

TEST REPORT

Report Number: 106061900DAL-001

Project Numbers: G106061900

Report Issue Date: February 27, 2025

Testing performed on

PEMF Device

Models Tested: 5505, 5212 & 5314R

Model(s) Not Tested but declared

Equivalent by the client:

5302, 5303, 5313, 5314L & 5315

FCC ID: 2AHVNOFIX5000002

IC ID: 21309-5000OFIX002

to

FCC Part 15 Subpart C (15.247)

ISED RSS-247 Issue 3

FCC Part 15, Subpart B, Class B

Industry Canada ICES-003, Class B

For

ORTHOFIX US LLC

Test Performed by:

Intertek Testing Services NA, Inc.
1809 10th Street Suite 400
Plano, TX 75074
USA

Test Authorized by:

ORTHOFIX US LLC
3451 Plano Parkway
Lewisville, TX 75056-9453
USA

Prepared by:



Kaushal Patel

Date: February 27, 2025

Reviewed by:



Anderson Soungpanya

Date: February 27, 2025

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. This report must not be used to claim product endorsement by A2LA, NIST nor any other agency of the U.S. Government.

Report No. 106061900DAL-001	
Equipment Under Test:	PEMF Device
Model Numbers:	5505, 5212 & 5314R
Applicant:	Orthofix US LLC
Contact:	Bobby Harris
Address:	3451 Plano Parkway Lewisville, TX 75056-9453
Country:	USA
Email:	bobbyharris@orthofix.com
Applicable Regulation:	FCC Part 15 Subpart C (15.247) ISED RSS-247 Issue 3
Date of Test:	January 31, 2025 To February 20, 2025

We attest to the accuracy of this report:



Kaushal Patel
Compliance Investigator



Anderson Soungpanya
EMC Team Leader

TABLE OF CONTENTS

1.0	Summary of Tests	4
2.0	General Information	5
2.1	Product Description	5
2.2	Related Submittal(s) Grants.....	6
2.3	Test Facility	6
2.4	Test Methodology.....	6
2.5	Measurement Uncertainty	6
3.0	System Test Configuration	7
3.1	Support Equipment.....	7
3.2	Block Diagram of Test Setup	7
3.3	Justification	9
3.4	Software Exercise Program.....	9
3.5	Mode of Operation during Test	9
3.6	Modifications Required for Compliance	9
3.7	Additions, Deviations and Exclusions from Standards.....	9
4.0	Measurement Results.....	10
4.1	6-dB Bandwidth and 99% Occupied Bandwidth	10
4.2	Maximum Peak Conducted Output Power at Antenna Terminals	21
4.3	Maximum Power Spectral Density.....	28
4.4	Out of Band Antenna Conducted Emission	35
4.5	Transmitter Radiated Emissions	42
4.6	Radiated Emissions	170
4.7	AC Line Conducted Emission.....	190
5.0	List of Test Equipment	200
6.0	Document History.....	201

1.0 Summary of Tests

Models: 5505, 5212 & 5314R

Test	Reference FCC	Reference Industry Canada	Result
RF Output Power	15.247(b)(3)	RSS-247, 5.4.d)	Complies
6 dB Bandwidth	15.247(a)(2)	RSS-247, 5.2.a)	Complies
Power Density	15.247(e)	RSS-247, 5.2.b)	Complies
Out of Band Antenna Conducted Emission	15.247(d)	RSS-247, 5.5	Complies
Transmitter Radiated Emissions	15.247(d), 15.209, 15.205	RSS-247, 5.5	Complies
AC Line Conducted Emission	15.207	RSS-GEN	Complies
Antenna Requirement	15.203	RSS-GEN	Complies (Internal Antenna)

EUT receive date: January 31, 2025

EUT receive condition: The production version of the EUT was received in good condition with no apparent damage.

Test start date: January 31, 2025

Test completion date: February 22, 2025

The test results in this report pertain only to the item tested.

2.0 General Information

2.1 Product Description

Orthofix US LLC. supplied the following description of the EUT:

The Orthofix PEMF stimulators, Spinal-Stim (model 5212), Cervical-Stim (5505), and Physio-Stim (5302, 5303, 5313, 5314L, 5314R, 5315), are external medical devices that generate a Pulsed Electromagnetic Field (PEMF) signal as a nonsurgical, prescription treatment to increase the chances of tissue healing. The models communicate with a user's smartphone via a Bluetooth Low Energy radio operating at 2.4GHz to pass remaining treatment time, status, and historical usage. All the models consist of a treatment transducer/garment, plastic enclosure, internal rechargeable Li-ion battery, LCD, ON/OFF button, printed circuit assembly, and external 5V "wall" power supply for battery charging. All the models use the same control module (the black plastic enclosure with the LCD) that contains the same PCA and antenna. The only difference between the models is the garment/ treatment coil size and shape and where the models are placed on a human body. Battery consumption, peak treatment coil current, number of treatment pulses, and treatment duration can also be different between the different models.

For more information, refer to the manufacturer user manual.

The following product specification, declared by the manufacturer.

Information about the 2.4 GHz BLE radio is presented below:

Applicant	Othofix US LLC
Model No.	5505, 5314R & 5212
FCC Identifier	2AHVNOFIX5000002
IC Identifier	21309-5000OFIX002
Type of transmission	Digital Transmission System (DTS)
Rated RF Output	See Section 4.2 for RF Output Power
Antenna(s) & Gain	Internal Antenna, Gain: -3.86 dBi
Frequency Range	2402 – 2480 MHz
Type of modulation/data rate	GFSK / 1Mbit/s
Number of Channel(s)	40 Channels
Test Channels	2402 MHz, 2442 MHz, 2480 MHz
Applicant Name & Address	Othofix US LLC 3451 Plano Parkway Lewisville, TX 75056-9453 USA

*: Antenna gain was provided by Orthofix US LLC. Intertek takes no responsibility for the accuracy of the antenna gain.

*: This test report covers the BLE transmitter only.

2.2 Related Submittal(s) Grants

None.

2.3 Test Facility

The test site used to collect the radiated data is site 1 (3-m semi-anechoic chamber). This test facility and site measurement data have been fully placed on file with the FCC, IC and A2LA accredited.

2.4 Test Methodology

Antenna conducted measurements were performed according to the FCC documents “Guidance for Performing Compliance Measurement on Digital Transmission Systems (DTS) Operating under §15.247” (KDB 558074 D01 DTS Meas Guidance v05r02).

Radiated emissions and AC mains conducted emissions measurements were performed according to the procedures in ANSI C63.10: 2013. Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the “Data Sheet” of this report.

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn’t take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz
RF Power and Power Density – antenna conducted	-	0.7 dB	-
Unwanted emissions – antenna conducted	1.1 dB	1.3 dB	1.9 dB
Bandwidth – antenna conducted	-	30 Hz	-

Measurement	Expanded Uncertainty (k=2)			
	0.15 MHz – 30MHz	30 – 200 MHz	200 MHz – 1 GHz	1 GHz – 18 GHz
Radiated emissions	-	3.5	3.5	3.5 dB
AC mains conducted emissions	2.1 dB	-	-	-

3.0 System Test Configuration

3.1 Support Equipment

Equipment Under Test				
Description	Manufacturer	Type	Model	Serial Number
Radiated Sample	Othofix US LLC	PEMF Device	5505	0048798037
Conducted Sample	Othofix US LLC	PEMF Device	5505	0048798058
Radiated Sample	Othofix US LLC	PEMF Device	5314R	0048728010
Conducted Sample	Othofix US LLC	PEMF Device	5314R	0048480001
Radiated Sample	Othofix US LLC	PEMF Device	5212	0048790044
Conducted Sample	Othofix US LLC	PEMF Device	5212	0048790045

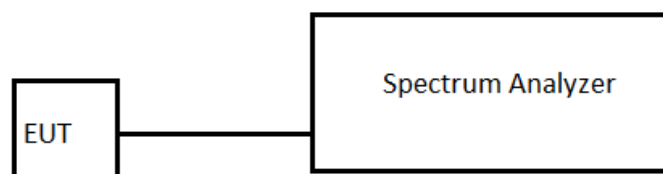
Power Adaptor
Model 5505 - SALOM AC Power Supply (Orthofix P/N 20123807 SN 224940038)
Model 5313R- CUI INC Medical AC Adapter (Orthofix P/N 20123808 SN 241806745)
Model 5212- CUI INC Medical AC Adapter (Orthofix P/N 20123808 SN 241808504)

Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of phases
120-240 VAC	0.15A	50/60 Hz	Single
100-240 VAC	0.6-0.3A	50/60 Hz	Single
100-240 VAC	0.6-0.3A	50/60 Hz	Single

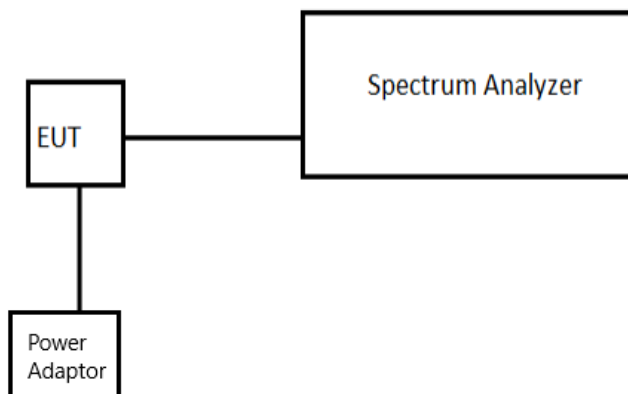
Support Equipment			
Description	Manufacturer	Model	Serial Number
None	None	None	None

3.2 Block Diagram of Test Setup

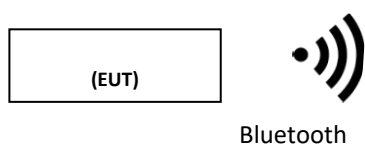
Conducted Measurements SETUP
Battery Mode



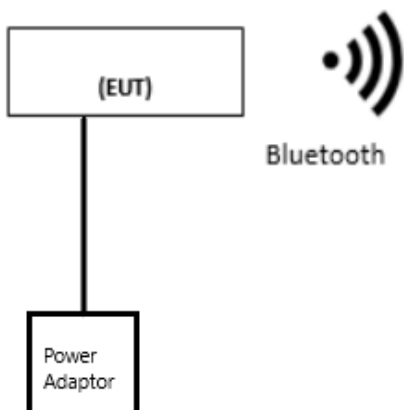
**Conducted Measurements SETUP
Charging Mode**



**Radiated Measurements SETUP
Battery Mode**



**Radiated Measurements SETUP
Charging Mode**



S = Shielded
U = Unshielded

F = With Ferrite
m = Length in Meters

3.3 Justification

For radiated emission measurements the EUT is placed on a non-conductive table. Different orientations of EUT were tested and only the worse-case emissions were reported.

3.4 Software Exercise Program

The EUT exercise program used during radiated and conducted testing was provided by Orthofix US LLC

3.5 Mode of Operation during Test

Each model is tested for the following two modes.

1. Treatment Mode -Battery Powered
2. Charging Mode -AC Power Adaptor connected

During transmitter testing, the transmitter was setup to transmit at maximum RF power on low, middle and high channel.

EUT was placed into transmit mode at the lowest (2402MHz) middle (2442MHz), and highest (2480MHz) channels.

Channels	Freq. MHz	EUT Setting
Low	2402	Programed to Max Power as provided by Client
Mid	2442	Programed to Max Power as provided by Client
High	2480	Programed to Max Power as provided by Client

The Duty Cycle for the BLE Transmitter is >98 % for the testing.

3.6 Modifications Required for Compliance

No modifications were made by the manufacturer or Intertek to the EUT in order to bring the EUT into compliance.

3.7 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusions from the standard were made.

4.0 Measurement Results

4.1 6-dB Bandwidth and 99% Occupied Bandwidth FCC Rule: 15.247(a)(2); RSS-247, 5.2.a) and RSS-GEN;

4.1.1 Requirement

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

4.1.2 Procedure

A spectrum analyzer was connected to the antenna port of the transmitter.

For FCC 6dB Channel Bandwidth the Procedure described in the FCC Publication KDB 558074 D01 Meas Guidance v05r02 was used to determine the DTS occupied bandwidth. Section 11.8.1 Option 1 of ANSI 63.10 was used.

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

For 99% power bandwidth measurement, the bandwidth was determined by using the built-in 99% occupied bandwidth function of the spectrum analyzer. The resolution bandwidth is set to 1% of the selected span as is without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.

4.1.3 Test Result

Model 5505

Frequency (MHz)	6-dB bandwidth FCC 15.247 & RSS-GEN, kHz	Occupied bandwidth, RSS-GEN, MHz	Plot
2402	649.03	--	1.1
	--	1.27	1.4
2442	665.06	--	1.2
	--	1.48	1.5
2480	608.97	--	1.3
	--	1.00	1.6

Model 5314R

Frequency (MHz)	6-dB bandwidth FCC 15.247 & RSS-GEN, kHz	Occupied bandwidth, RSS-GEN, MHz	Plot
2402	625.00	--	1.7
	--	1.31	1.10
2442	673.07	--	1.8
	--	1.28	1.11
2480	592.94	--	1.9
	--	0.985	1.12

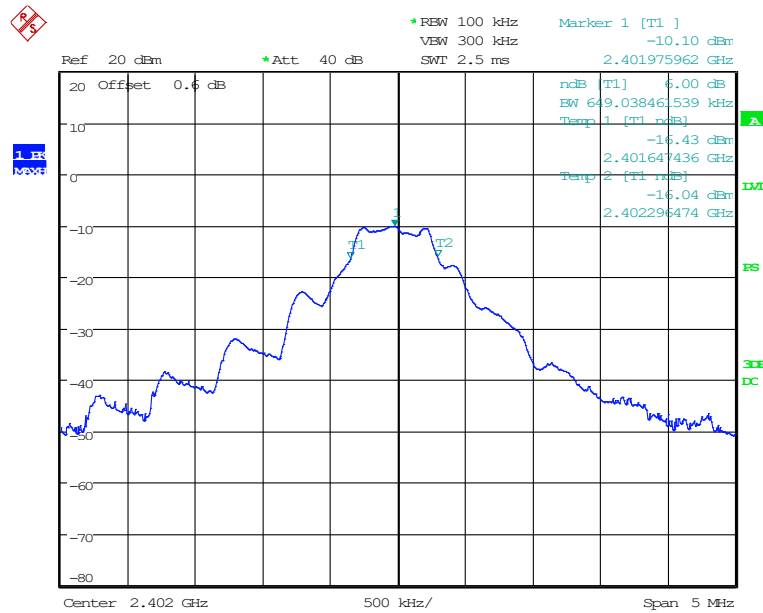
Model 5212

Frequency (MHz)	6-dB bandwidth FCC 15.247 & RSS-GEN, kHz	Occupied bandwidth, RSS-GEN, MHz	Plot
2402	625.00	--	1.13
	--	1.16	1.16
2442	665.06	--	1.14
	--	1.30	1.17
2480	600.96	--	1.15
	--	1.00	1.18

Tested By	Test Date	Results
Kaushal Patel	February 1, 2025 & February 12, 2025	Complies

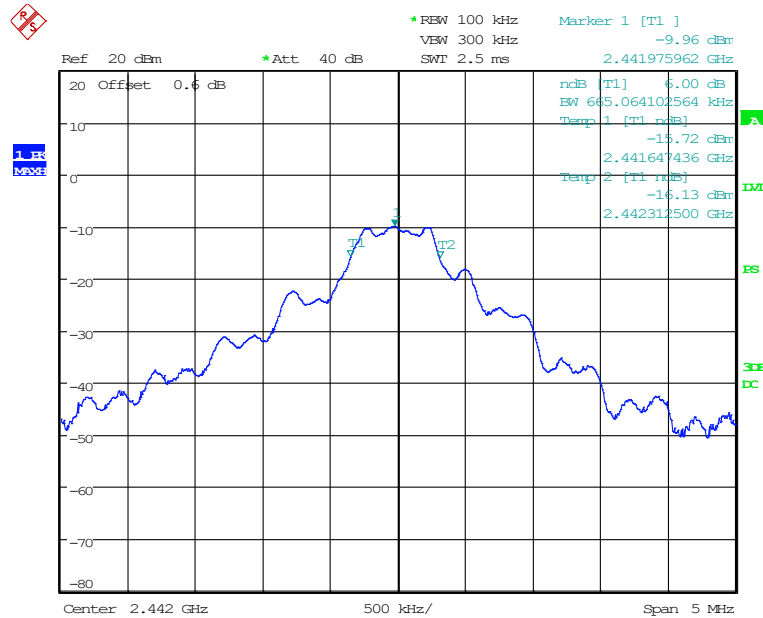
Model 5505

Plot 1. 1



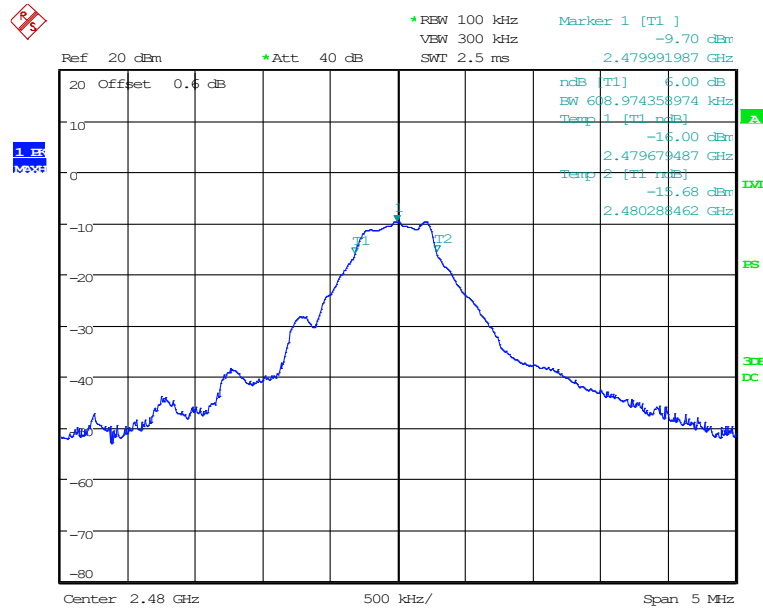
Date: 6.FEB.2025 11:31:47

Plot 1. 2



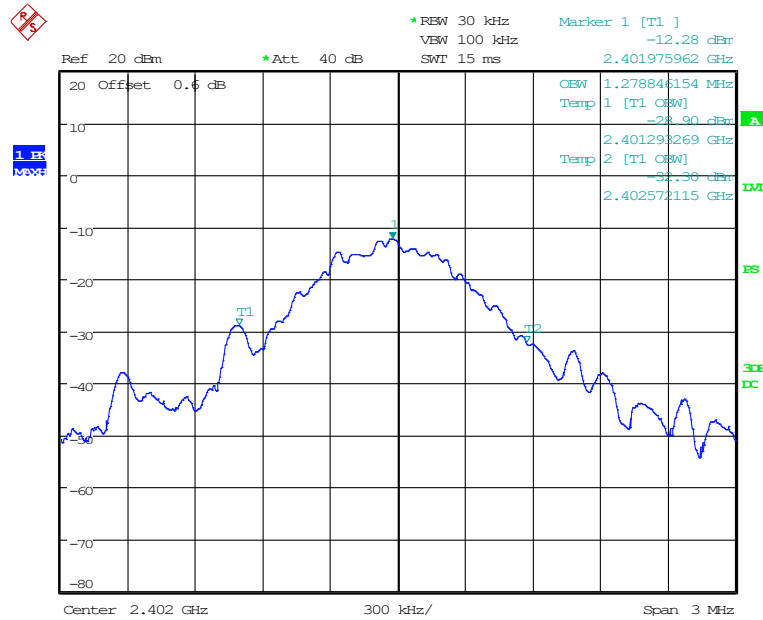
Date: 7.FEB.2025 07:44:01

Plot 1.3



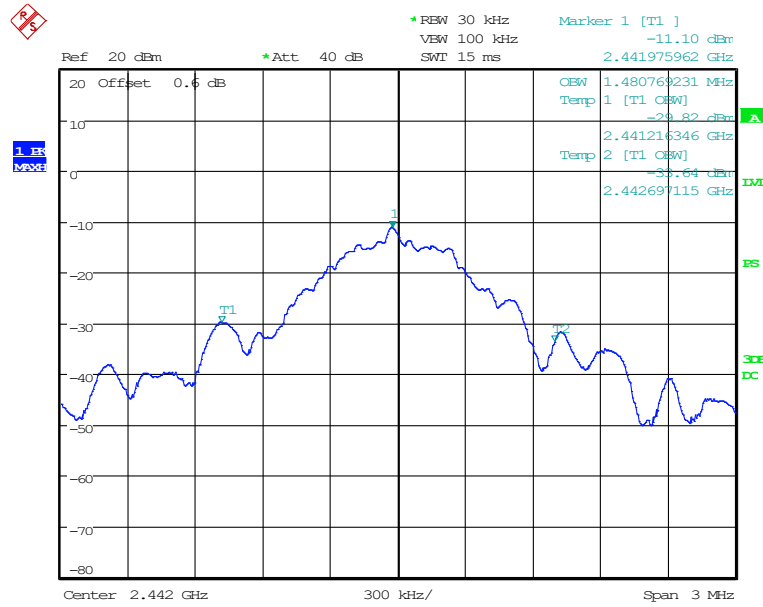
Date: 7.FEB.2025 07:55:40

Plot 1.4



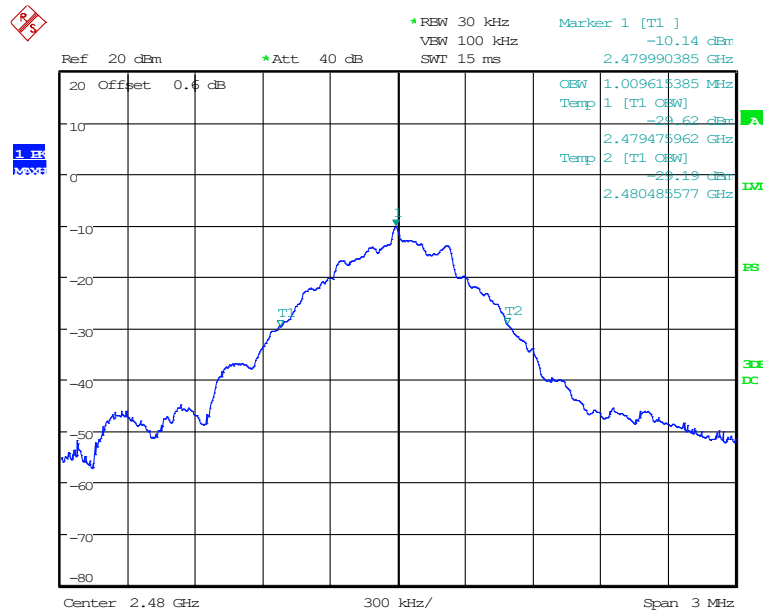
Date: 6.FEB.2025 11:45:56

Plot 1.5



Date: 7.FEB.2025 07:45:30

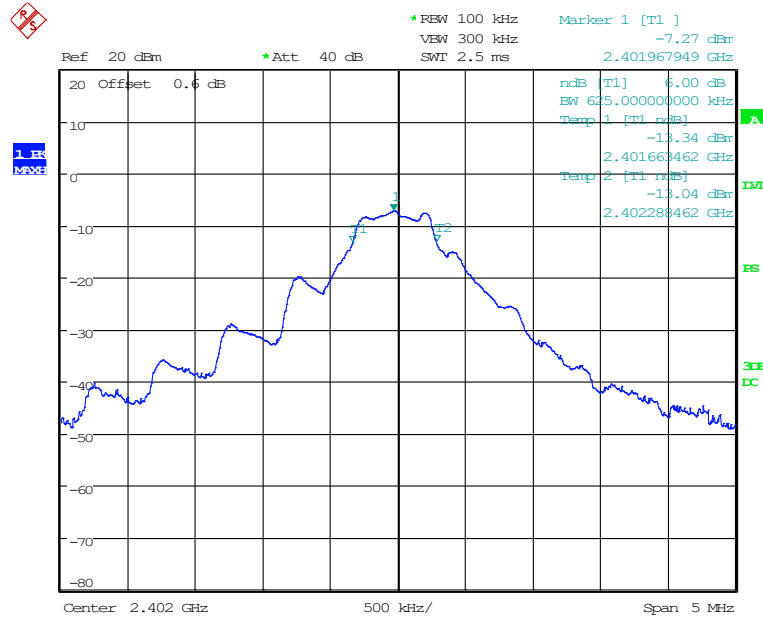
Plot 1.6



Date: 7.FEB.2025 07:57:08

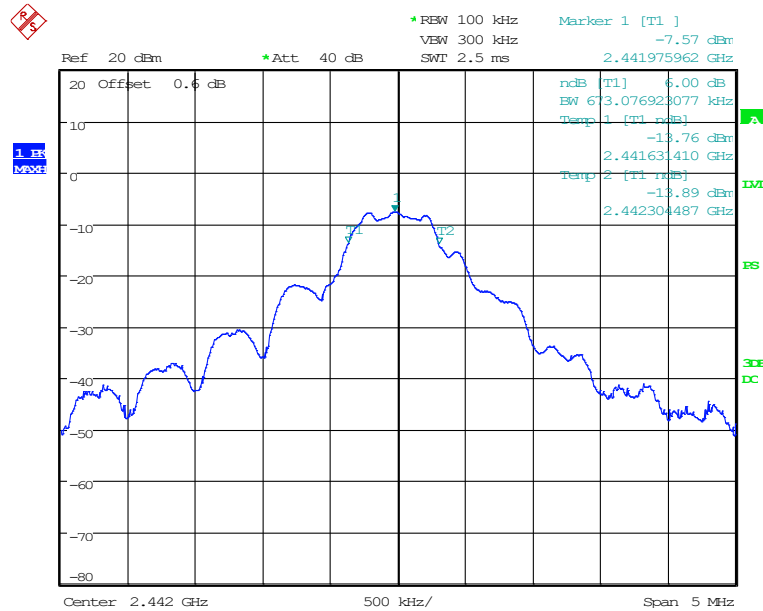
Model 5314R

Plot 1.7



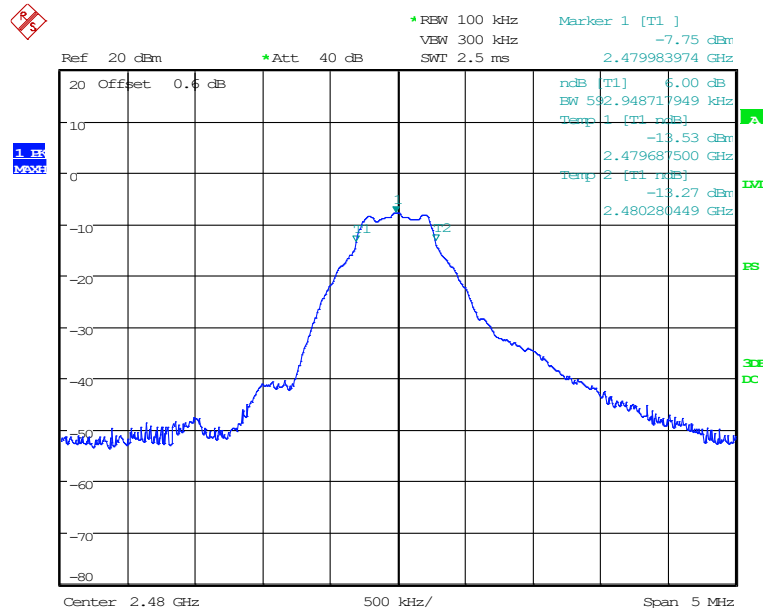
Date: 7.FEB.2025 11:44:06

Plot 1.8



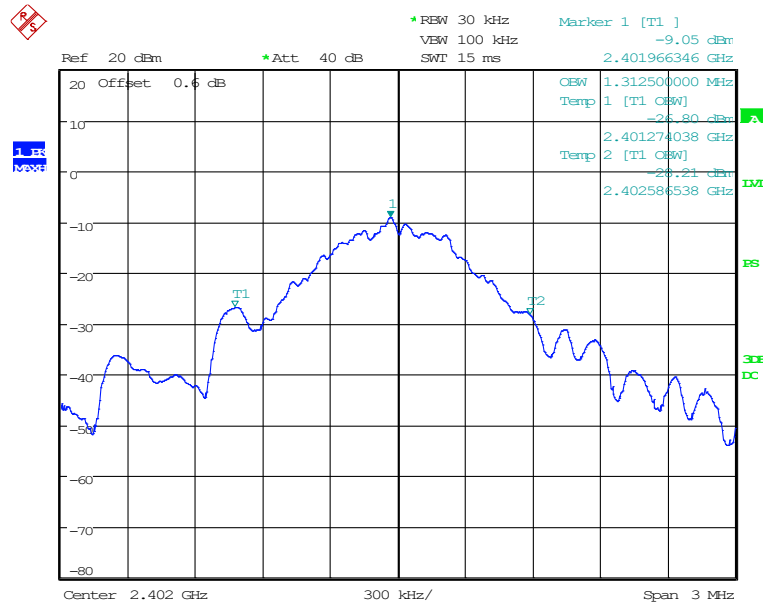
Date: 7.FEB.2025 12:10:53

Plot 1. 9



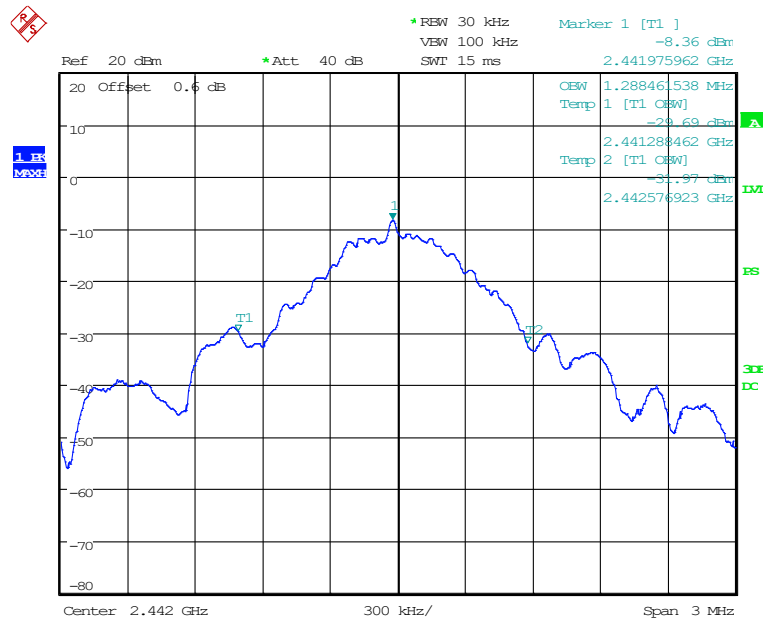
Date: 7.FEB.2025 12:25:39

Plot 1. 10



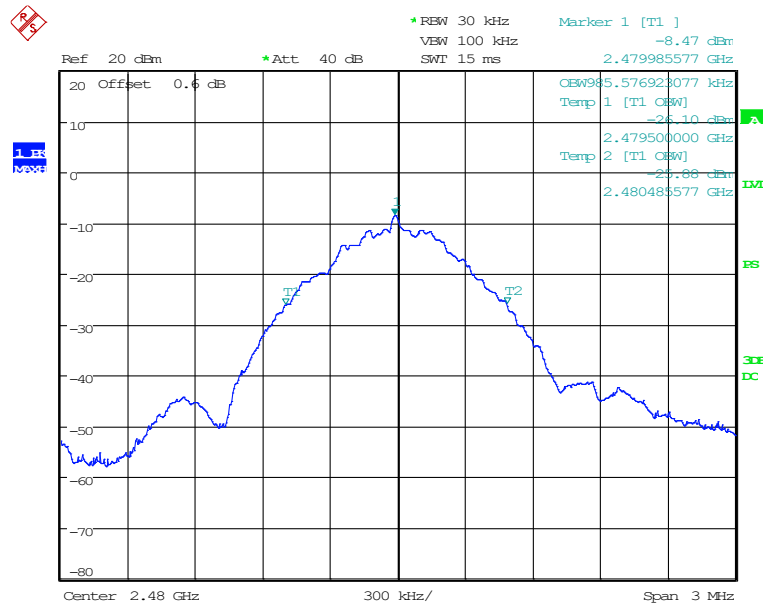
Date: 7.FEB.2025 11:45:13

Plot 1. 11



Date: 7.FEB.2025 12:12:23

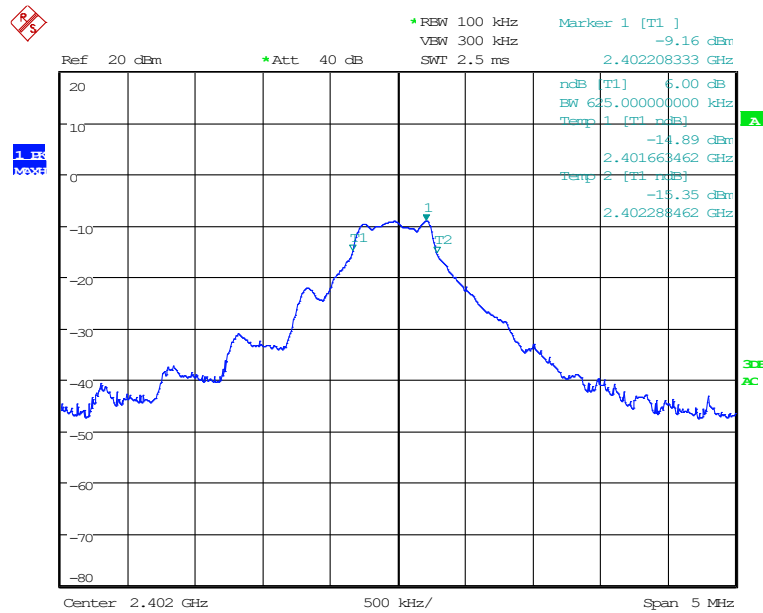
Plot 1. 12



Date: 7.FEB.2025 12:27:14

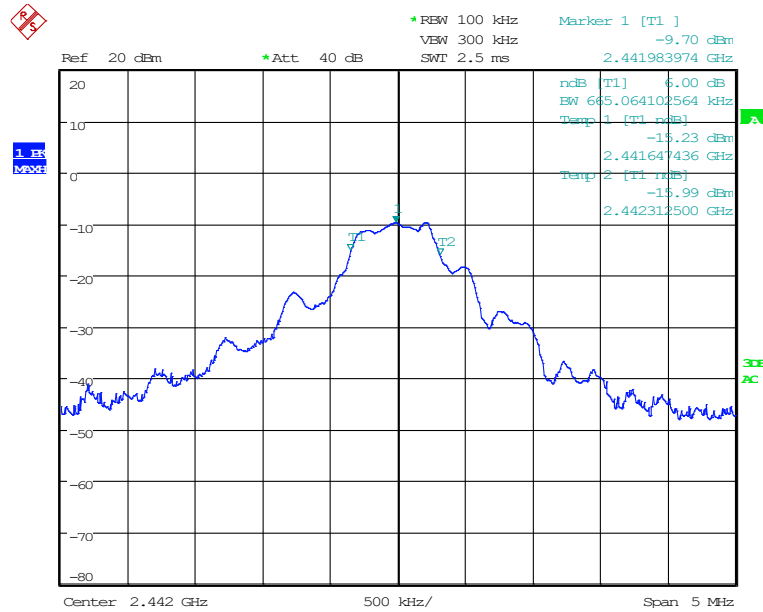
Model 5212

Plot 1. 13



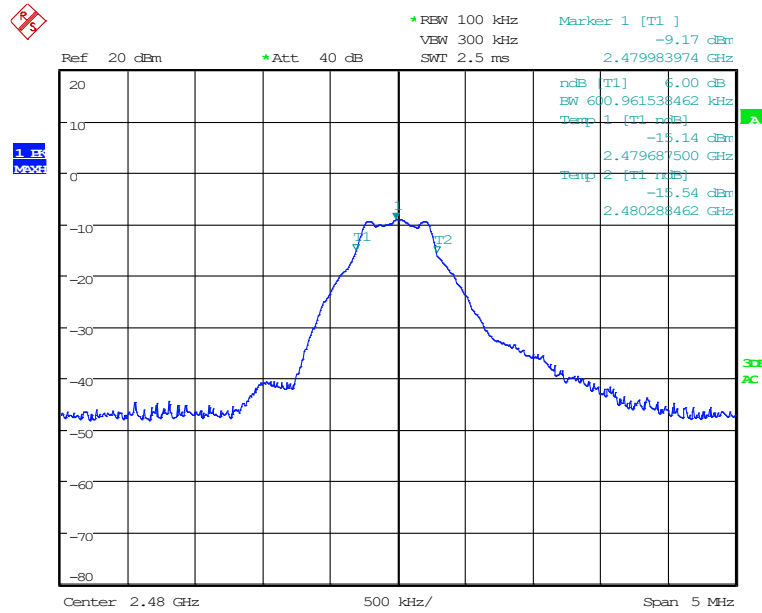
Date: 11.FEB.2025 09:17:28

Plot 1. 14



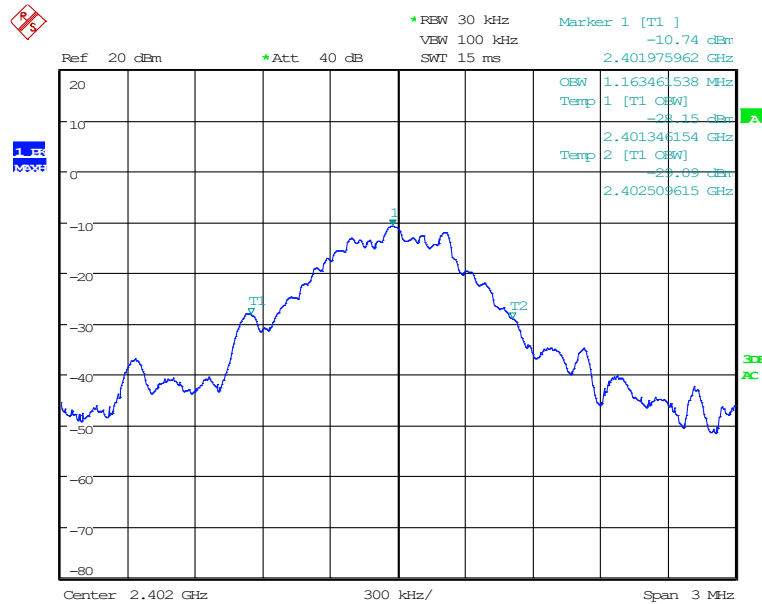
Date: 11.FEB.2025 10:09:56

Plot 1. 15



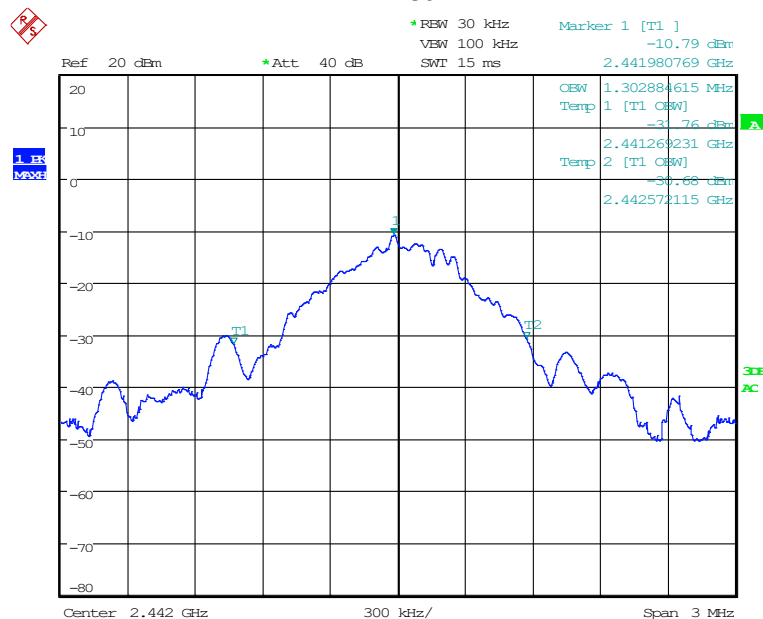
Date: 11.FEB.2025 11:34:47

Plot 1. 16



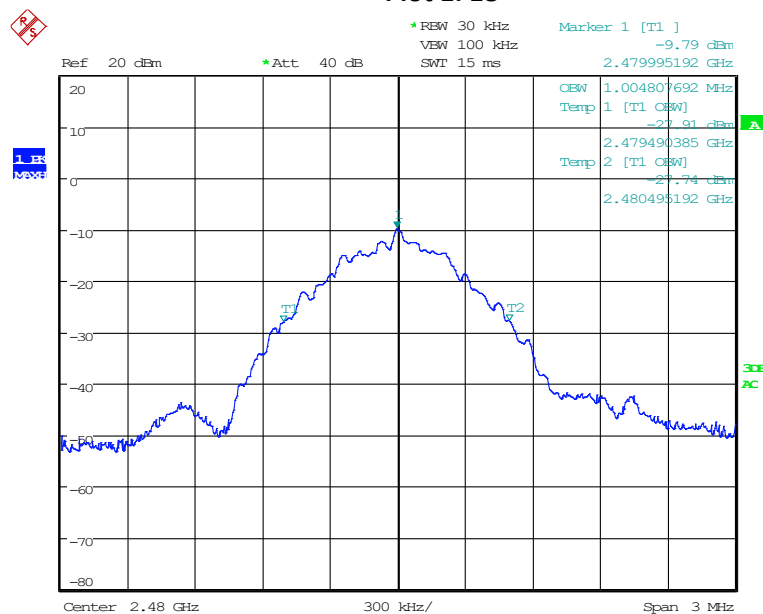
Date: 11.FEB.2025 09:20:26

Plot 1. 17



Date: 11.FEB.2025 10:11:31

Plot 1. 18



Date: 11.FEB.2025 11:36:21

Results

Complies

4.2 Maximum Peak Conducted Output Power at Antenna Terminals FCC Rule: 15.247(b)(3); RSS-247, 5.4.d);

4.2.1 Requirement

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt or 30 dBm. For antennas with gains greater than 6 dBi, transmitter output level must be decreased appropriately, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2.2 Procedure

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02 was used. Specifically, section 11.9.1.1 RBW $\geq$ DTS bandwidth in ANSI 63.10.

1. Set the RBW $\geq$ DTS Bandwidth
2. Set the VBW $\geq 3 \times$ RBW
3. Set the span $\geq 3 \times$ RBW
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max Hold
7. Allow trace to fully stabilize
8. Use peak marker function to determine the peak amplitude level.

A spectrum analyzer was connected to the antenna port of the transmitter.

4.2.3 Test Result

Refer to the following plots 2.1 – 2.9 for the test details.

Model 5505

Frequency	Conducted Power (peak)		Plot
MHz	dBm	mW	
2402	-9.90	0.102	2.1
2442	-9.78	0.105	2.2
2480	-9.57	0.110	2.3

Model 5314R

Frequency	Conducted Power (peak)		Plot
MHz	dBm	mW	
2402	-7.19	0.191	2.4
2442	-7.45	0.180	2.5
2480	-7.62	0.173	2.6

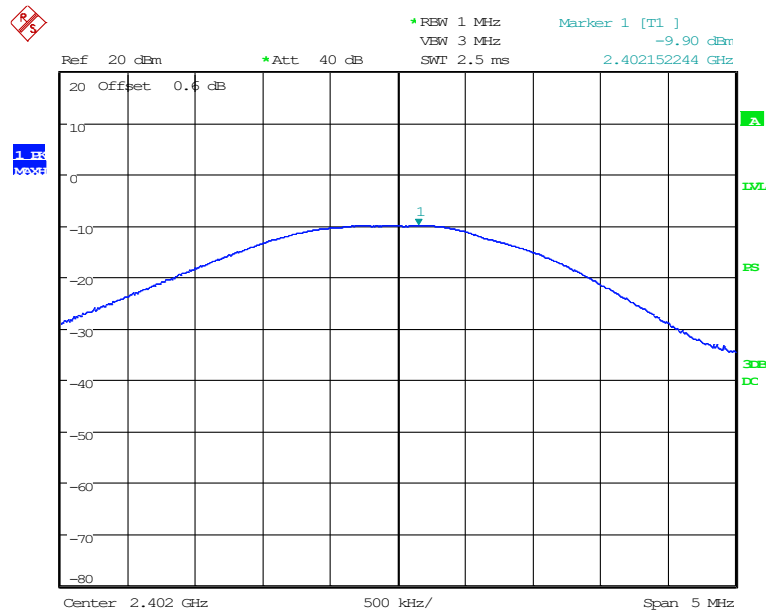
Model 5212

Frequency	Conducted Power (peak)		Plot
MHz	dBm	mW	
2402	-8.85	0.130	2.7
2442	-9.35	0.116	2.8
2480	-8.83	0.131	2.9

Tested By	Test Date	Results
Kaushal Patel	February 1, 2025 & February 12, 2025	Complies

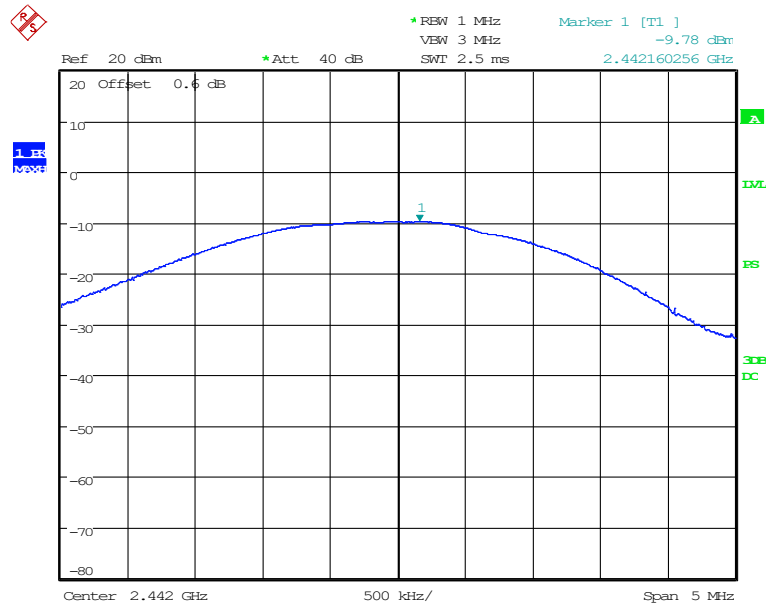
Model 5505

Plot 2. 1



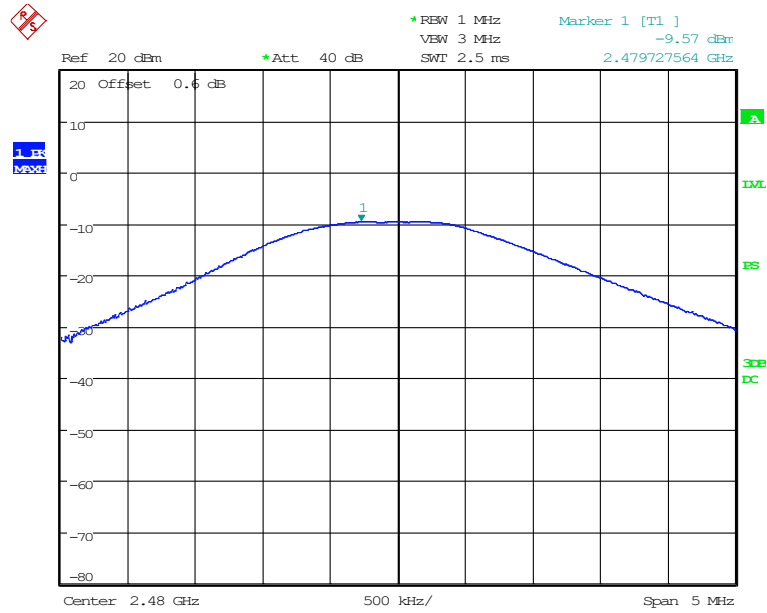
Date: 6.FEB.2025 11:48:24

Plot 2. 2



Date: 7.FEB.2025 06:51:28

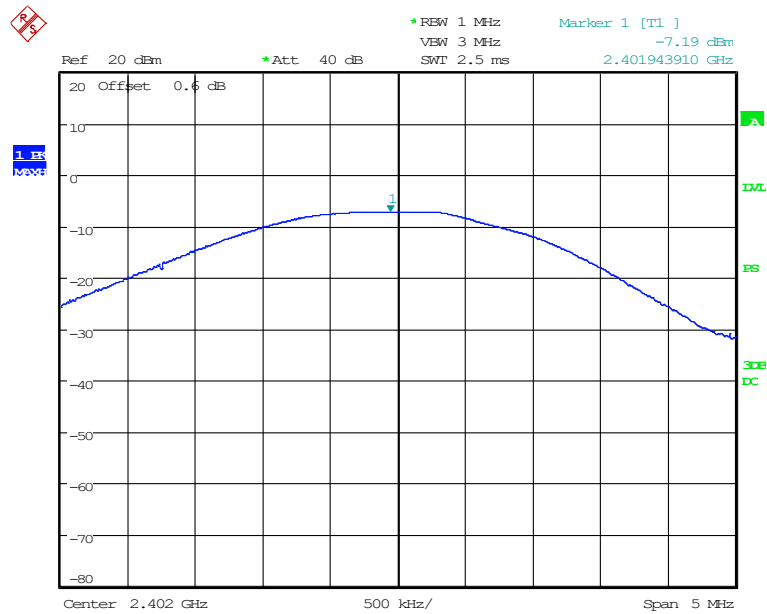
Plot 2.3



Date: 7.FEB.2025 07:59:04

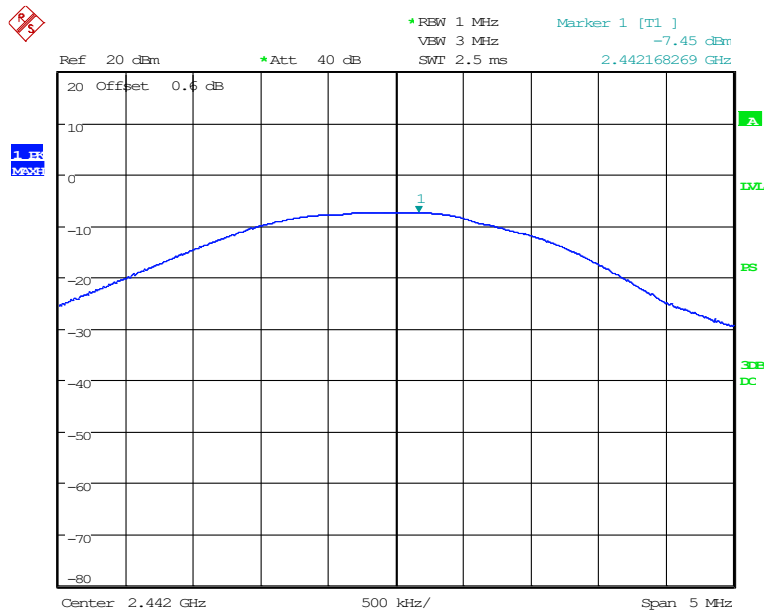
Model 5314R

Plot 2.4



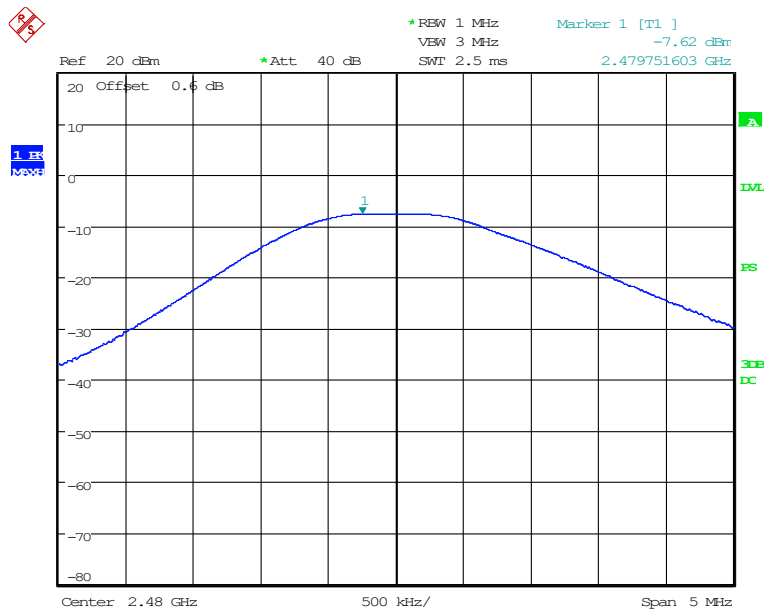
Date: 7.FEB.2025 11:47:16

Plot 2. 5



Date: 7.FEB.2025 12:15:04

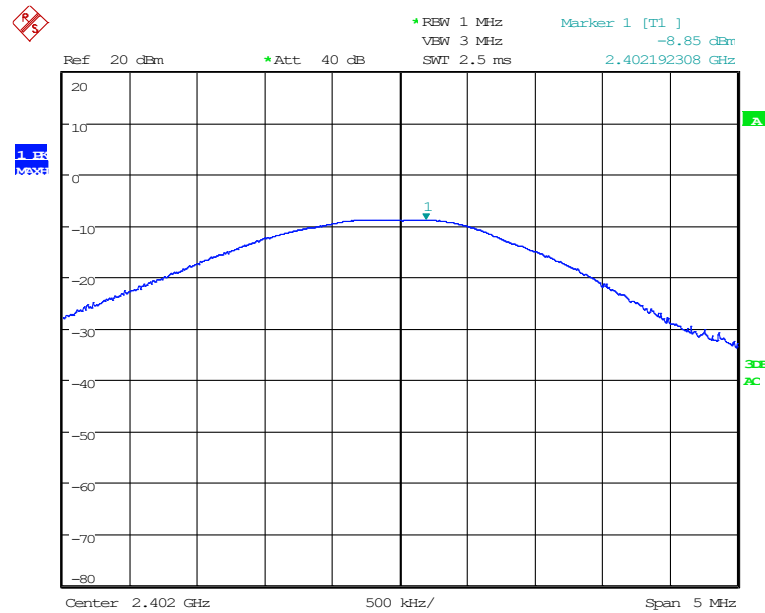
Plot 2. 6



Date: 7.FEB.2025 12:43:17

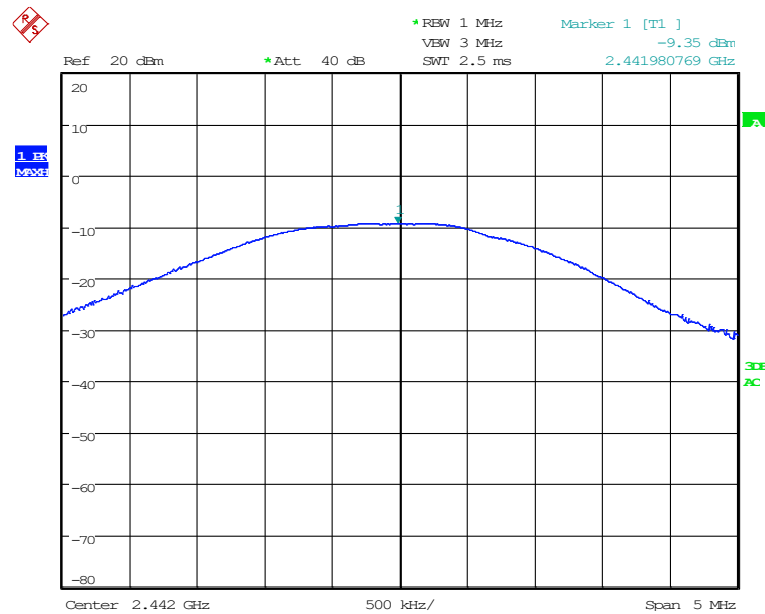
Model 5212

Plot 2. 7

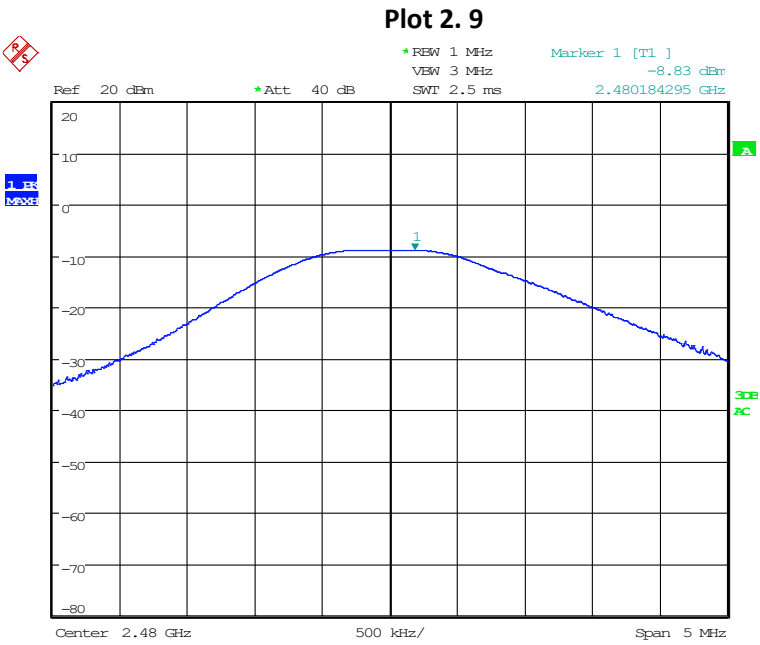


Date: 11.FEB.2025 09:22:03

Plot 2. 8



Date: 11.FEB.2025 10:14:11



Date: 11.FEB.2025 11:38:07

Results	Complies
---------	----------

4.3 Maximum Power Spectral Density FCC: 15.247 (e); RSS-247, 5.2.b);

4.3.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna should not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2 Procedure

A spectrum analyzer was connected to the antenna port of the transmitter.

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02, specifically section 11.10.2 Method PKPSD (peak PSD) of ANSI 63.10.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the *DTS bandwidth*.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.3.3 Test Result

Refer to the following plots for the test result

Model 5505

Frequency, MHz	Maximum Power Spectral Density, dBm	Maximum Power Spectral Density Limit, dBm	Margin, dB	Plot
2402	-10.28	8.0	18.28	3.1
2442	-10.09	8.0	18.09	3.2
2480	-9.80	8.0	17.80	3.3

Model 5314R

Frequency, MHz	Maximum Power Spectral Density, dBm	Maximum Power Spectral Density Limit, dBm	Margin, dB	Plot
2402	-7.48	8.0	15.48	3.1
2442	-7.65	8.0	15.65	3.2
2480	-7.87	8.0	15.87	3.3

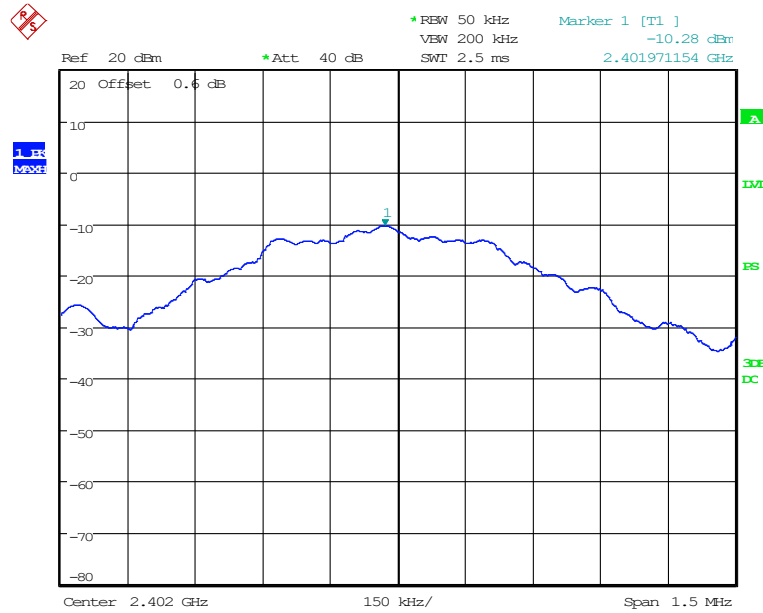
Model 5212

Frequency, MHz	Maximum Power Spectral Density, dBm	Maximum Power Spectral Density Limit, dBm	Margin, dB	Plot
2402	-9.40	8.0	17.40	3.1
2442	-9.83	8.0	17.83	3.2
2480	-11.35	8.0	19.35	3.3

Tested By	Test Date	Results
Kaushal Patel	February 1, 2025 & February 12, 2025	Complies

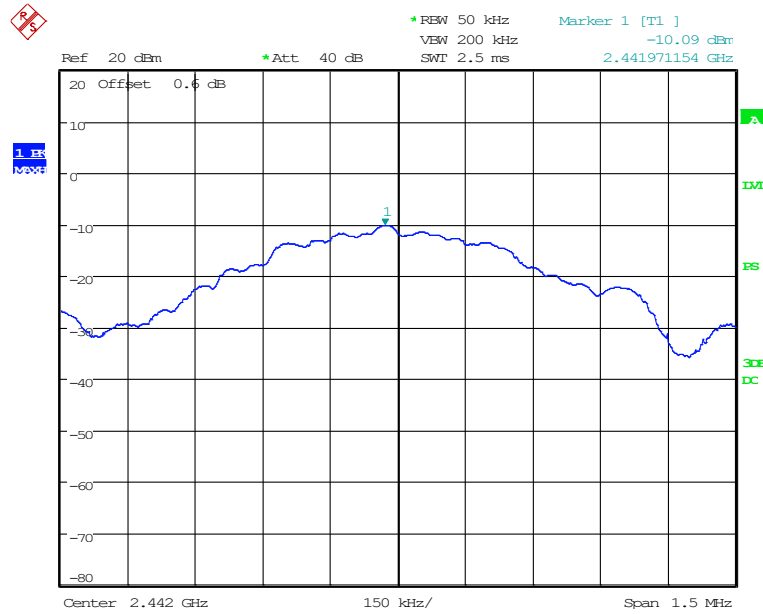
Model 5505

Plot 3. 1



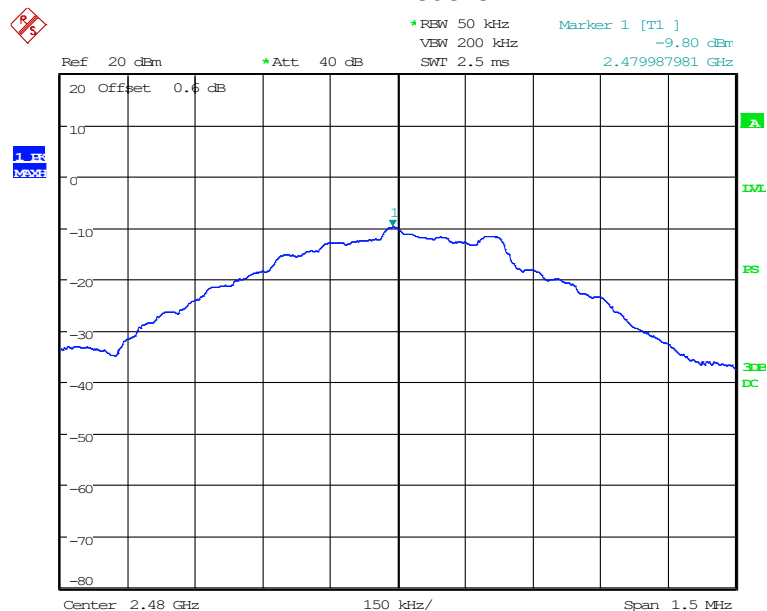
Date: 6.FEB.2025 12:07:43

Plot 3. 2



Date: 7.FEB.2025 06:55:02

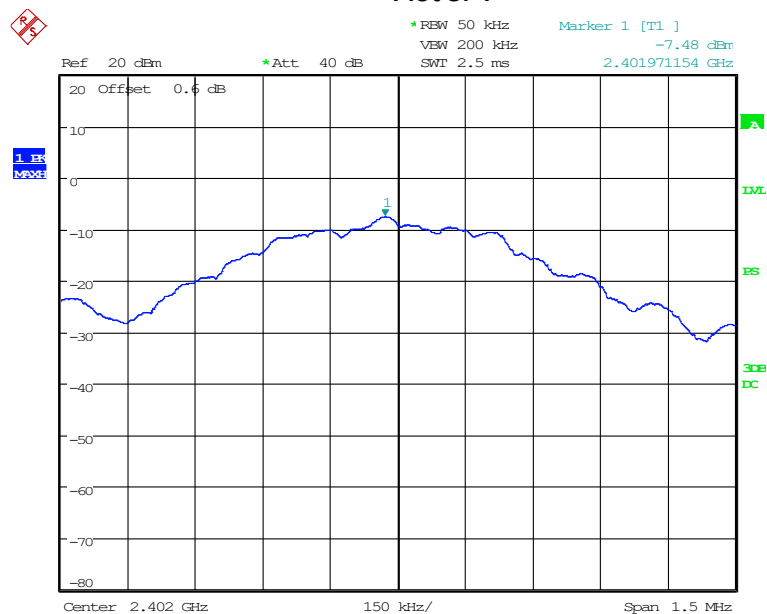
Plot 3.3



Date: 7.FEB.2025 07:51:53

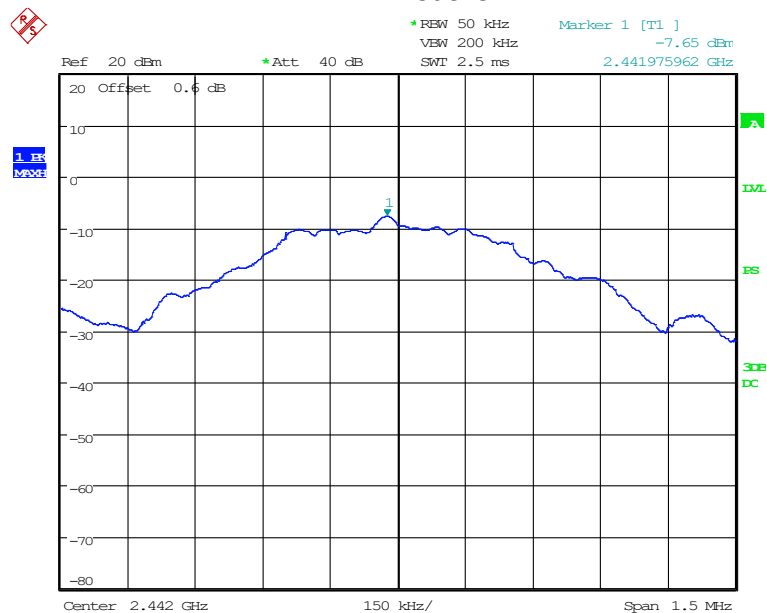
Model 5314R

Plot 3.4



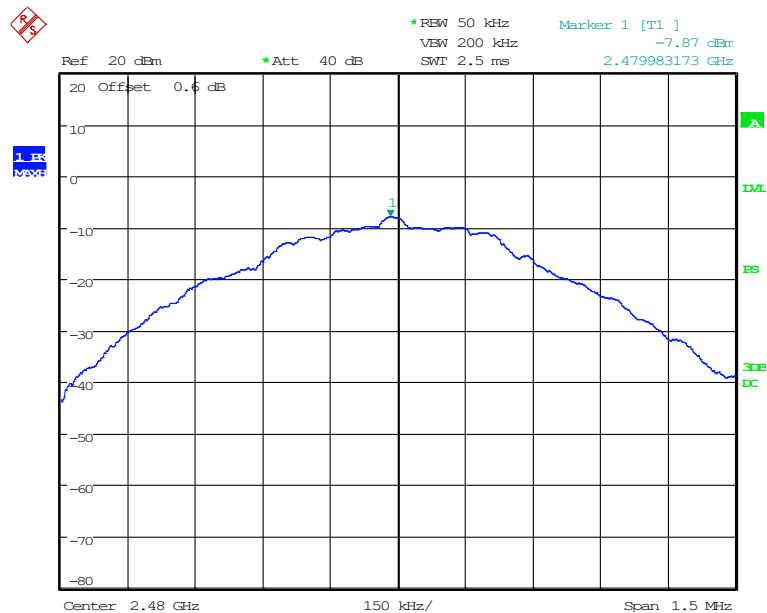
Date: 7.FEB.2025 11:48:19

Plot 3.5



Date: 7.FEB.2025 12:08:30

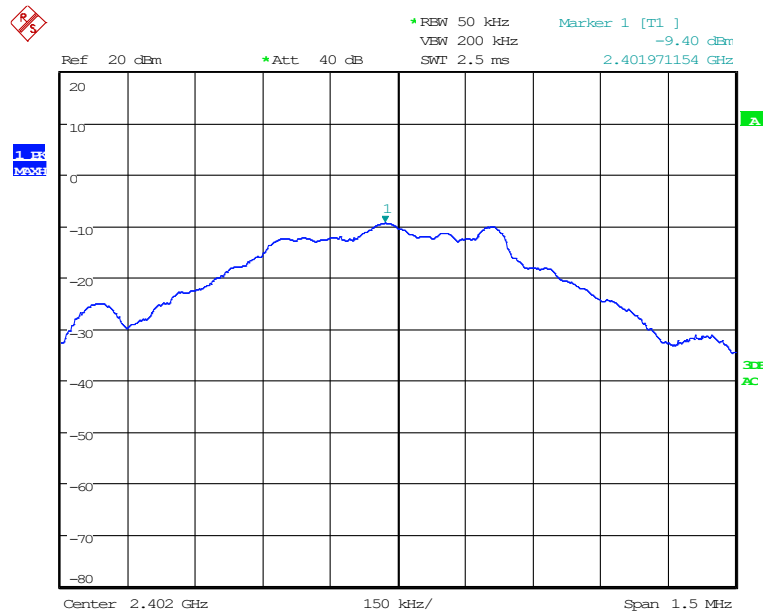
Plot 3.6



Date: 7.FEB.2025 12:30:14

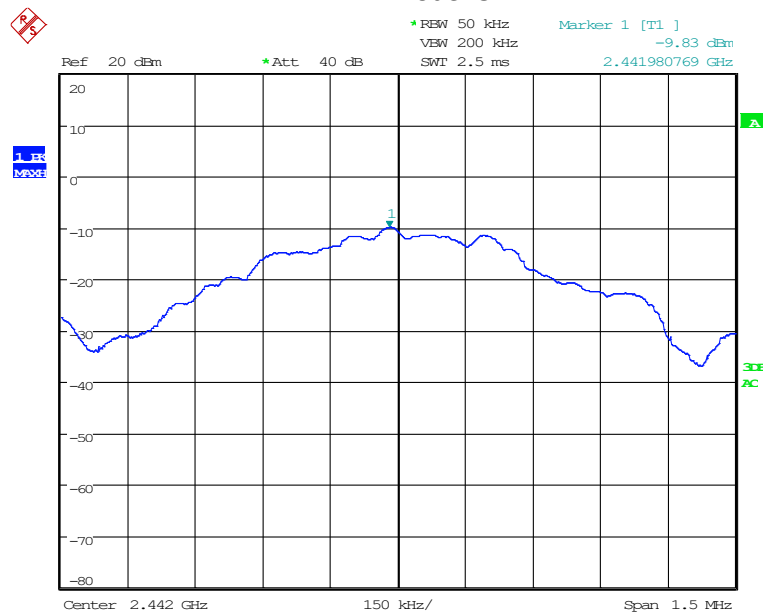
Model 5212

Plot 3.7



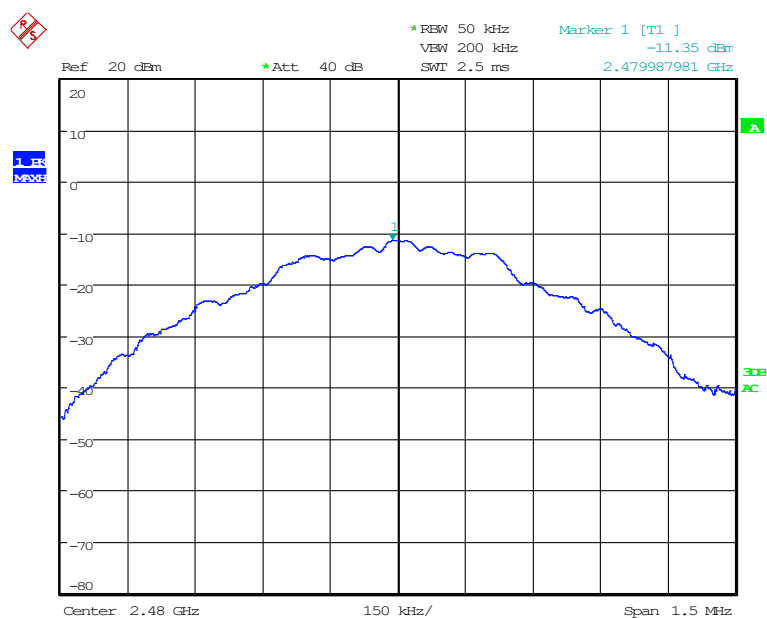
Date: 11.FEB.2025 09:23:39

Plot 3.8



Date: 11.FEB.2025 10:07:55

Plot 3. 9



Date: 11.FEB.2025 11:39:07

Results	Complies
----------------	-----------------

4.4 Out of Band Antenna Conducted Emission FCC: 15.247(d); RSS-247, 5.5;

4.4.1 Requirement

In any 100 kHz bandwidth outside the EUT pass-band, the RF power shall be below the maximum in-band 100 kHz emissions by at least 20 dB (if peak power of in-band emission is measured) or 30 dB (if average power of in-band emission is measured).

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)

4.4.2 Procedure

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02, specifically section 11.11 DTS Emissions in non-restricted frequency bands of ANSI 63.10.

A spectrum analyzer was connected to the antenna port of the transmitter.

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq 3 \times$ RBW.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

The unwanted emissions were measured from 30 MHz to 25 GHz. Plots below are corrected for cable loss and then compared to the limits.

4.4.3 Test Result

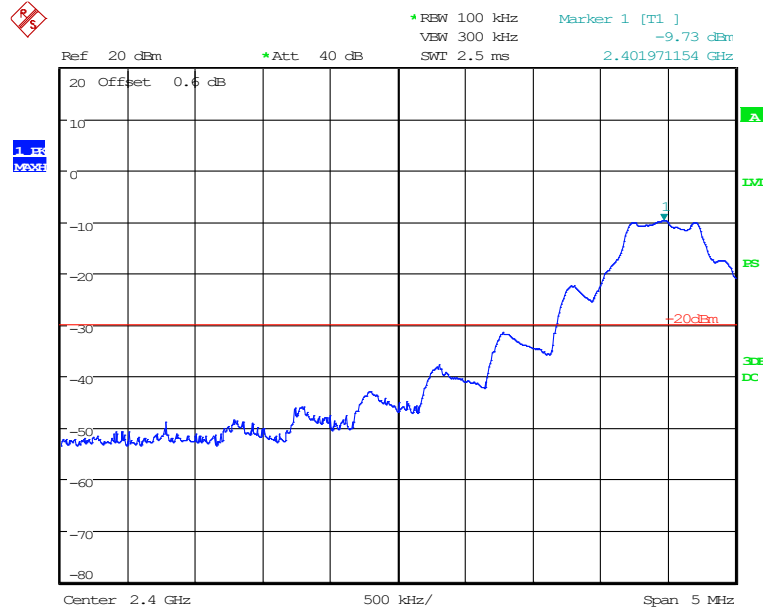
Refer to the following for unwanted conducted emissions. The plot shows a -20dB attenuation limit line.

Tested By	Test Date	Results
Kaushal Patel	February 1, 2025 & February 24, 2025	Complies

Model 5505

Tx @ Low Channel, 2402 MHz Band Edge

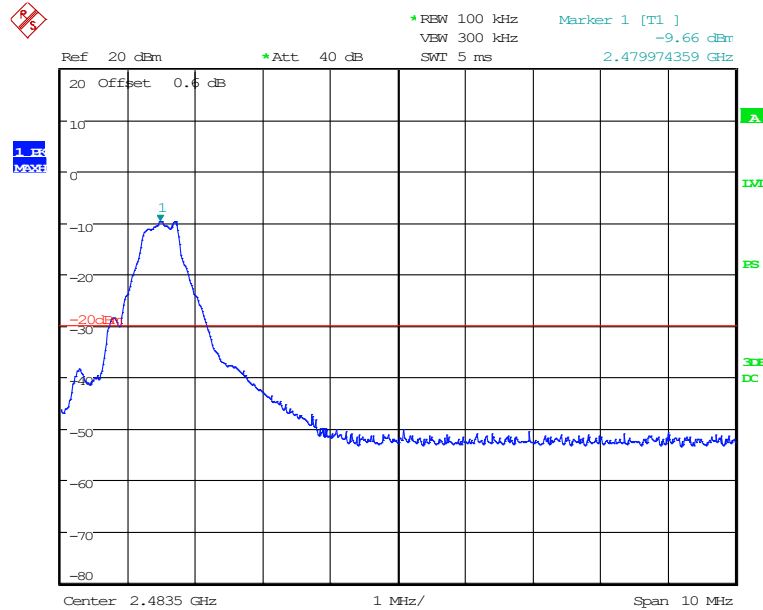
Plot 4.1



Date: 6.FEB.2025 12:49:08

Tx @ High Channel, 2480 MHz Band Edge

Plot 4.2

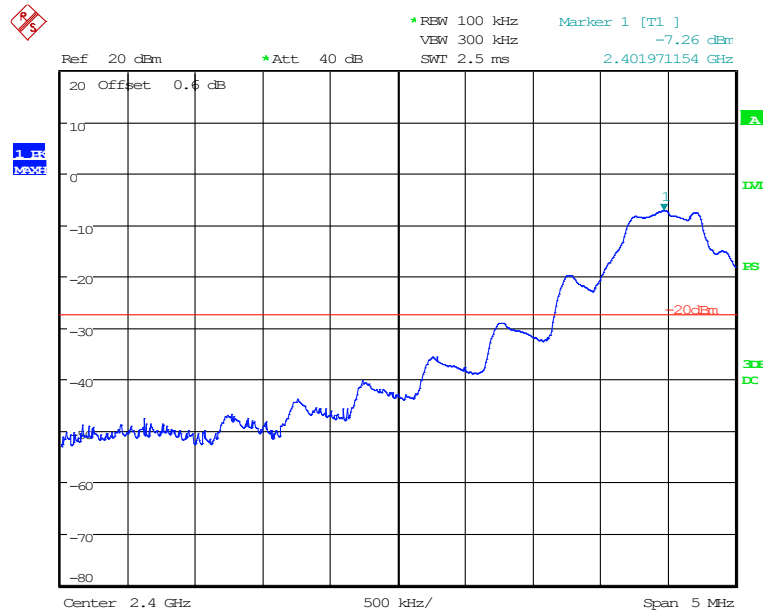


Date: 7.FEB.2025 08:01:33

Model 5314R

Tx @ Low Channel, 2402 MHz Band Edge

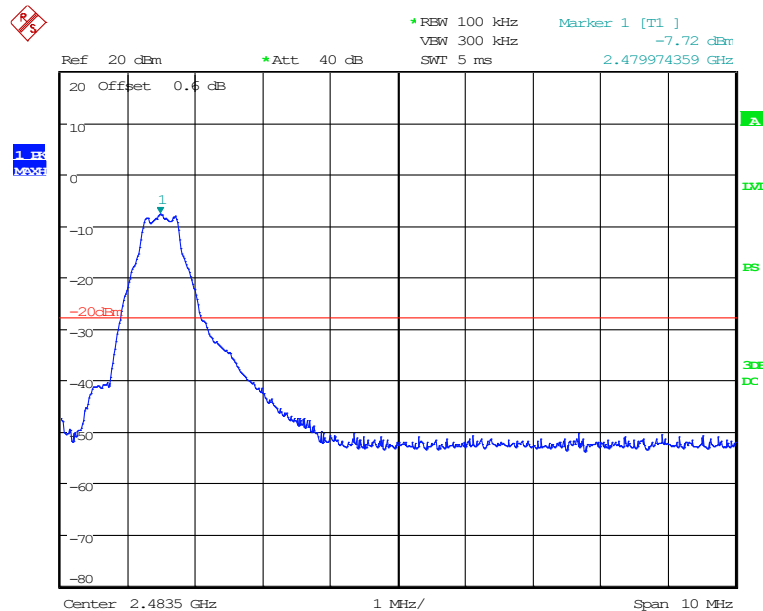
Plot 4.1



Date: 7.FEB.2025 11:51:21

Tx @ High Channel, 2480 MHz Band Edge

Plot 4.2

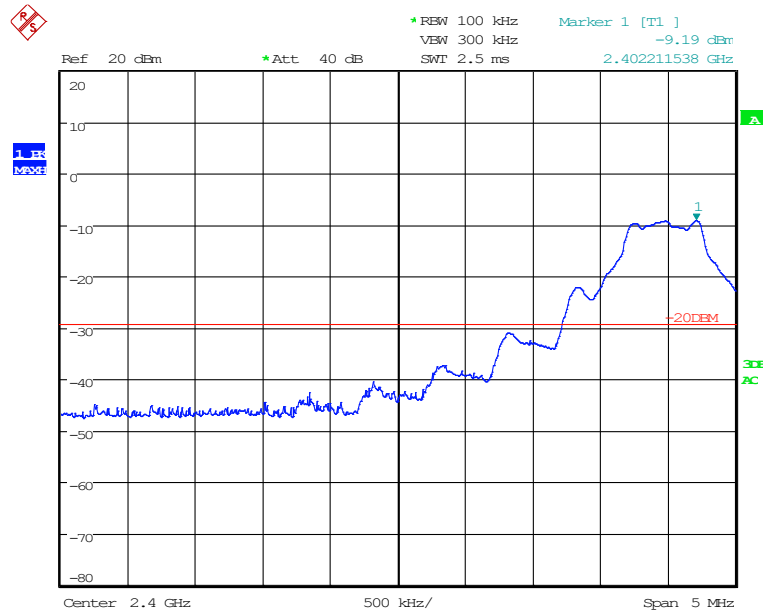


Date: 7.FEB.2025 12:31:50

Model 5212

Tx @ Low Channel, 2402 MHz Band Edge

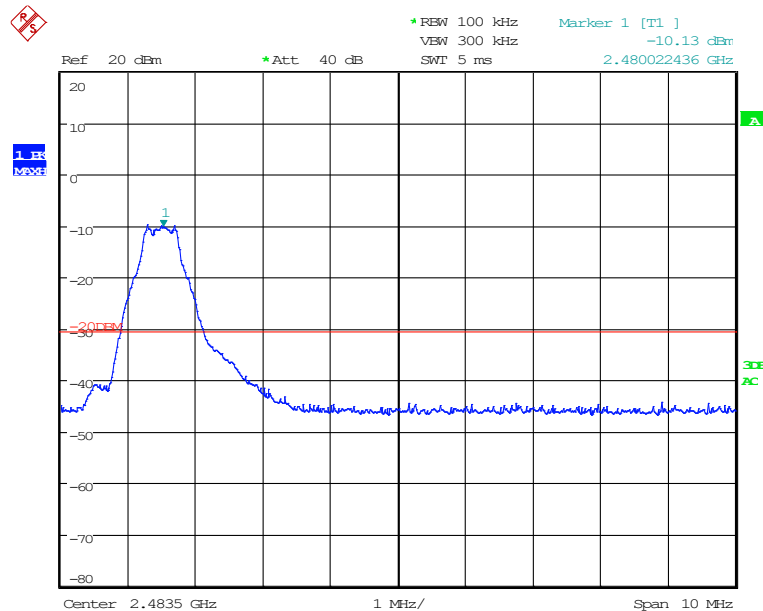
Plot 4.1



Date: 11.FEB.2025 09:29:57

Tx @ High Channel, 2480 MHz Band Edge

Plot 4.2

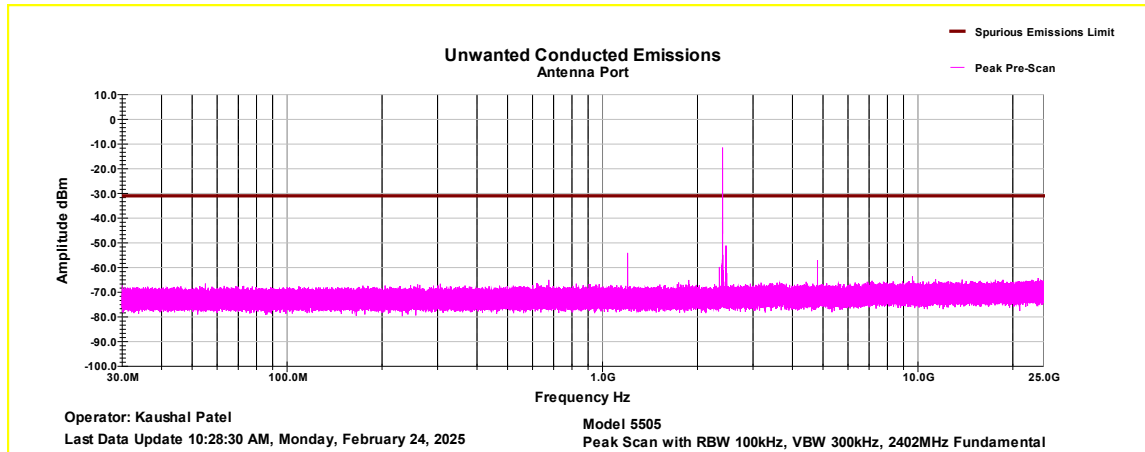


Date: 11.FEB.2025 12:00:56

Model 5505

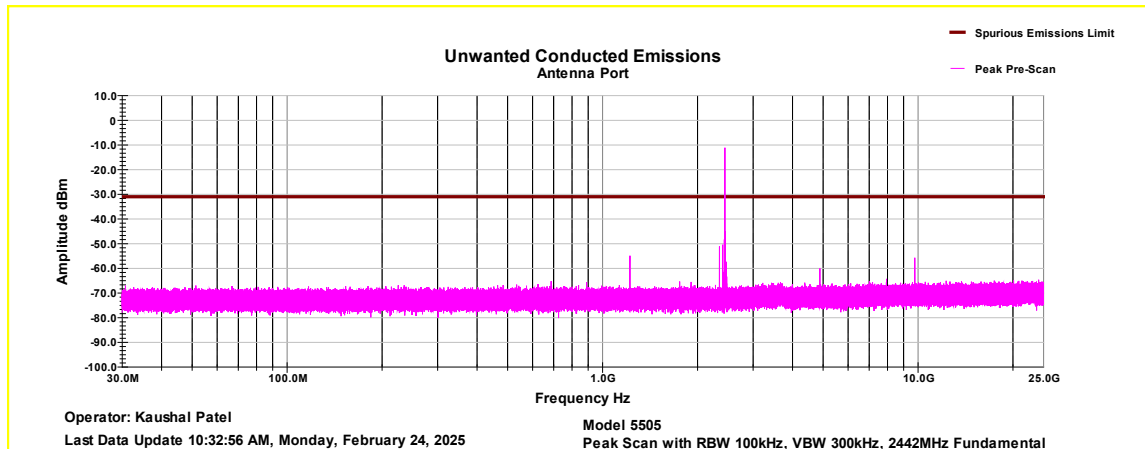
Tx @ Low Channel, 2402 MHz 30MHz -25GHz Conducted Spurious

Plot 4.3



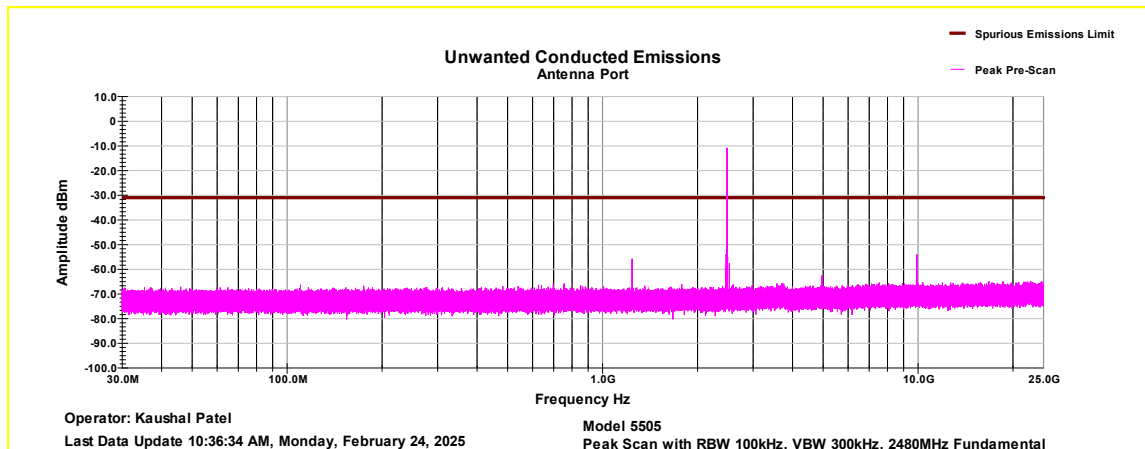
Tx @ Mid Channel, 2440 MHz 30MHz -25GHz Conducted Spurious

Plot 4.4



Tx @ High Channel, 2480 MHz 30MHz -25GHz Conducted Spurious

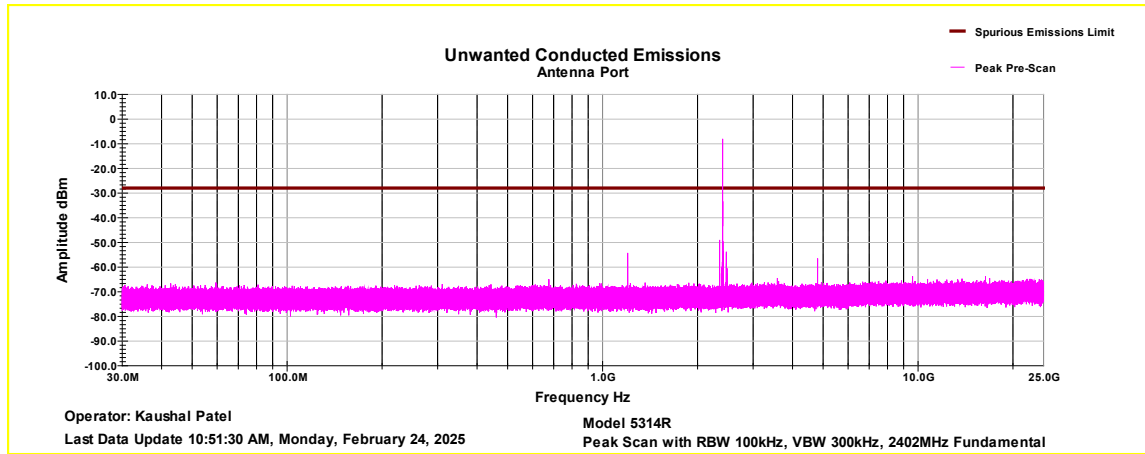
Plot 4.5



Model 5314R

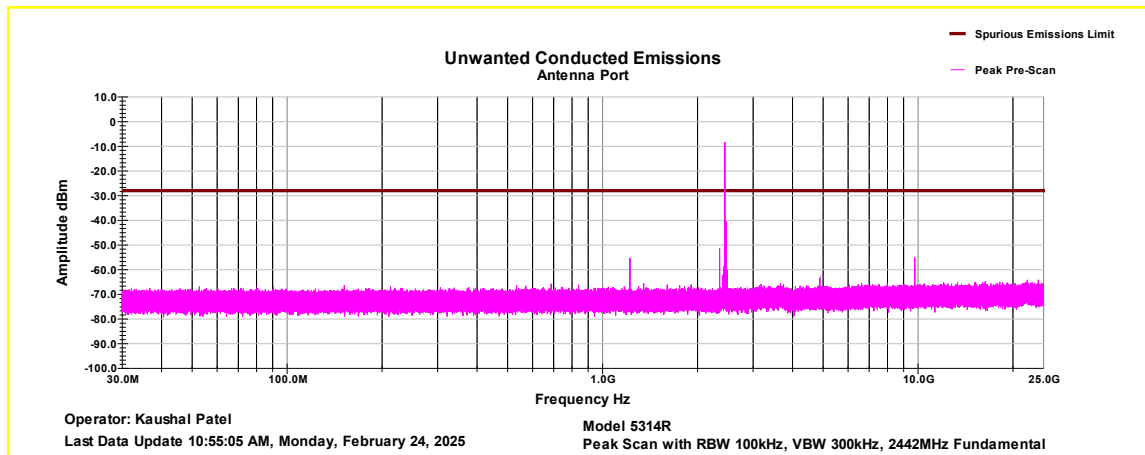
Tx @ Low Channel, 2402 MHz 30MHz -25GHz Conducted Spurious

Plot 4.3



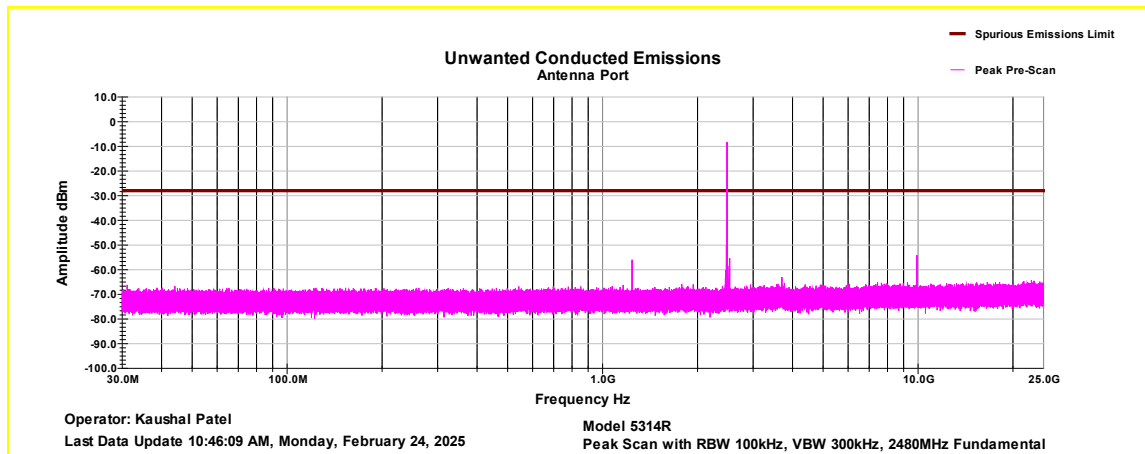
Tx @ Mid Channel, 2440 MHz 30MHz -25GHz Conducted Spurious

Plot 4.4



Tx @ High Channel, 2480 MHz 30MHz -25GHz Conducted Spurious

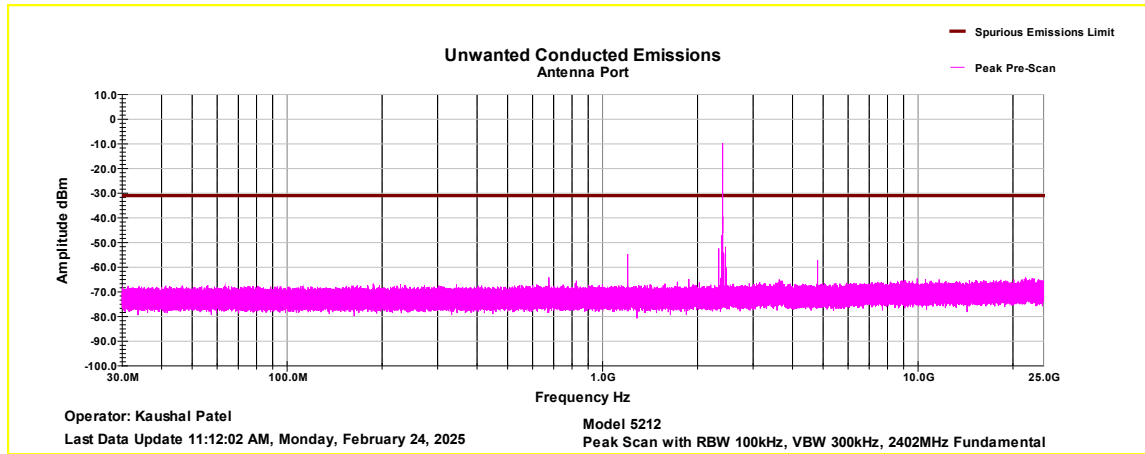
Plot 4.5



Model 5212

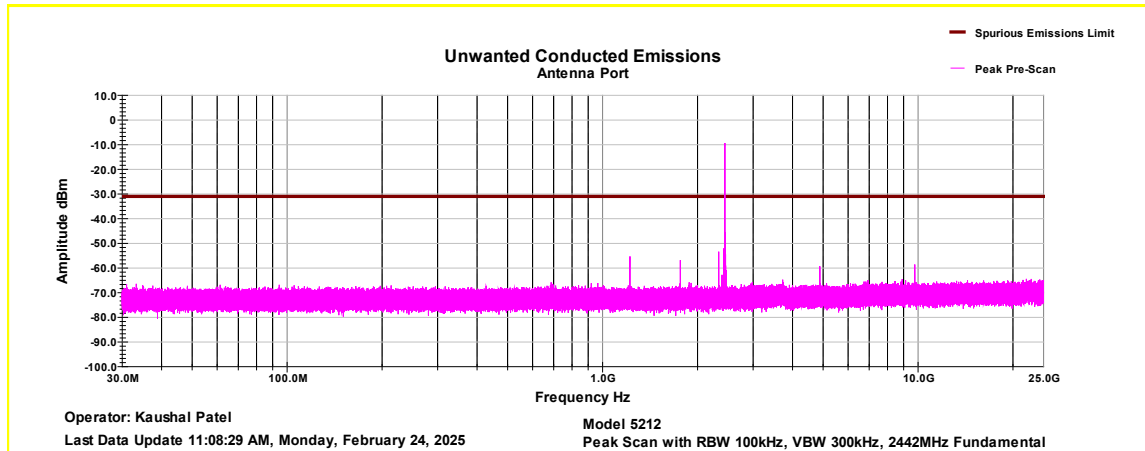
Tx @ Low Channel, 2402 MHz 30MHz -25GHz Conducted Spurious

Plot 4.3



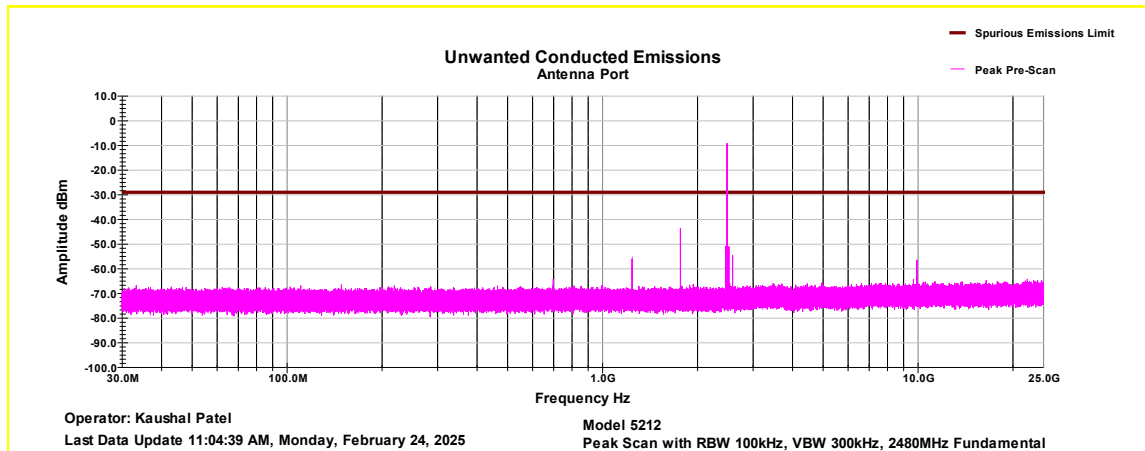
Tx @ Mid Channel, 2440 MHz 30MHz -25GHz Conducted Spurious

Plot 4.4



Tx @ High Channel, 2480 MHz 30MHz -25GHz Conducted Spurious

Plot 4.5



Results

Complies

4.5 Transmitter Radiated Emissions FCC Rules: 15.247(d), 15.209, 15.205; RSS-247;

4.5.1 Requirement

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)).

For out of band radiated emissions (except for frequencies in restricted bands), in any 100 kHz bandwidths outside the EUT pass-band, the RF power shall be at least 20dB (peak) or 30 dB (average) below that of the maximum in-band 100 kHz emissions.

4.5.2 Procedure

Radiated emission measurements were performed from 9 kHz to 26.5 GHz according to the procedure described in ANSI C63.10:2013. Spectrum Analyzer Resolution Bandwidth is 200Hz or greater for frequencies 9kHz to 30MHz, 100 kHz or greater for frequencies 30 MHz to 1000 MHz, 1 MHz for frequencies above 1000 MHz. Above 1000 MHz Peak and Average measurements were performed.

The EUT is placed on a plastic turntable that is 80 cm in height for below 1000MHz and 1.5m in height for above 1GHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters for frequencies above 1 GHz and at 3 meters for frequencies below 1 GHz.

Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place. A preamp was used from 9kHz to 26.5GHz.

All measurements were made with a Peak Detector and compared to QP limits for 30MHz – 1GHz and Peak & Average limits for 1GHz – 26.5GHz.

Data is included of the worst-case configuration (the configuration which resulted in the highest emission levels).

4.5.3 Field Strength Calculation

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$FS = RA + AF + CF - AG$; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where FS = Field Strength in dB(μ V/m)

RA = Receiver Amplitude (including preamplifier) in dB(μ V); AF = Antenna Factor in dB(1/m)

CF = Cable Attenuation Factor in dB; AG = Amplifier Gain in dB

Assume a receiver reading of 52.0 dB(μ V) is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of 32 dB(μ V/m). This value in dB(μ V/m) was converted to its corresponding level in μ V/m.

RA = 52.0 dB(μ V)

AF = 7.4 dB(1/m)

CF = 1.6 dB

AG = 29.0 dB

$FS = 52.0 + 7.4 + 1.6 - 29.0 = 32 \text{ dB}(\mu\text{V/m})$.

Level in μ V/m = Common Antilogarithm $[(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$.

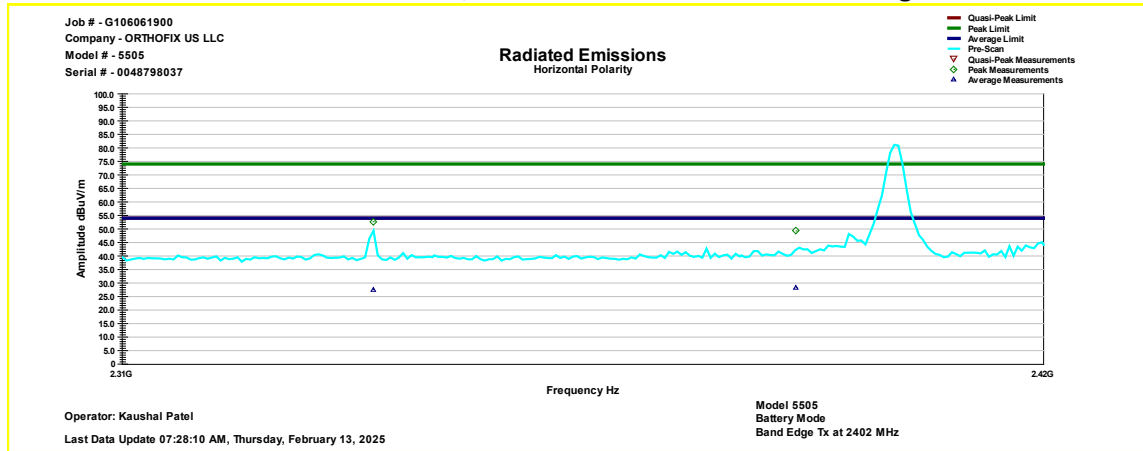
4.5.4 Test Results

All testing in this section were performed by radiated measurements.

Tested By	Test Date	Results
Kaushal Patel	January 31, 2025 To February 22, 2025	Complies

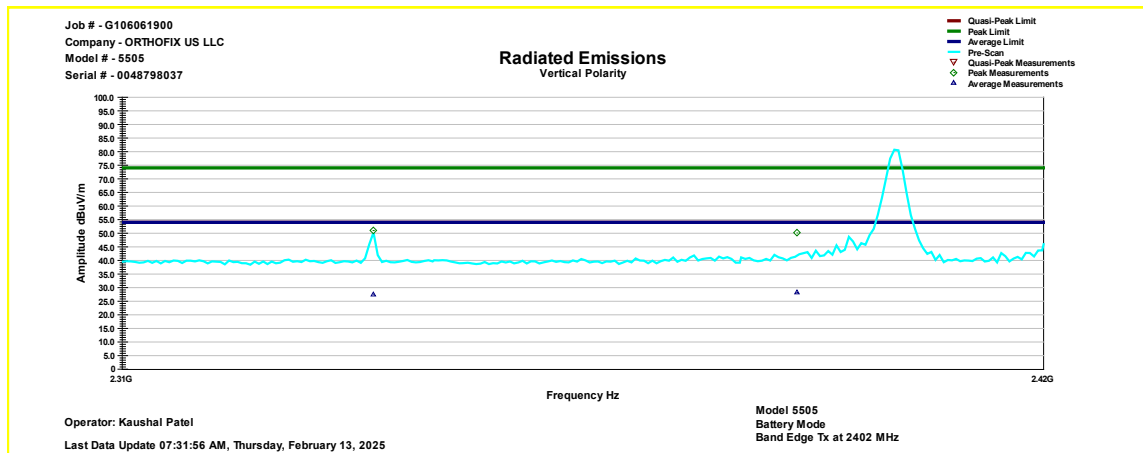
Test Results: 15.209/15.205 Radiated Restricted Band Emissions
Model 5505
Battery Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	52.7	74	-21.3	244	63	Horizontal	-15.7
2390.00	49.3	74	-24.7	300	74	Horizontal	-15.2

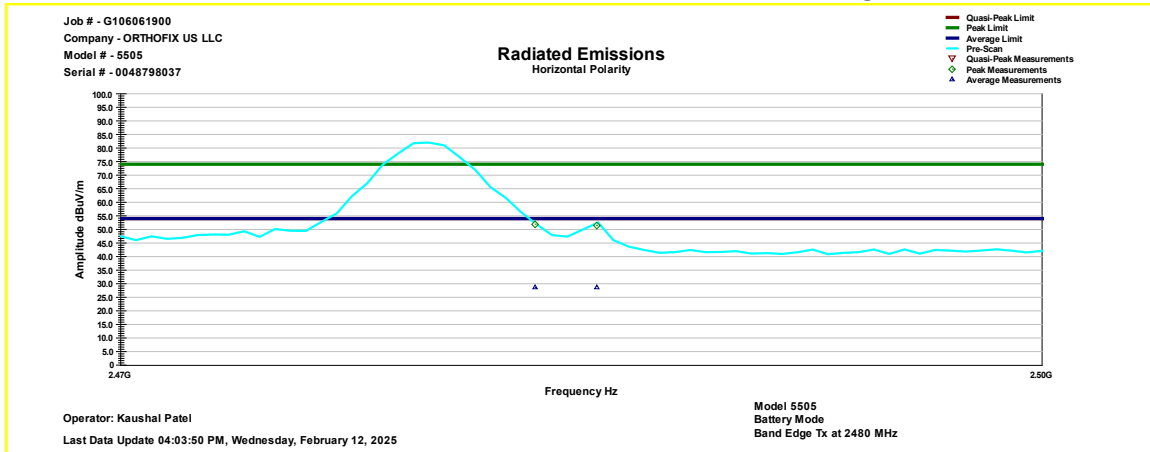
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	27.6	54	-26.4	244	63	Horizontal	-15.7
2390.00	28.3	54	-25.7	300	74	Horizontal	-15.2



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	51	74	-23	99.9	47	Vertical	-15.811
2390.00	50.1	74	-23.9	300	86	Vertical	-15.34

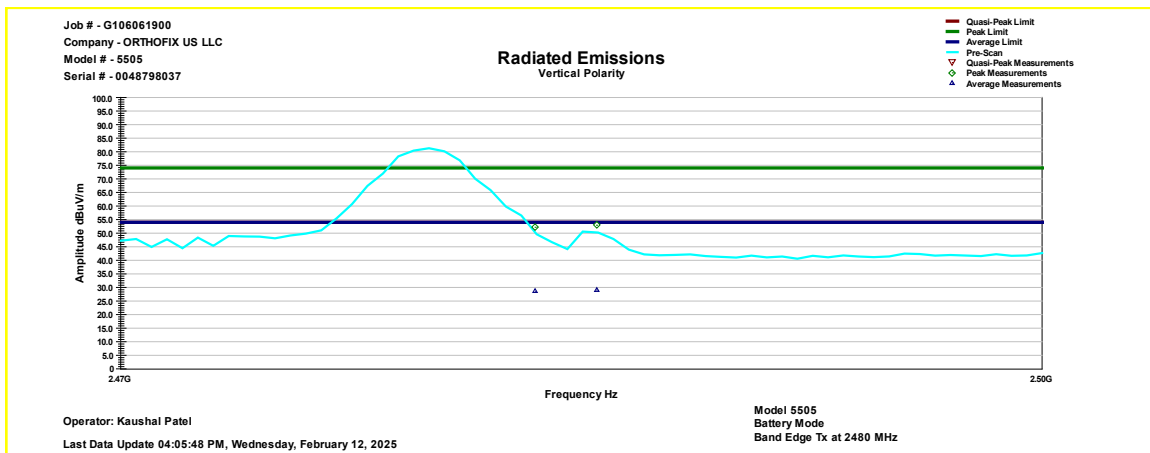
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	27.6	54	-26.4	99.9	47	Vertical	-15.811
2390.00	28.2	54	-25.8	300	86	Vertical	-15.34

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	51.9	74	-22.1	250	42	Horizontal	-14.7
2485.45	51.5	74	-22.5	250	50	Horizontal	-14.7

Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.6	54	-25.4	250	42	Horizontal	-14.7
2485.45	28.9	54	-25.1	250	50	Horizontal	-14.7

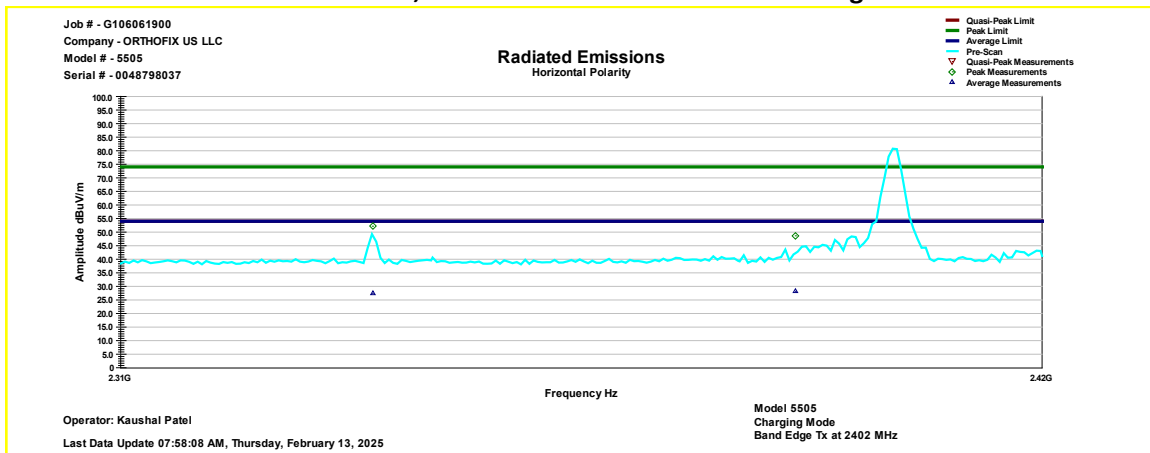


Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	52.2	74	-21.8	203	12	Vertical	-14.82
2485.45	52.9	74	-21.1	100	46	Vertical	-14.82

Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.6	54	-25.4	203	12	Vertical	-14.82
2485.45	29	54	-25	100	46	Vertical	-14.82

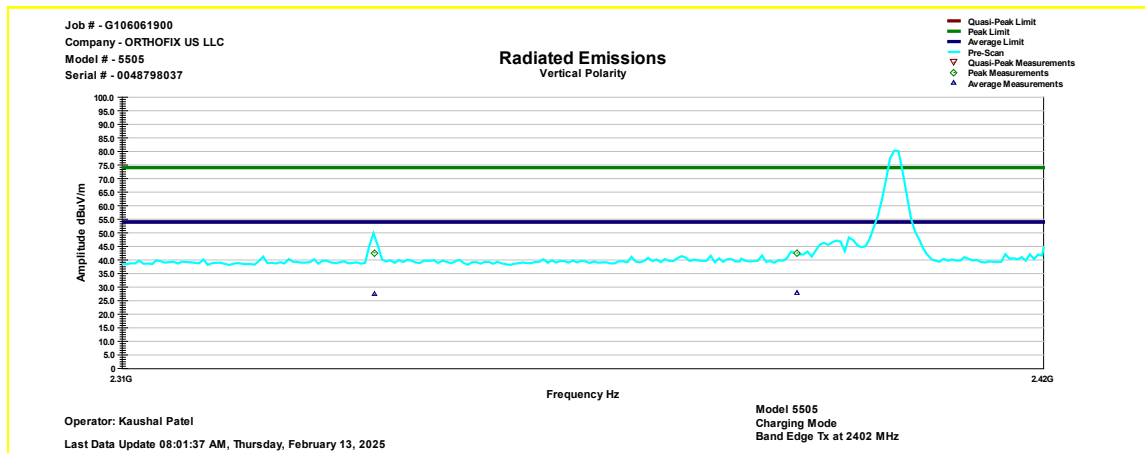
Charging Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance 2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	52.1	74	-21.9	183	63	Horizontal	-15.7
2390.00	48.6	74	-25.4	123	96	Horizontal	-15.2

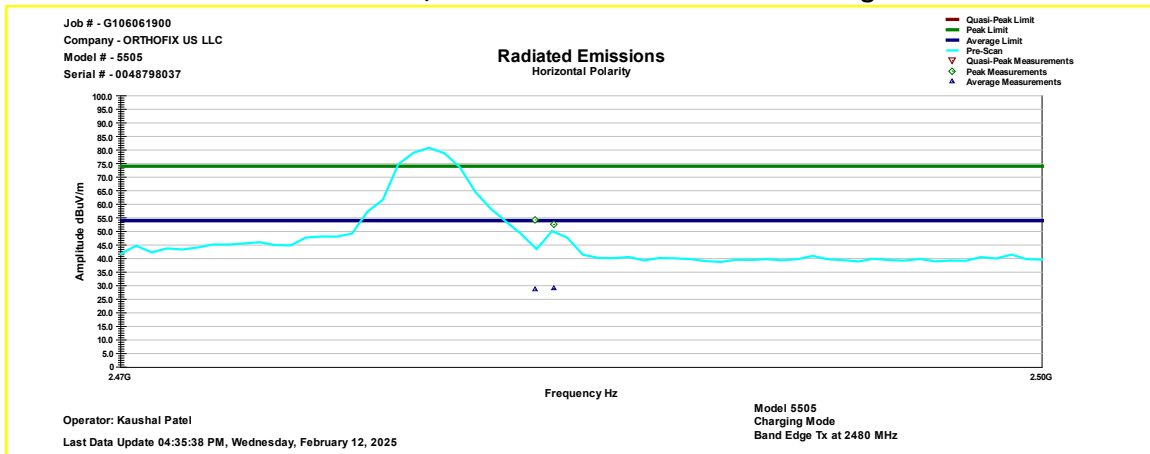
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.4	54	-26.5	183	63	Horizontal	-15.7
2390.00	28.2	54	-25.8	123	96	Horizontal	-15.2



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	42.7	74	-31.3	239	45	Vertical	-15.71
2390.00	42.6	74	-31.4	376	284	Vertical	-15.34

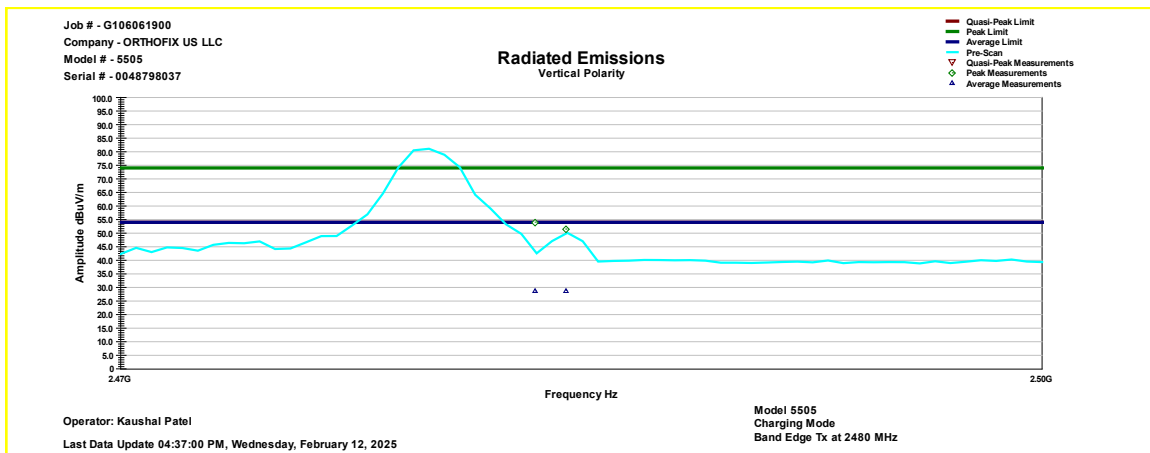
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.3	54	-26.6	239	45	Vertical	-15.71
2390.00	28	54	-26	376	284	Vertical	-15.34

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	54.2	74	-19.8	166	47	Horizontal	-14.7
2485.05	52.5	74	-21.5	100	58	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.7	54	-25.3	166	47	Horizontal	-14.7
2485.05	29	54	-25	100	58	Horizontal	-14.7

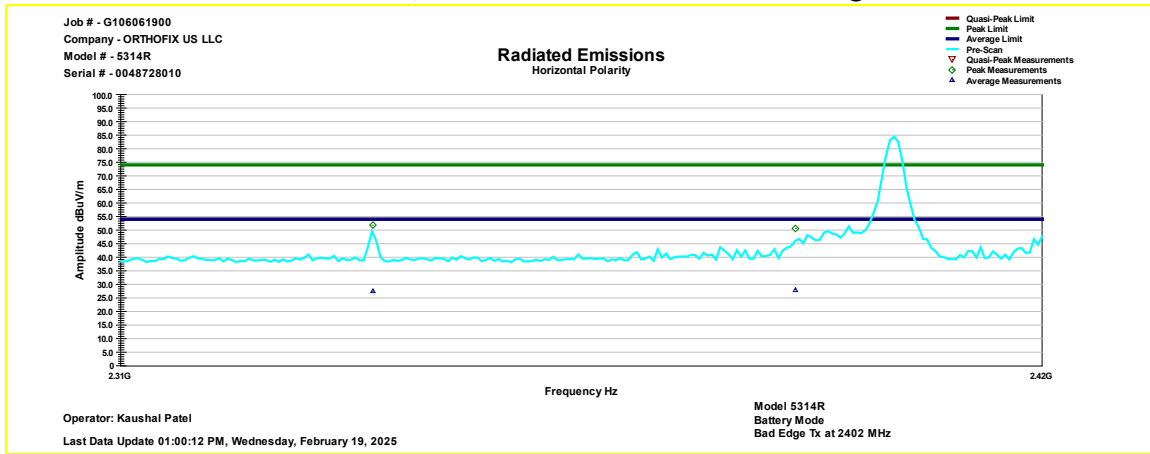


Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	54	74	-20	100	41	Vertical	-14.82
2485.45	51.5	74	-22.5	150	31	Vertical	-14.82

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.7	54	-25.3	100	41	Vertical	-14.82
2485.45	28.9	54	-25.1	150	31	Vertical	-14.82

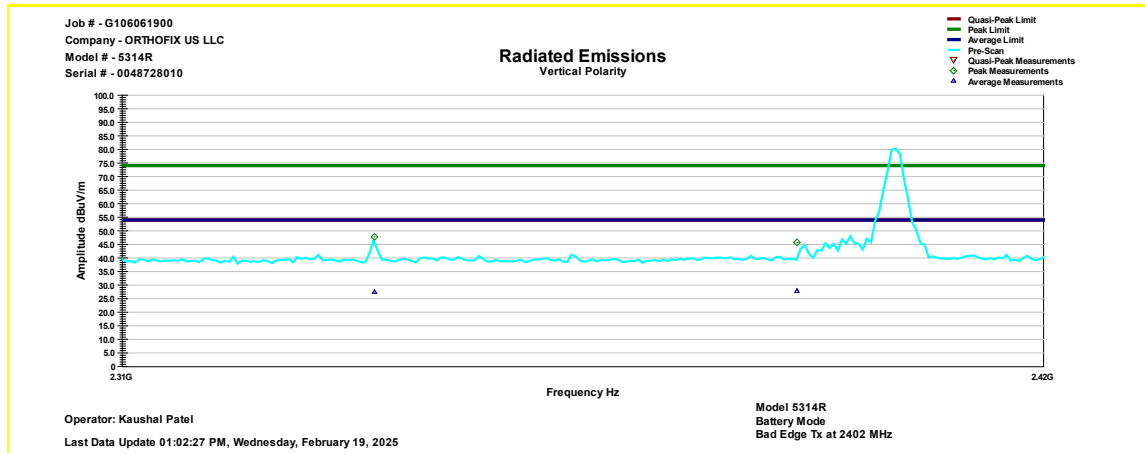
Model 5314R
Battery Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	51.8	74	-22.2	250	154	Horizontal	-15.7
2390.00	50.7	74	-23.3	316	143	Horizontal	-15.2

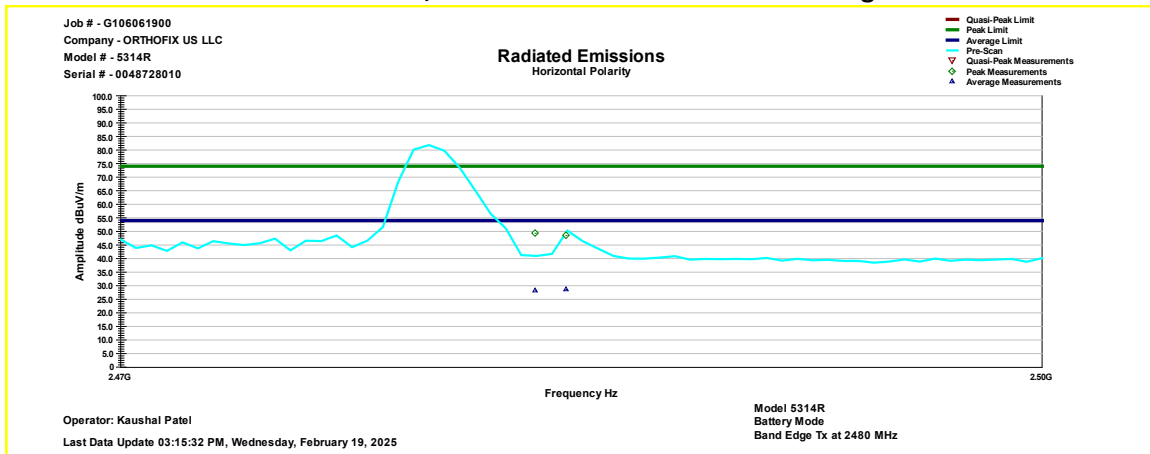
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	27.5	54	-26.5	250	154	Horizontal	-15.7
2390.00	28	54	-26	316	143	Horizontal	-15.2



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	47.7	74	-26.3	123	81	Vertical	-15.811
2390.00	45.7	74	-28.3	154	85	Vertical	-15.34

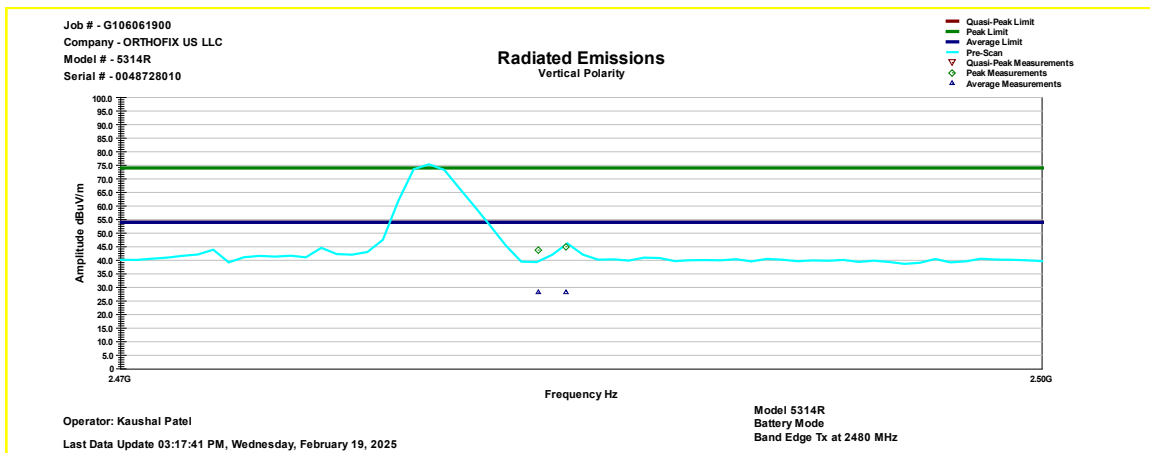
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	27.4	54	-26.5	123	81	Vertical	-15.811
2390.00	27.9	54	-26.1	154	85	Vertical	-15.34

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	49.3	74	-24.7	350	236	Horizontal	-14.7
2485.45	48.5	74	-25.5	350	219	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.3	54	-25.7	350	236	Horizontal	-14.7
2485.45	28.6	54	-25.4	350	219	Horizontal	-14.7

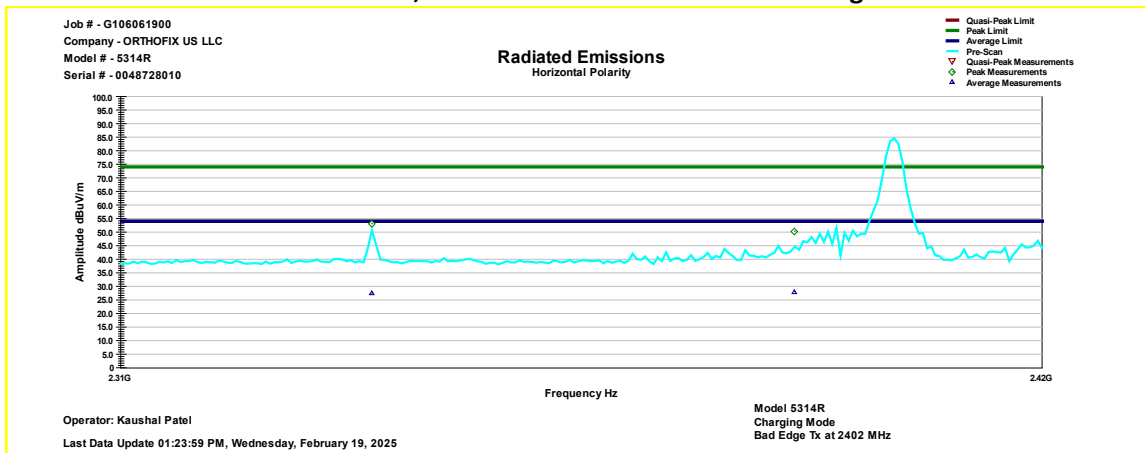


Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	43.7	74	-30.3	101	91	Vertical	-14.82
2485.45	45	74	-29	100	90	Vertical	-14.82

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.2	54	-25.8	101	91	Vertical	-14.82
2485.45	28.5	54	-25.5	100	90	Vertical	-14.82

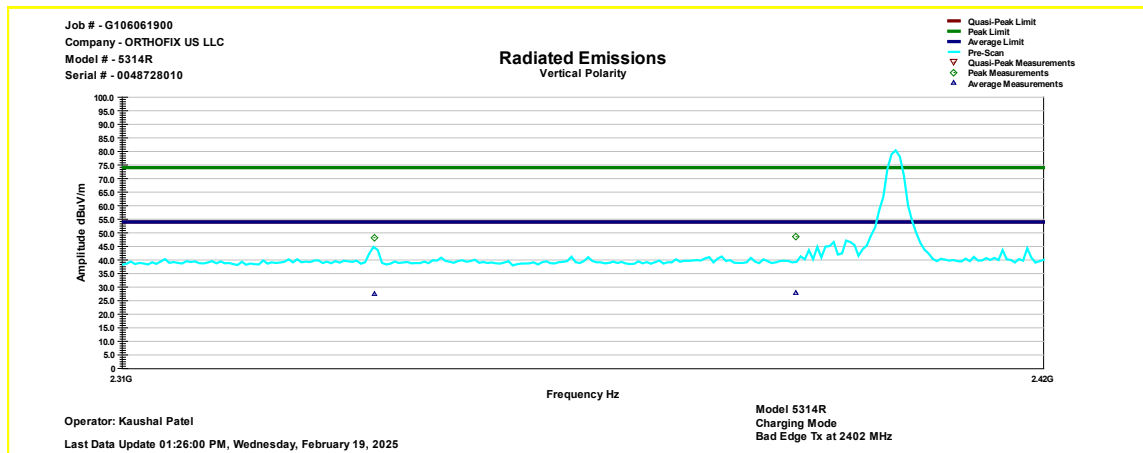
Charging Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance 2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	53.1	74	-20.9	339	244	Horizontal	-15.7
2390.00	50.3	74	-23.7	250	97	Horizontal	-15.2

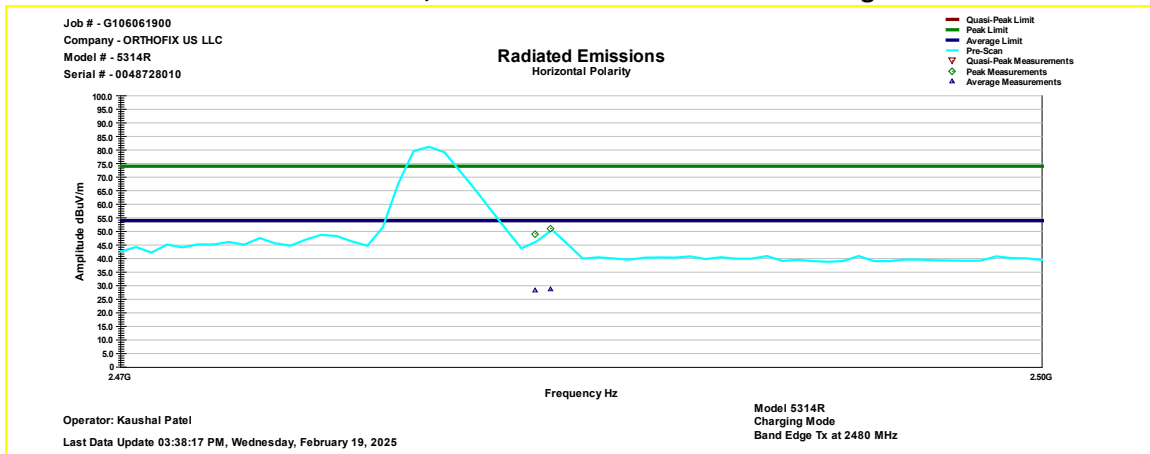
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.5	54	-26.5	339	244	Horizontal	-15.7
2390.00	28	54	-26	250	97	Horizontal	-15.2



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	48.2	74	-25.8	100	146	Vertical	-15.71
2390.00	48.6	74	-25.4	184	115	Vertical	-15.34

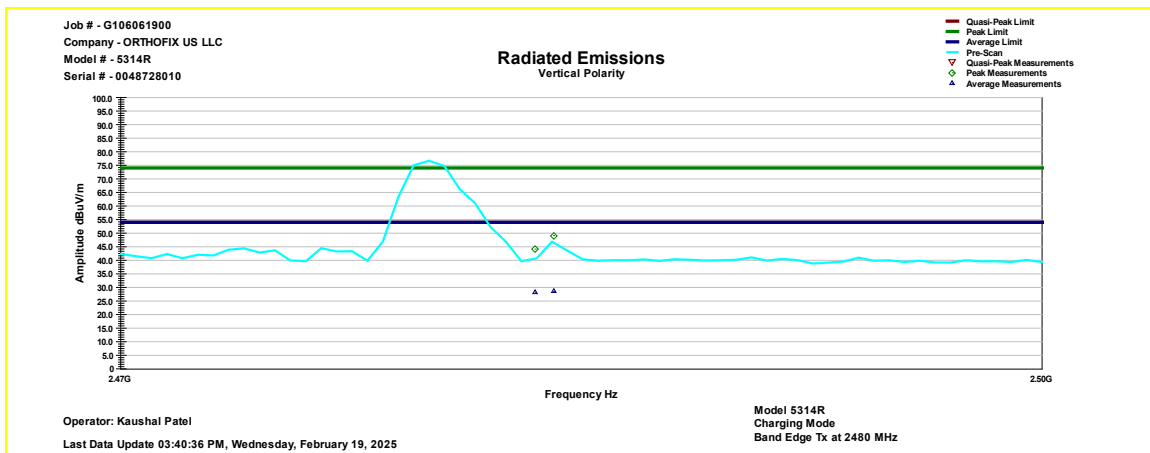
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.4	54	-26.6	100	146	Vertical	-15.71
2390.00	27.9	54	-26.1	184	115	Vertical	-15.34

**Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit**



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	49.1	74	-24.9	350	237	Horizontal	-14.7
2484.05	51.1	74	-22.9	306	98	Horizontal	-14.7

Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.4	54	-25.6	350	237	Horizontal	-14.7
2484.05	28.7	54	-25.3	306	98	Horizontal	-14.7

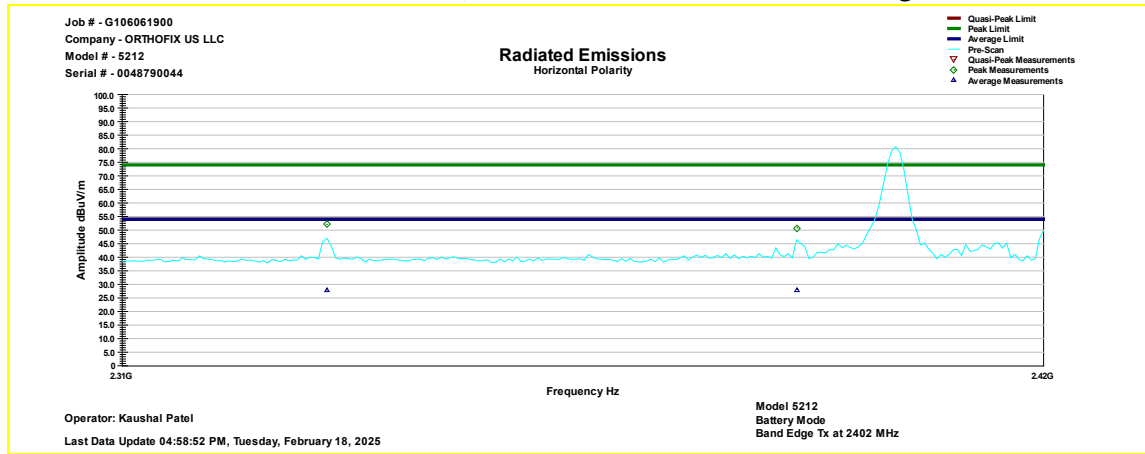


Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	44.1	74	-29.9	247	93	Vertical	-14.82
2485.45	49.1	74	-24.9	340	91	Vertical	-14.82

Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.2	54	-25.7	247	93	Vertical	-14.82
2485.45	28.6	54	-25.4	340	91	Vertical	-14.82

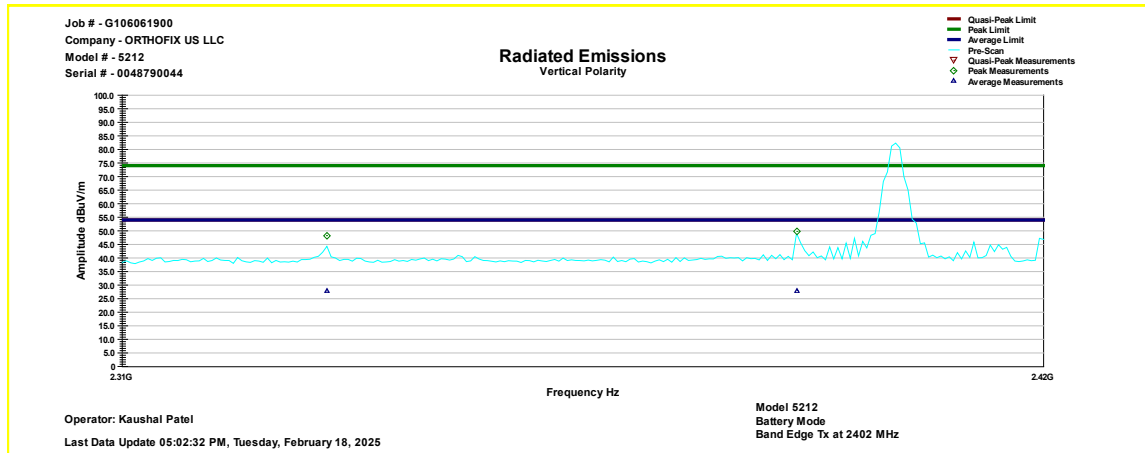
Model 5212
Battery Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.95	52.1	74	-21.9	332	18	Horizontal	-15.7
2390.00	50.8	74	-23.2	150	20	Horizontal	-15.2

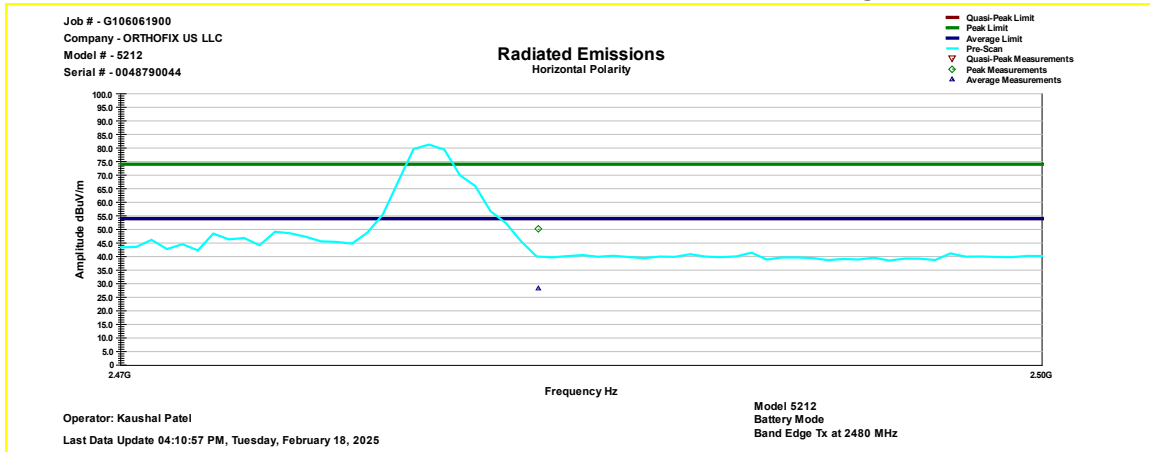
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.95	27.9	54	-26.1	332	18	Horizontal	-15.7
2390.00	28.1	54	-25.9	150	20	Horizontal	-15.2



Freq. MHz	Pk@3m dB(μV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.95	48.2	74	-25.8	244	327	Vertical	-15.811
2390.00	49.8	74	-24.2	347	92	Vertical	-15.34

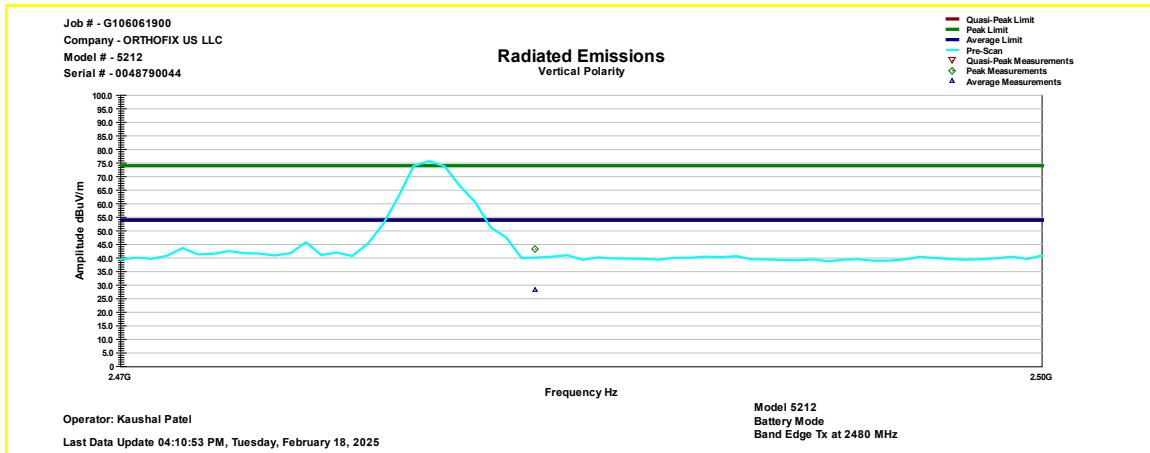
Freq. MHz	Avg@3m dB(μV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.95	27.9	54	-26.1	244	327	Vertical	-15.811
2390.00	28	54	-26	347	92	Vertical	-15.34

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	50	74	-24	302	326	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.3	54	-25.6	302	326	Horizontal	-14.7

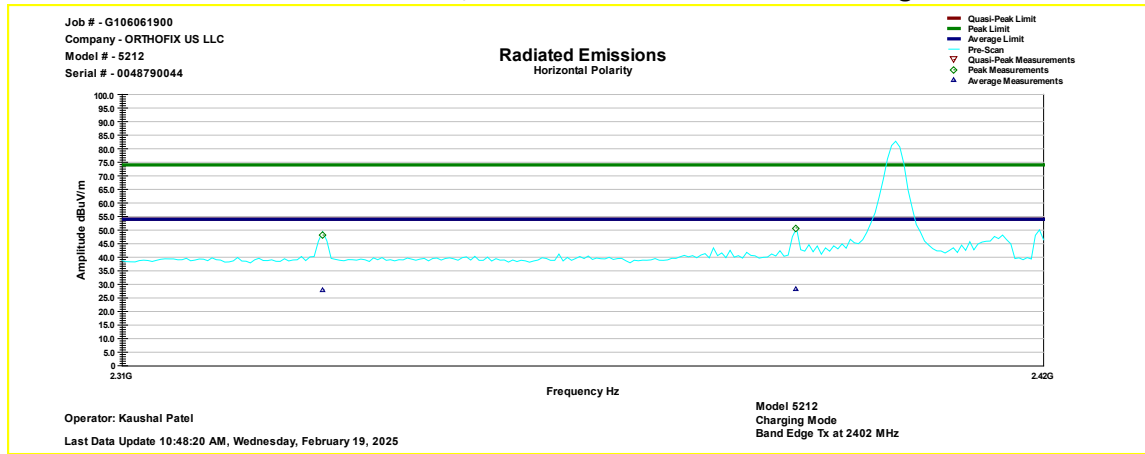


Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	43.3	74	-30.7	150	267	Vertical	-14.82

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.2	54	-25.8	150	267	Vertical	-14.82

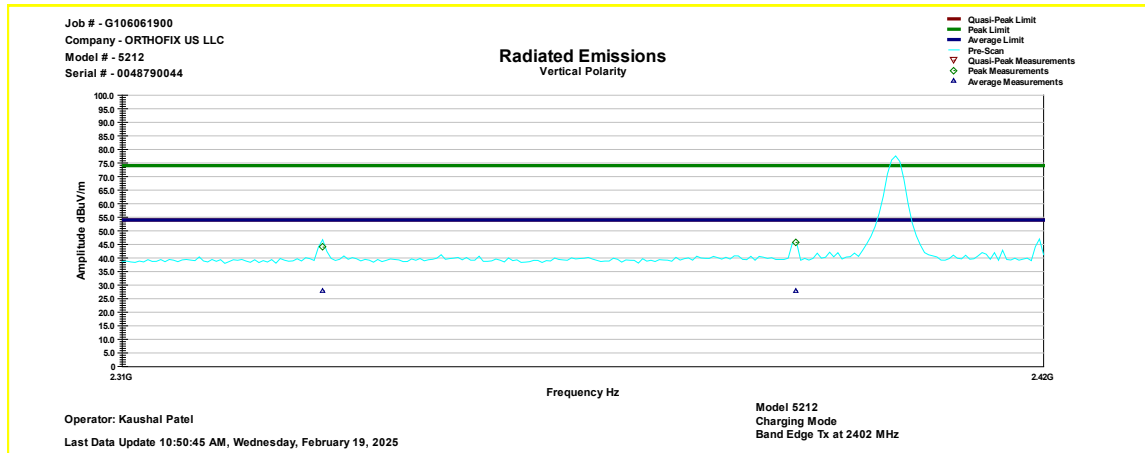
Charging Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance 2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.55	48.1	74	-25.9	105	222	Horizontal	-15.7
2390.00	50.8	74	-23.2	105	226	Horizontal	-15.2

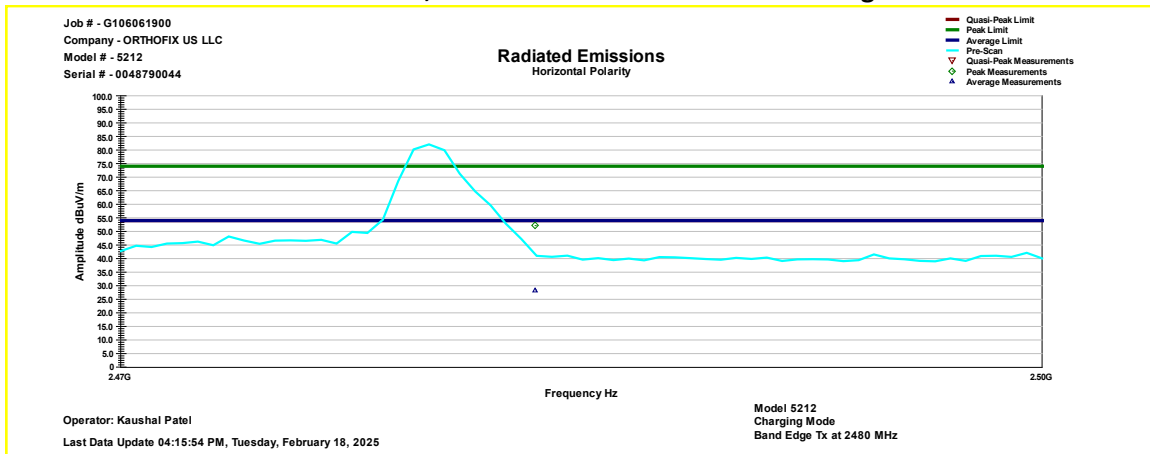
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.55	27.9	54	-26.1	105	222	Horizontal	-15.7
2390.00	28.1	54	-25.8	105	226	Horizontal	-15.2



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.55	44	74	-30	175	181	Vertical	-15.71
2390.00	45.7	74	-28.3	348	119	Vertical	-15.34

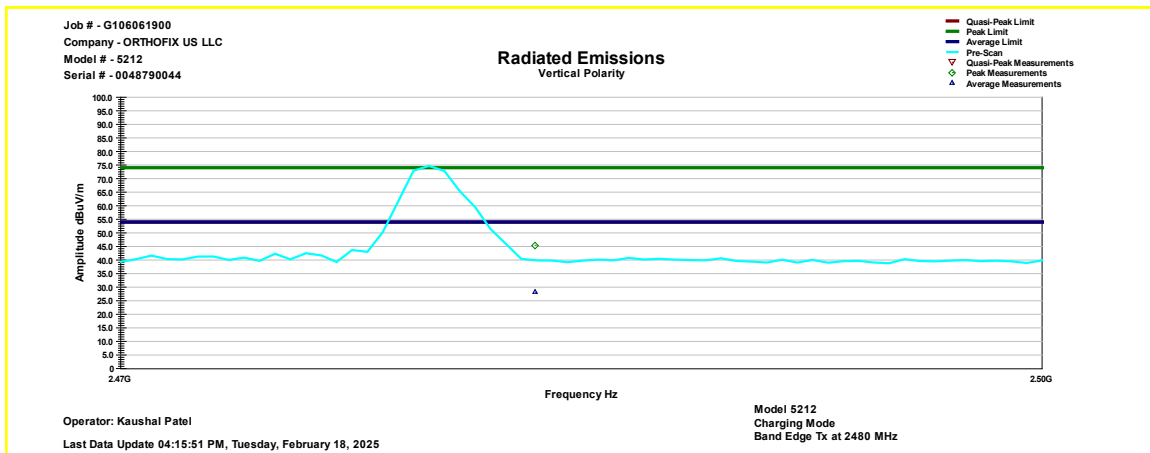
Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2333.55	27.9	54	-26.1	175	181	Vertical	-15.71
2390.00	28	54	-26	348	119	Vertical	-15.34

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	52.1	74	-21.9	194	18	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.4	54	-25.5	194	18	Horizontal	-14.7



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	45.4	74	-28.6	325	233	Vertical	-14.82

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	28.1	54	-25.8	325	233	Vertical	-14.82

Results

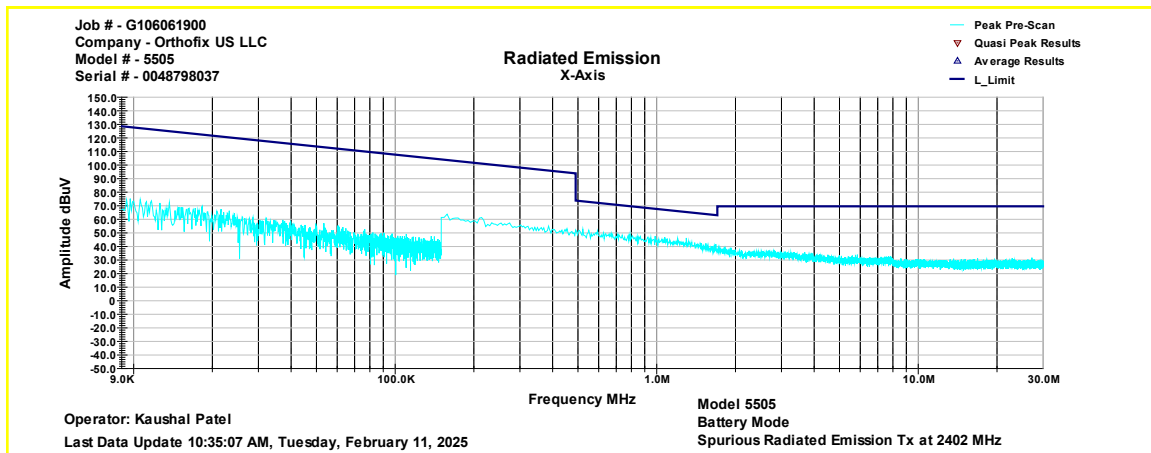
Complies

Model 5505

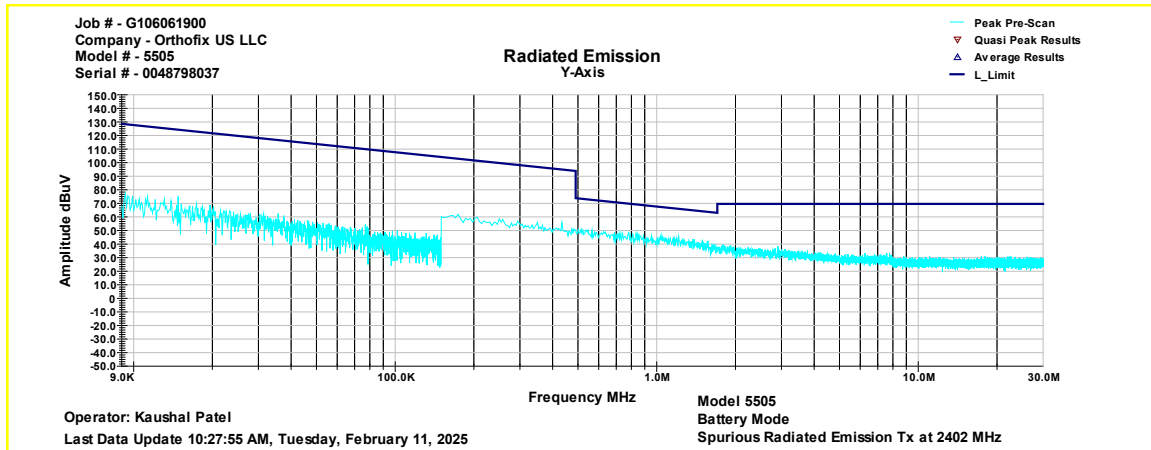
Battery Mode

Test Results: Part 15.209 Radiated Spurious Emissions Low Channel, Tx at 2402MHz

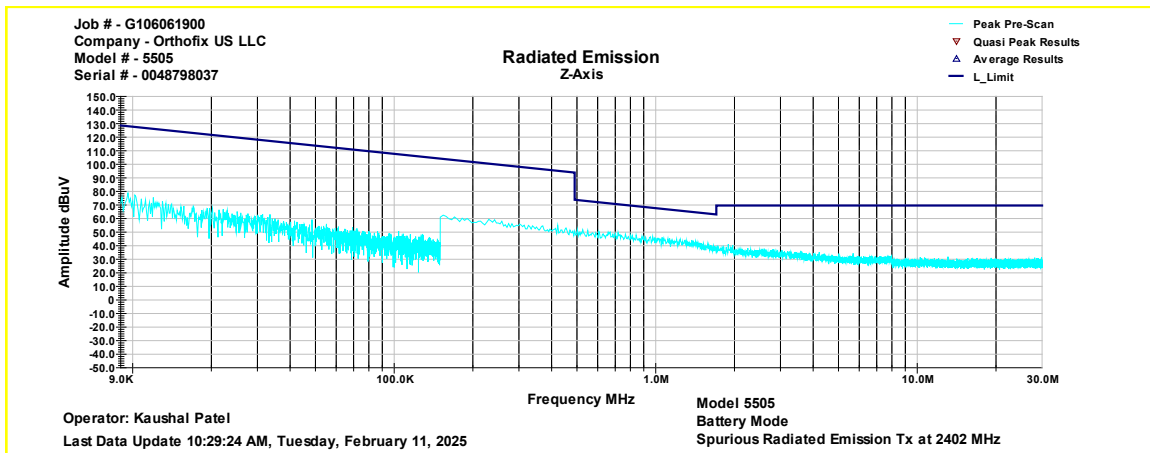
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



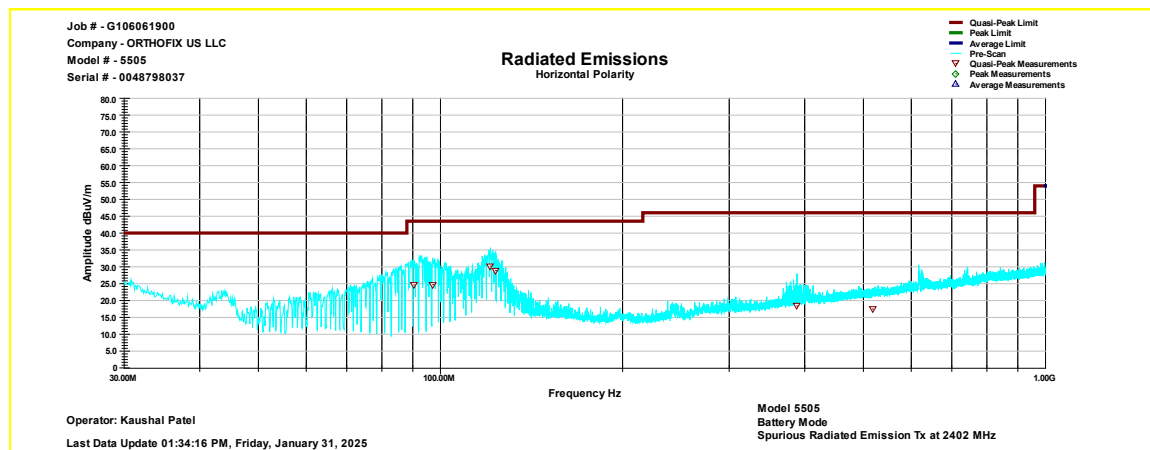
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



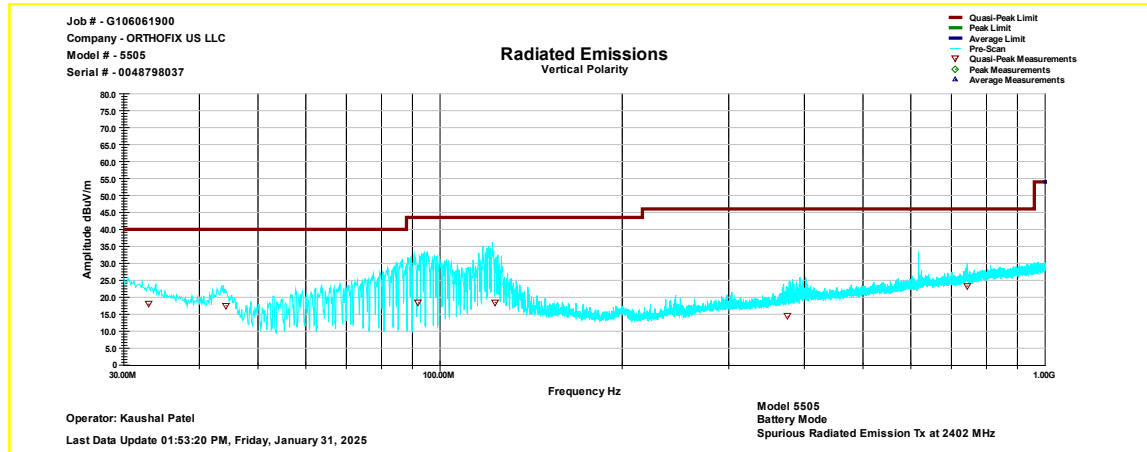
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
90.35	24.6	43.5	-18.9	163	64	Horizontal	-20.4
97.05	24.7	43.5	-18.8	132	46	Horizontal	-18.7
120.85	30.2	43.5	-13.3	279	202	Horizontal	-14.3
123.25	28.9	43.5	-14.7	224	246	Horizontal	-14.3
388.25	18.4	46	-27.7	324	21	Horizontal	-10.5
517.35	17.4	46	-28.6	222	177	Horizontal	-7.4

Note: Correction = AF + CF - Preamp

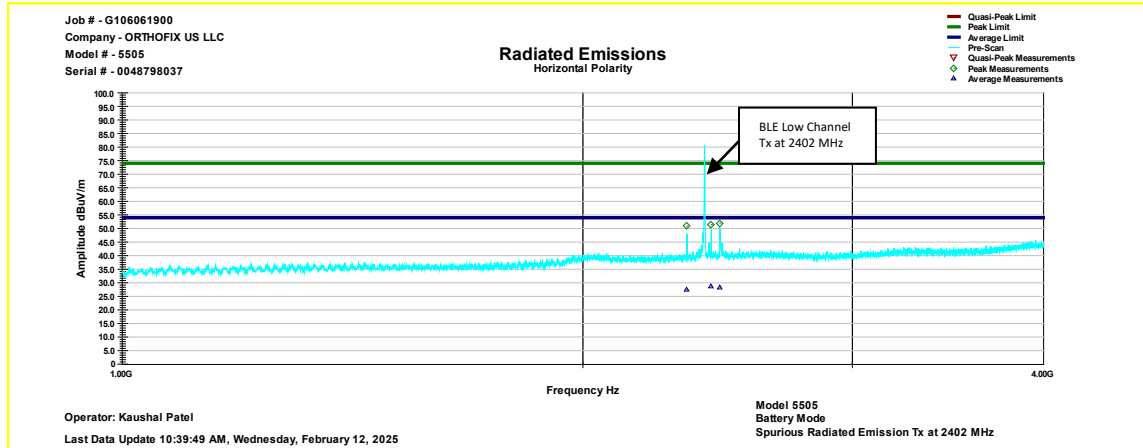
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
32.95	17.9	40	-22.1	302	164	Vertical	-9.0
44.25	17.5	40	-22.5	249	314	Vertical	-17.1
92.05	18.3	43.5	-25.2	349	293	Vertical	-20.0
123.41	18.4	43.5	-25.1	250	303	Vertical	-14.3
375.65	14.4	46	-31.6	110	317	Vertical	-10.8
742.35	23.3	46	-22.7	111	20	Vertical	-3.1

Note: Correction = AF + CF - Preamp

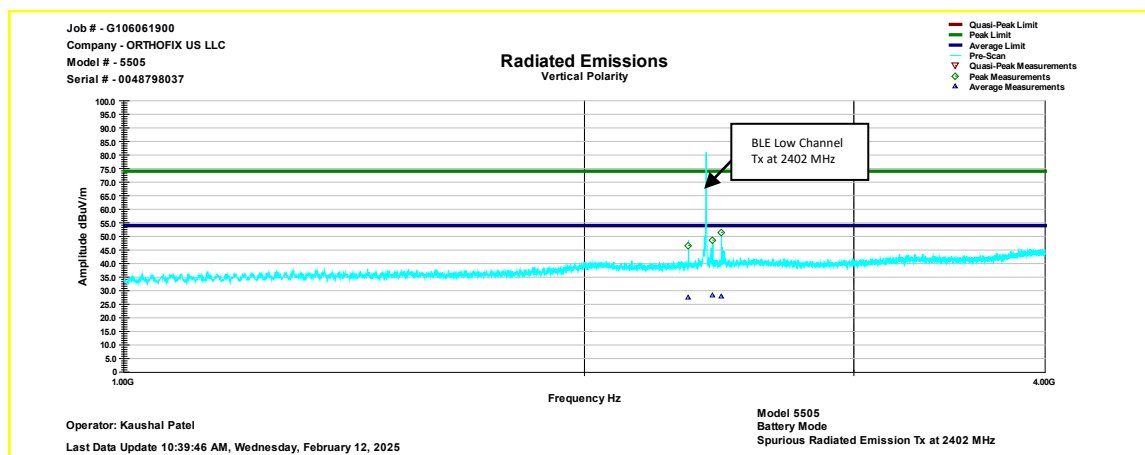
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2338.95	50.8	74	-23.2	202	64	Horizontal	-15.7
2425.95	51.4	74	-22.6	226	17	Horizontal	-14.8
2457.45	52	74	-22	123	18	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2338.95	27.4	54	-26.5	202	64	Horizontal	-15.7
2425.95	28.7	54	-25.3	226	17	Horizontal	-14.8
2457.45	28.4	54	-25.6	123	18	Horizontal	-14.7

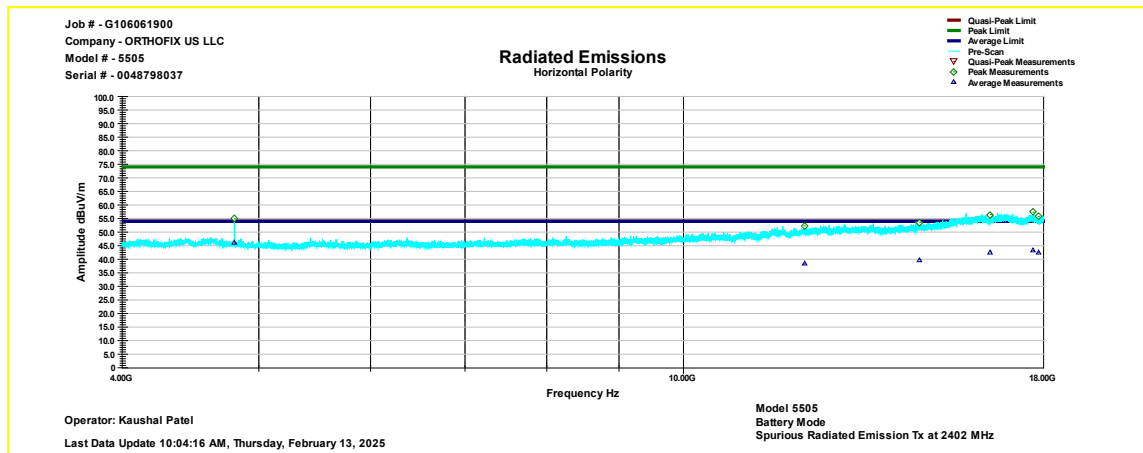
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	46.7	74	-27.3	131	18	Vertical	-15.81
2426.45	48.6	74	-25.4	99.9	51	Vertical	-15.19
2457.95	51.5	74	-22.5	123	17	Vertical	-14.95

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.45	27.4	54	-26.6	131	18	Vertical	-15.81
2426.45	28.3	54	-25.7	99.9	51	Vertical	-15.19
2457.95	28	54	-26	123	17	Vertical	-14.95

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

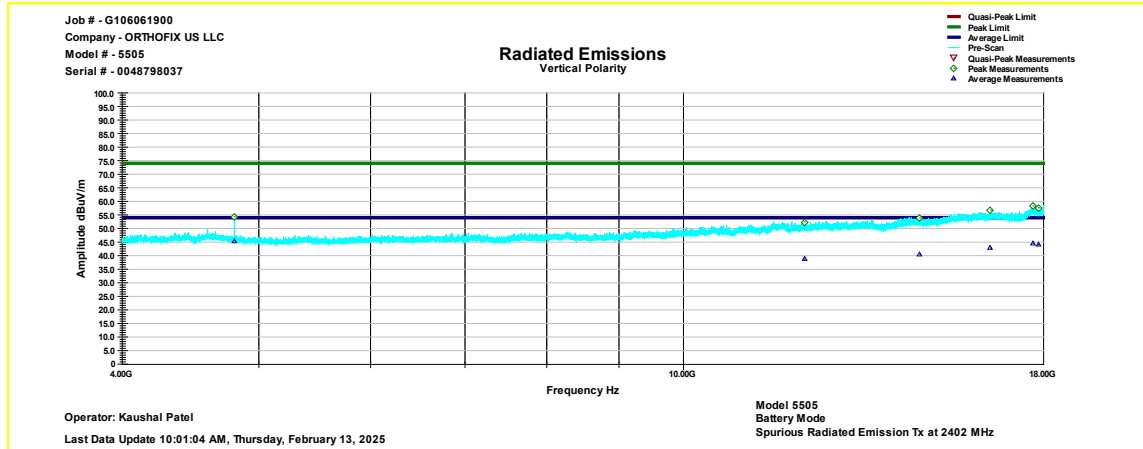
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	54.9	74	-19.1	306	273	Horizontal	4.4
12177.05	52.3	74	-21.7	100	256	Horizontal	6
14706.95	53.6	74	-20.4	345	169	Horizontal	9
16507.95	56.4	74	-17.6	397	118	Horizontal	11.9
17692.95	57.3	74	-16.7	138	66	Horizontal	13
17847.05	55.8	74	-18.2	400	260	Horizontal	13.1

Note: Correction = AF + CF - Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	45.4	54	-8.6	306	273	Horizontal	4.4
12177.05	38.7	54	-15.3	100	256	Horizontal	6
14706.95	40.5	54	-13.5	345	169	Horizontal	9
16507.95	42.8	54	-11.2	397	118	Horizontal	11.9
17692.95	44.5	54	-9.5	138	66	Horizontal	13
17847.05	44.1	54	-9.9	400	260	Horizontal	13.1

Note: Correction = AF + CF - Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	54.3	74	-19.7	350	226	Vertical	3.05
12176.95	52.4	74	-21.6	394	56	Vertical	3.33
14707.05	53.9	74	-20.1	290	90	Vertical	5.93
16507.95	56.8	74	-17.2	99.9	249	Vertical	8.06
17692.95	58.3	74	-15.7	115	217	Vertical	10.15
17846.95	57.6	74	-16.4	101	263	Vertical	10.66

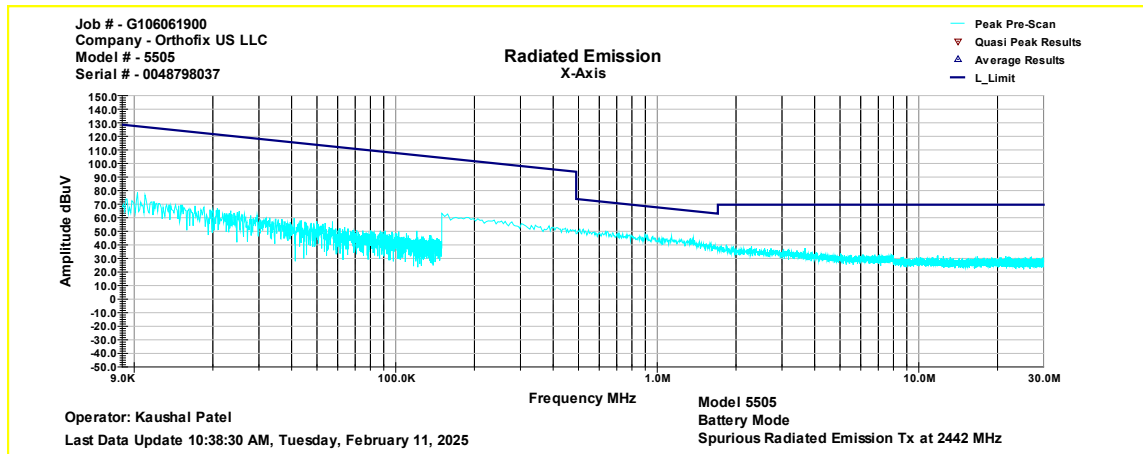
Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	45.4	54	-8.6	350	226	Vertical	3.05
12176.95	38.7	54	-15.3	394	56	Vertical	3.33
14707.05	40.5	54	-13.5	290	90	Vertical	5.93
16507.95	42.8	54	-11.2	99.9	249	Vertical	8.06
17692.95	44.5	54	-9.5	115	217	Vertical	10.15
17846.95	44.1	54	-9.9	101	263	Vertical	10.66

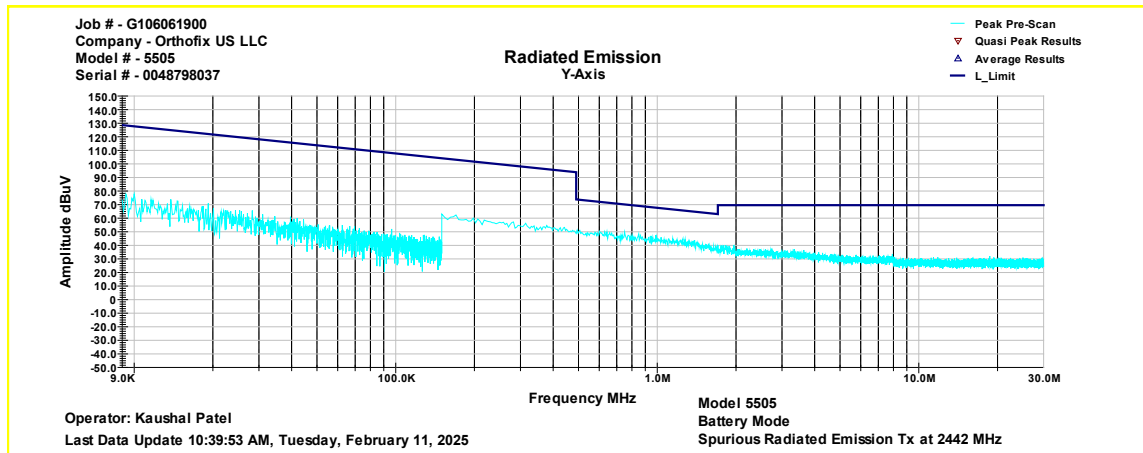
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions Mid Channel, Tx at 2442MHz

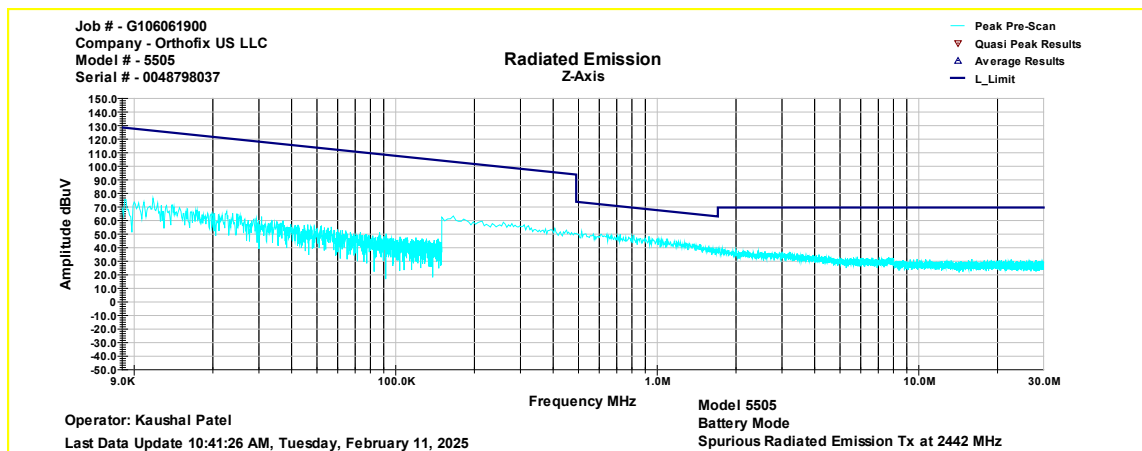
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



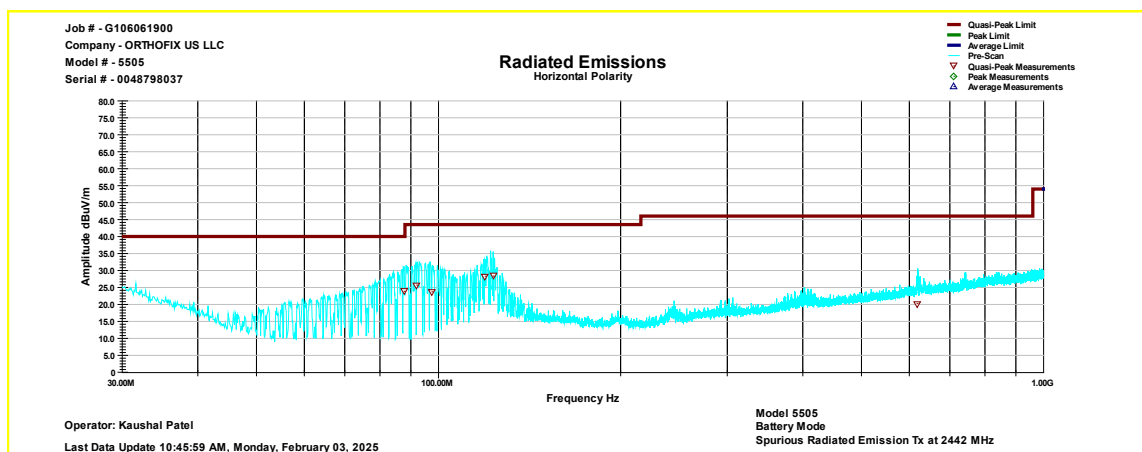
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



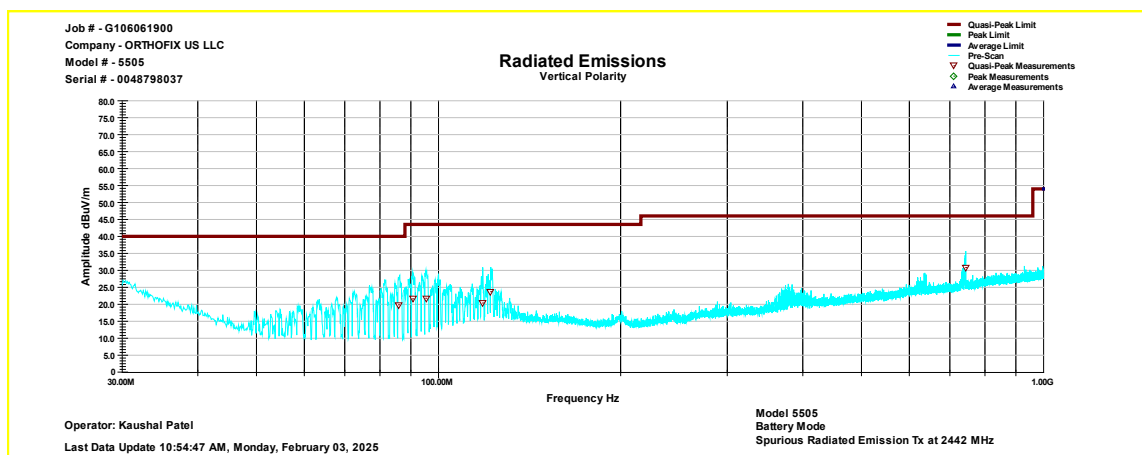
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
87.75	23.8	40	-16.2	207	53	Horizontal	-20.7
92.05	25.7	43.5	-17.8	324	50	Horizontal	-20
97.51	23.7	43.5	-19.8	149	23	Horizontal	-18.5
119.45	28.3	43.5	-15.2	249	63	Horizontal	-14.4
123.11	28.3	43.5	-15.2	207	246	Horizontal	-14.3
617.85	20.2	46	-25.8	150	22	Horizontal	-5.2

Note: Correction = AF + CF - Preamp

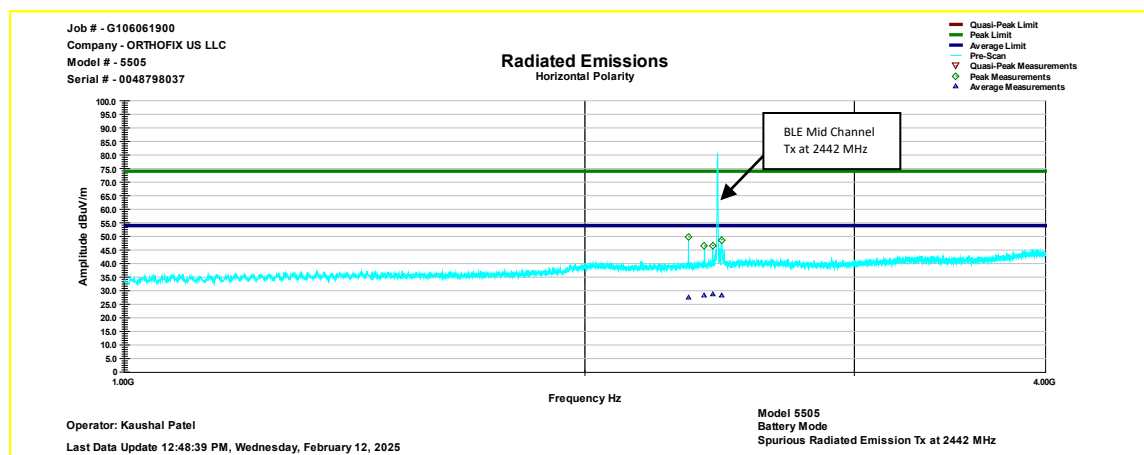
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
85.85	19.8	40	-20.2	347	143	Vertical	-20.8
90.61	21.6	43.5	-21.9	350	317	Vertical	-20.4
95.25	21.8	43.5	-21.8	349	312	Vertical	-19.2
118.25	20.4	43.5	-23.2	235	306	Vertical	-14.6
121.95	23.7	43.5	-19.8	350	128	Vertical	-14.3
743.55	30.8	46	-15.2	249	323	Vertical	-3.1

Note: Correction = AF + CF - Preamp

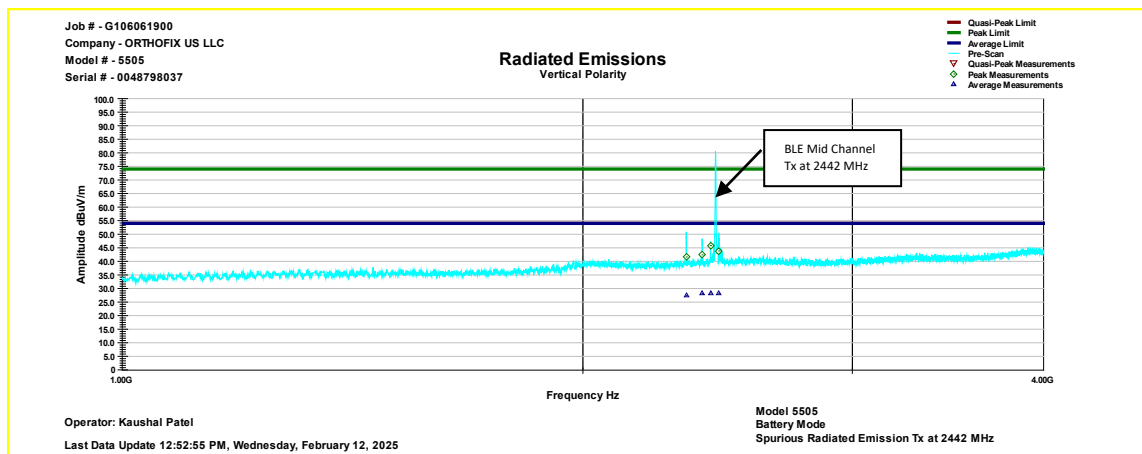
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2337.55	49.8	74	-24.2	109	54	Horizontal	-15.7
2394.05	46.5	74	-27.5	179	52	Horizontal	-15.1
2424.05	46.6	74	-27.4	238	193	Horizontal	-14.8
2455.55	48.8	74	-25.2	350	18	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2337.55	27.4	54	-26.6	109	54	Horizontal	-15.7
2394.05	28.3	54	-25.7	179	52	Horizontal	-15.1
2424.05	28.5	54	-25.4	238	193	Horizontal	-14.8
2455.55	28.4	54	-25.6	350	18	Horizontal	-14.7

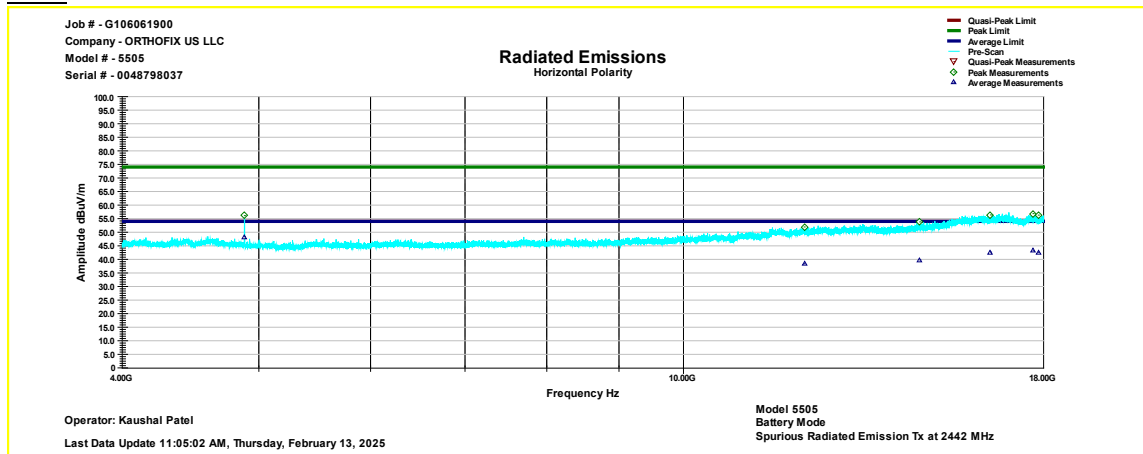
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2336.55	41.6	74	-32.4	123	49	Vertical	-15.81
2392.95	42.4	74	-31.6	174	42	Vertical	-15.34
2423.05	45.8	74	-28.2	344	43	Vertical	-15.20
2454.05	43.8	74	-30.2	344	17	Vertical	-14.96

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2336.55	27.3	54	-26.6	123	49	Vertical	-15.81
2392.95	28.1	54	-25.9	174	42	Vertical	-15.34
2423.05	28.3	54	-25.7	344	43	Vertical	-15.20
2454.05	28.2	54	-25.8	344	17	Vertical	-14.96

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

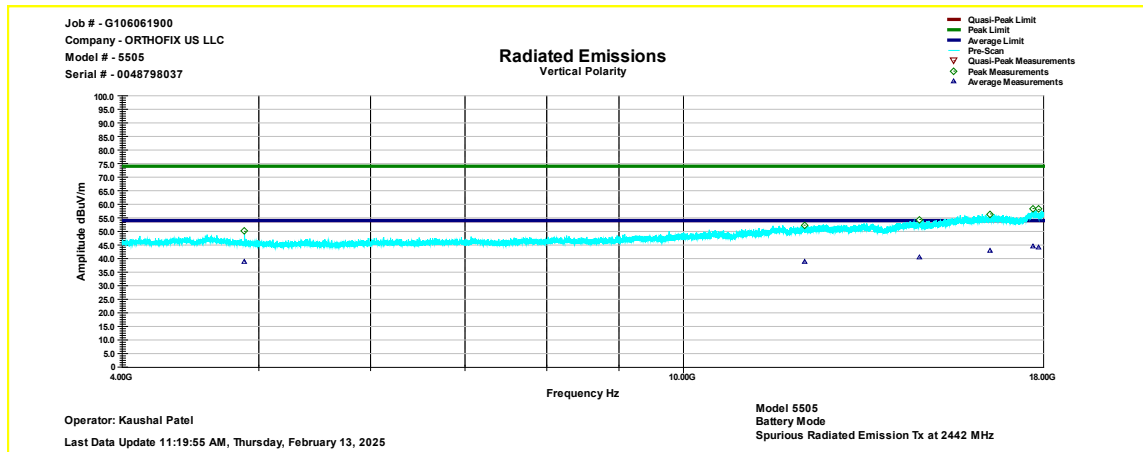
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4883.55	56.1	74	-17.9	100	149	Horizontal	3.70
12176.95	51.9	74	-22.1	266	75	Horizontal	6.00
14707.05	53.8	74	-20.2	100	163	Horizontal	9.00
16508.05	56.4	74	-17.6	115	294	Horizontal	11.90
17692.95	56.8	74	-17.2	122	58	Horizontal	13.00
17846.95	56.3	74	-17.7	215	29	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4883.55	48.3	54	-5.7	100	149	Horizontal	3.70
12176.95	38.4	54	-15.6	266	75	Horizontal	6.00
14707.05	39.8	54	-14.2	100	163	Horizontal	9.00
16508.05	42.6	54	-11.3	115	294	Horizontal	11.90
17692.95	43.2	54	-10.8	122	58	Horizontal	13.00
17846.95	42.6	54	-11.4	215	29	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4883.55	50	74	-24	250	319	Vertical	2.30
12176.95	52.3	74	-21.7	151	184	Vertical	3.33
14706.95	54.4	74	-19.6	142	65	Vertical	5.93
16508.05	56.4	74	-17.6	122	323	Vertical	8.06
17692.95	58.4	74	-15.6	358	247	Vertical	10.15
17847.05	58.1	74	-15.9	367	320	Vertical	10.66

Note: Correction = AF + CF - Preamp

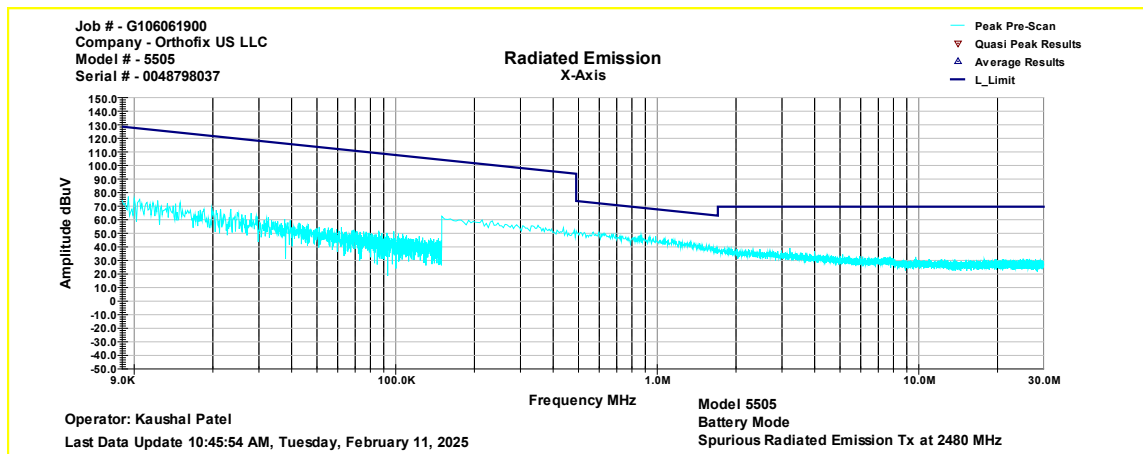
Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4883.55	39	54	-14.9	250	319	Vertical	2.30
12176.95	38.7	54	-15.2	151	184	Vertical	3.33
14706.95	40.3	54	-13.7	142	65	Vertical	5.93
16508.05	42.7	54	-11.2	122	323	Vertical	8.06
17692.95	44.5	54	-9.5	358	247	Vertical	10.15
17847.05	44.2	54	-9.8	367	320	Vertical	10.66

Note: Correction = AF + CF - Preamp

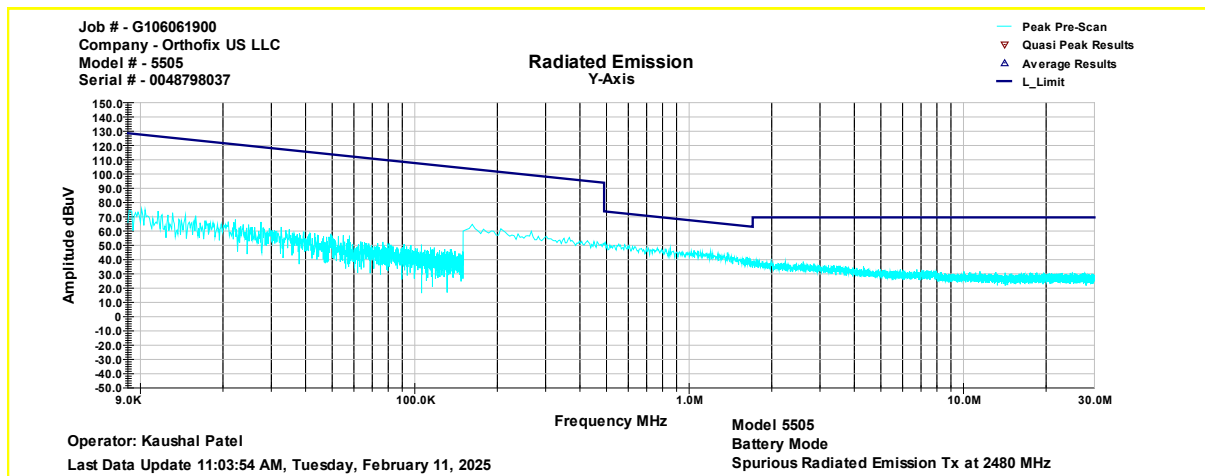
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions High Channel, Tx at 2480MHz

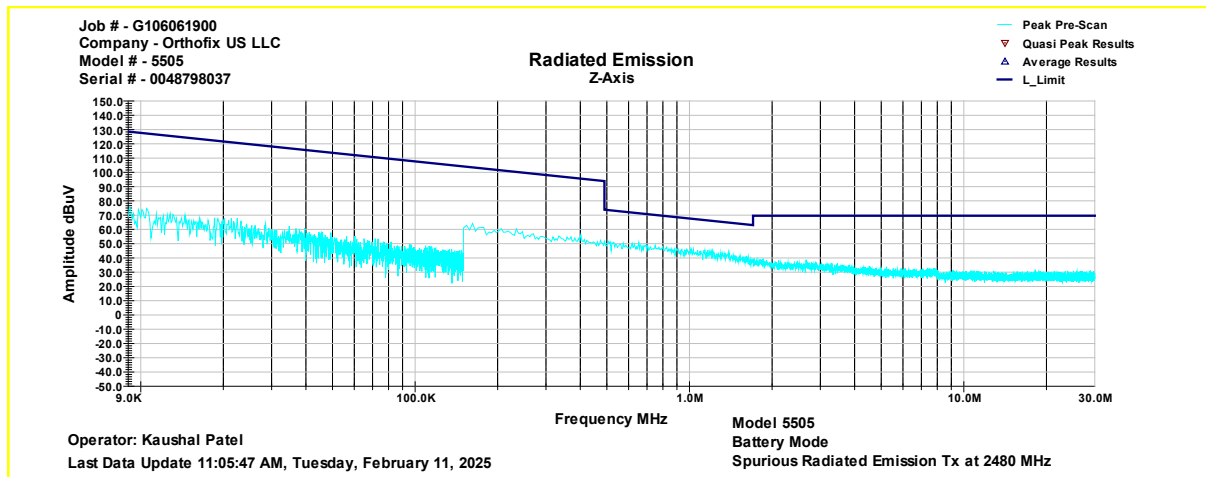
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



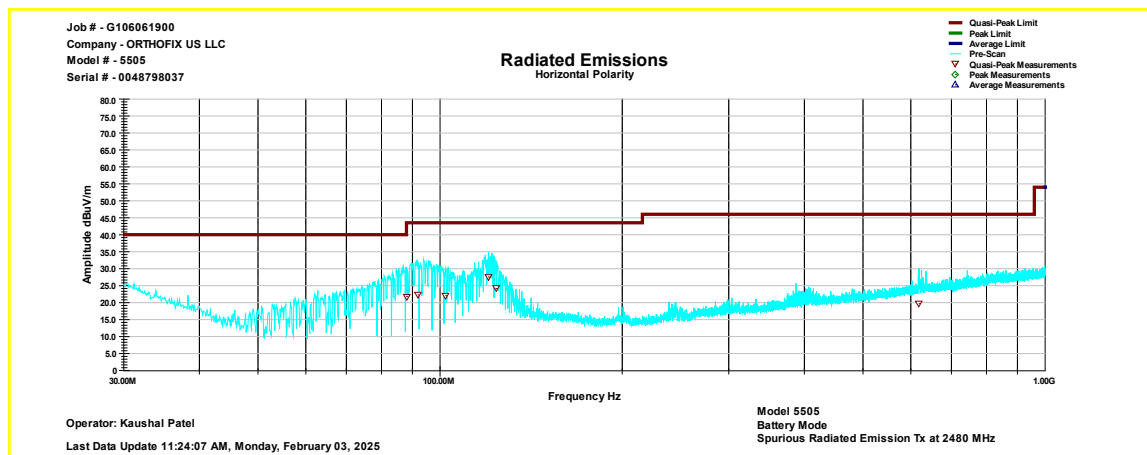
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



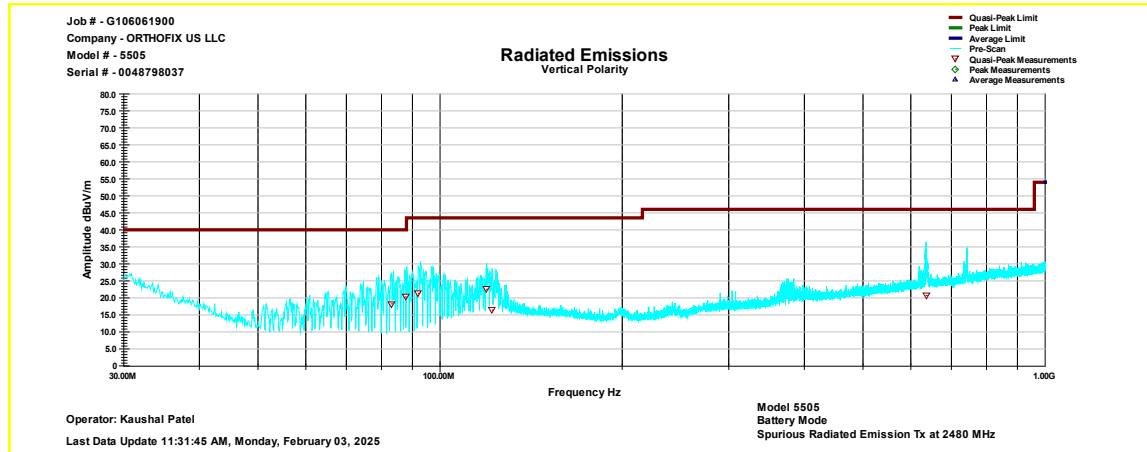
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
88.05	21.8	43.5	-21.7	339	201	Horizontal	-20.7
92.01	22.2	43.5	-21.3	149	191	Horizontal	-20
102.21	22.1	43.5	-21.5	249	239	Horizontal	-17.2
120.25	27.5	43.5	-16	244	222	Horizontal	-14.4
123.71	24.1	43.5	-19.4	100	189	Horizontal	-14.3
619.51	19.7	46	-26.3	149	171	Horizontal	-5.2

Note: Correction = AF + CF - Preamp

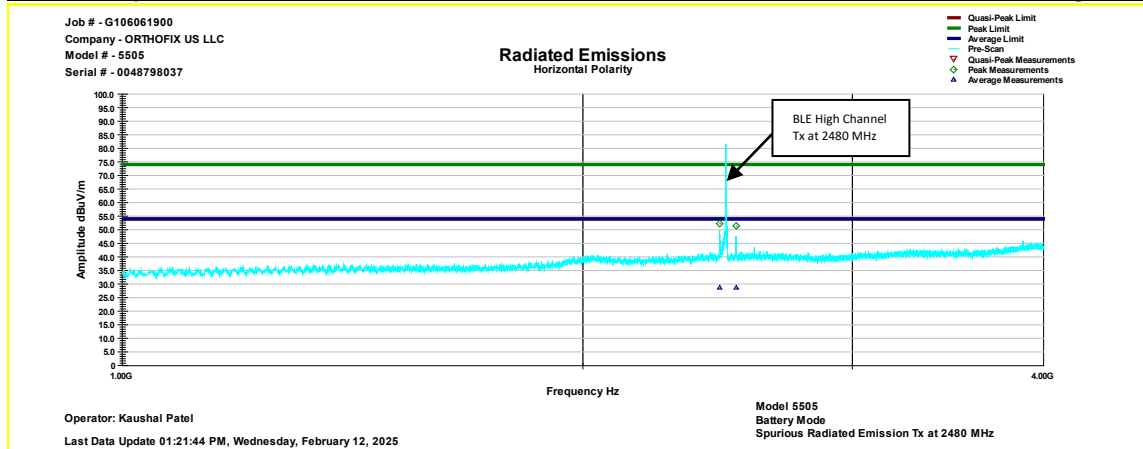
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
83.11	18.2	40	-21.8	350	124	Vertical	-20.7
87.65	20.2	40	-19.8	350	143	Vertical	-20.7
92.05	21.3	43.5	-22.2	350	126	Vertical	-20
119.41	22.5	43.5	-21	234	320	Vertical	-14.4
121.95	16.4	43.5	-27.2	344	87	Vertical	-14.3
635.85	20.7	46	-25.3	125	75	Vertical	-4.8

Note: Correction = AF + CF - Preamp

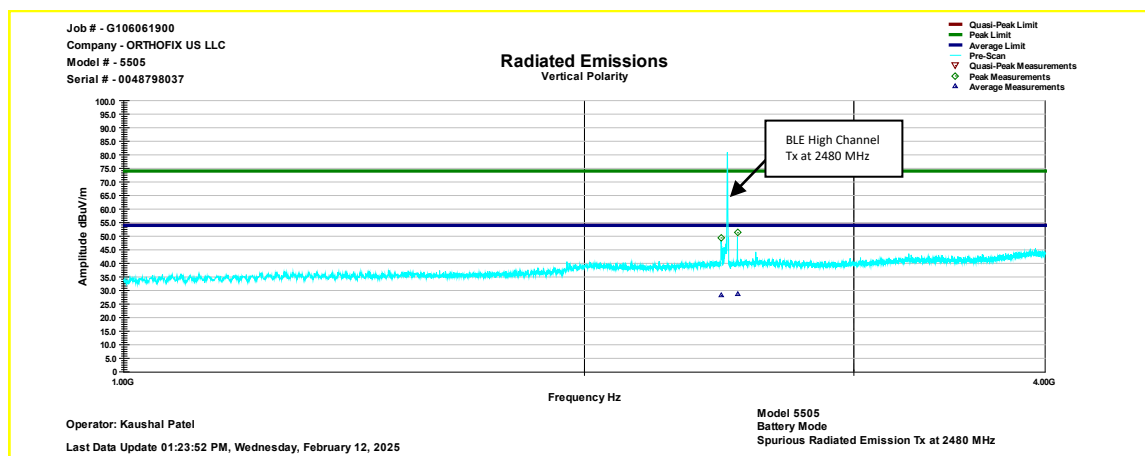
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2457.05	52.2	74	-21.8	159	45	Horizontal	-14.7
2518.45	51.3	74	-22.7	109	61	Horizontal	-14.6

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2457.05	28.5	54	-25.5	159	45	Horizontal	-14.7
2518.45	28.5	54	-25.5	109	61	Horizontal	-14.6

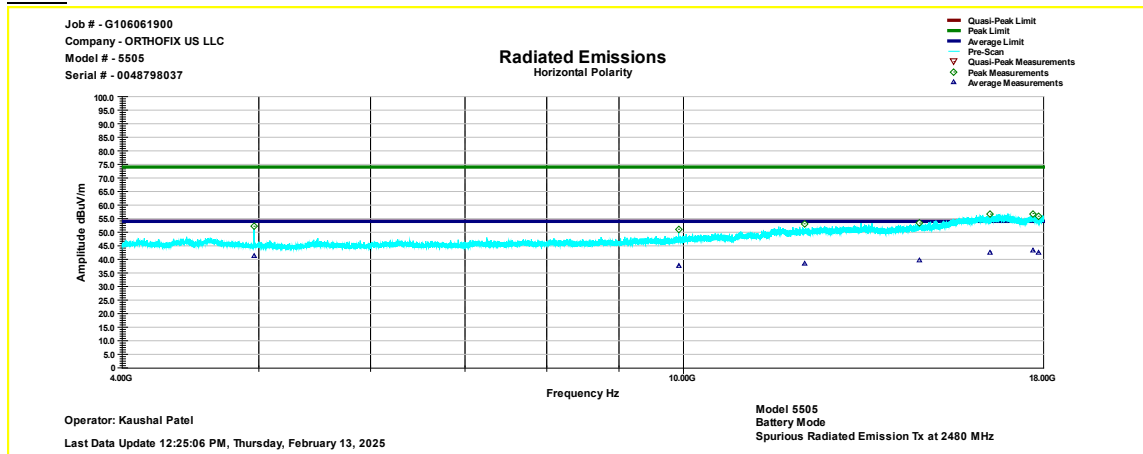
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2456.55	49.4	74	-24.6	150	34	Vertical	-14.96
2518.05	51.2	74	-22.8	348	51	Vertical	-14.69

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2456.55	28.2	54	-25.8	150	34	Vertical	-14.96
2518.05	28.7	54	-25.3	348	51	Vertical	-14.69

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

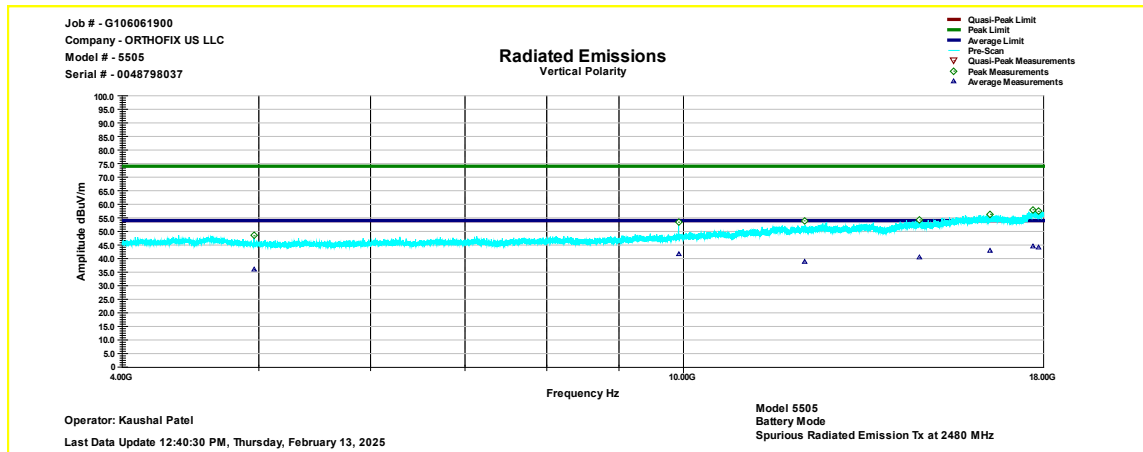
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4960.55	52.2	74	-21.8	100	150	Horizontal	3.00
9919.05	51.1	74	-22.9	368	319	Horizontal	1.90
12177.05	53.1	74	-20.9	179	137	Horizontal	6.00
14706.95	53.4	74	-20.6	297	277	Horizontal	9.00
16507.95	56.6	74	-17.4	179	68	Horizontal	11.90
17693.05	56.9	74	-17.1	384	197	Horizontal	13.00
17846.95	55.9	74	-18.1	376	144	Horizontal	13.10

Note: Correction = AF + CF - Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4960.55	36	54	-18	100	150	Horizontal	3.00
9919.05	41.7	54	-12.3	368	319	Horizontal	1.90
12177.05	38.7	54	-15.3	179	137	Horizontal	6.00
14706.95	40.4	54	-13.6	297	277	Horizontal	9.00
16507.95	42.8	54	-11.2	179	68	Horizontal	11.90
17693.05	44.5	54	-9.5	384	197	Horizontal	13.00
17846.95	44.2	54	-9.8	376	144	Horizontal	13.10

Note: Correction = AF + CF - Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4959.45	48.4	74	-25.6	267	325	Vertical	1.57
9919.25	53.4	74	-20.6	394	80	Vertical	1.03
12177.05	53.9	74	-20.1	394	136	Vertical	3.33
14707.05	54.2	74	-19.8	190	353	Vertical	5.93
16507.95	56.3	74	-17.7	283	50	Vertical	8.06
17692.95	58	74	-16	389	275	Vertical	10.15
17847.05	57.4	74	-16.6	329	55	Vertical	10.66

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4959.45	36	54	-18	267	325	Vertical	1.57
9919.25	41.7	54	-12.3	394	80	Vertical	1.03
12177.05	38.7	54	-15.3	394	136	Vertical	3.33
14707.05	40.4	54	-13.6	190	353	Vertical	5.93
16507.95	42.8	54	-11.2	283	50	Vertical	8.06
17692.95	44.5	54	-9.5	389	275	Vertical	10.15
17847.05	44.2	54	-9.8	329	55	Vertical	10.66

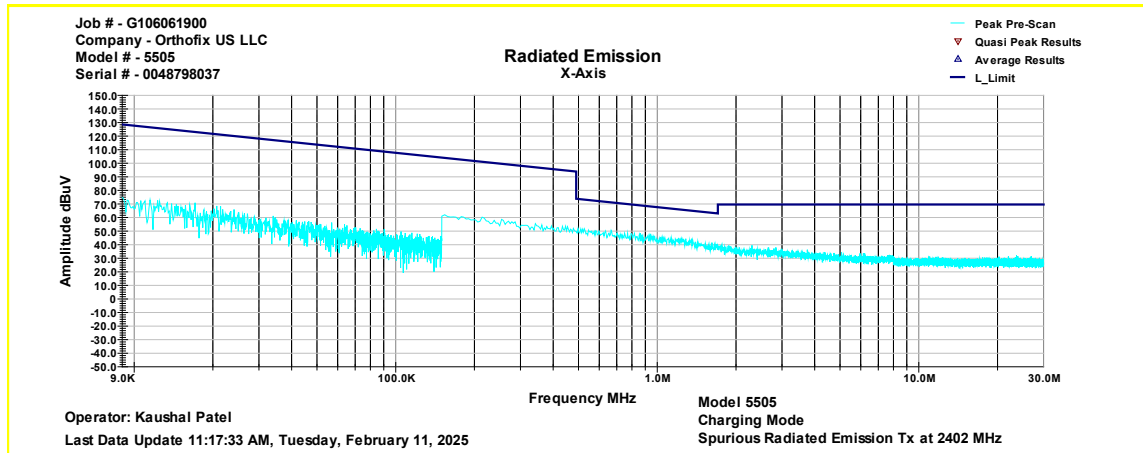
Note: Correction = AF + CF – Preamp

Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

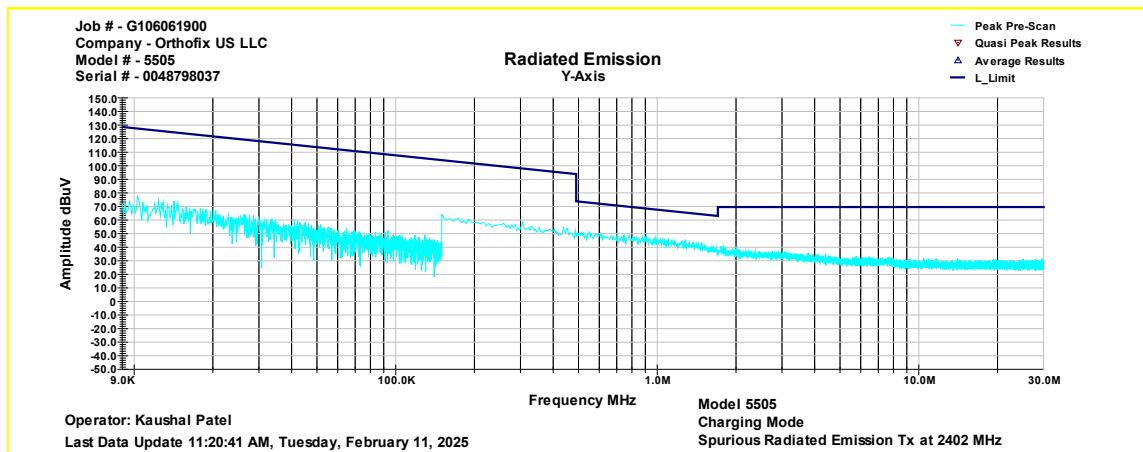
Charging Mode

Test Results: Part 15.209 Radiated Spurious Emissions Low Channel, Tx at 2402MHz

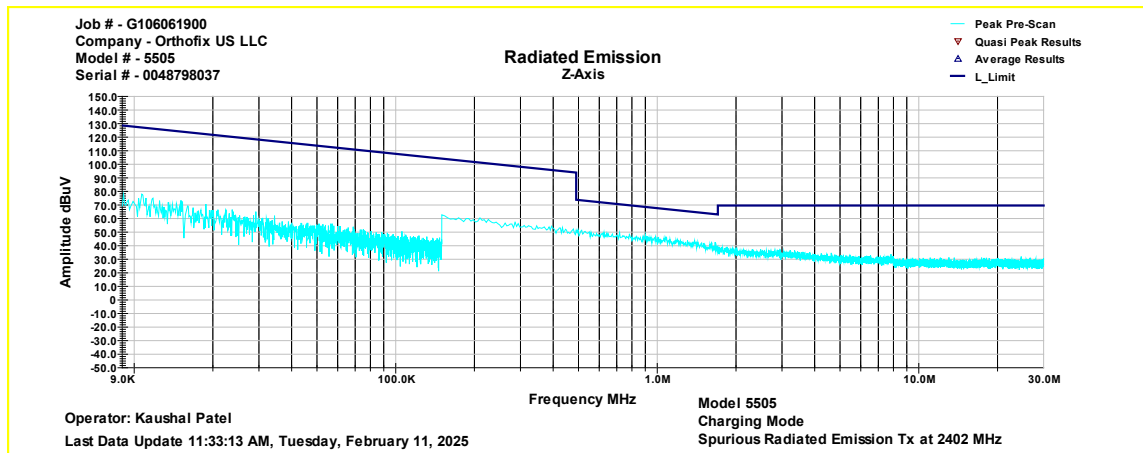
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



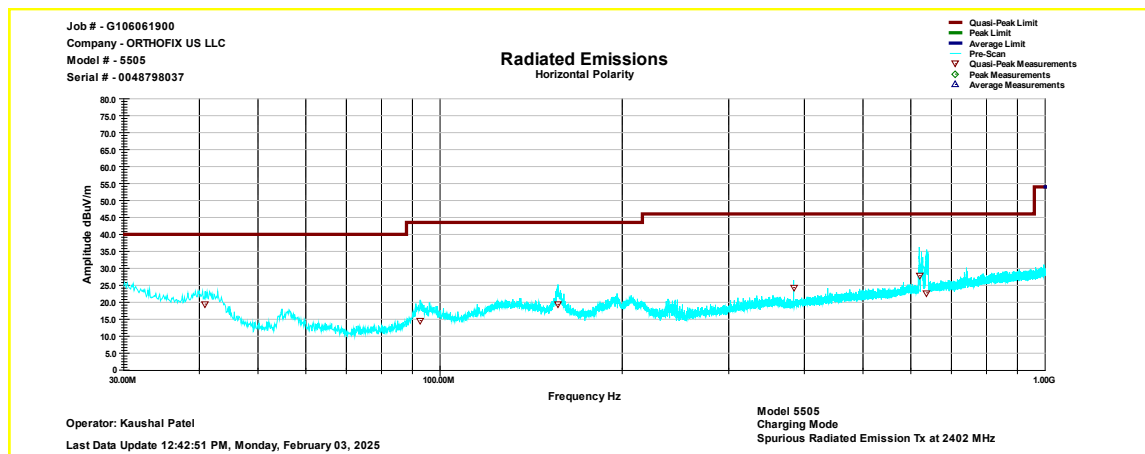
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



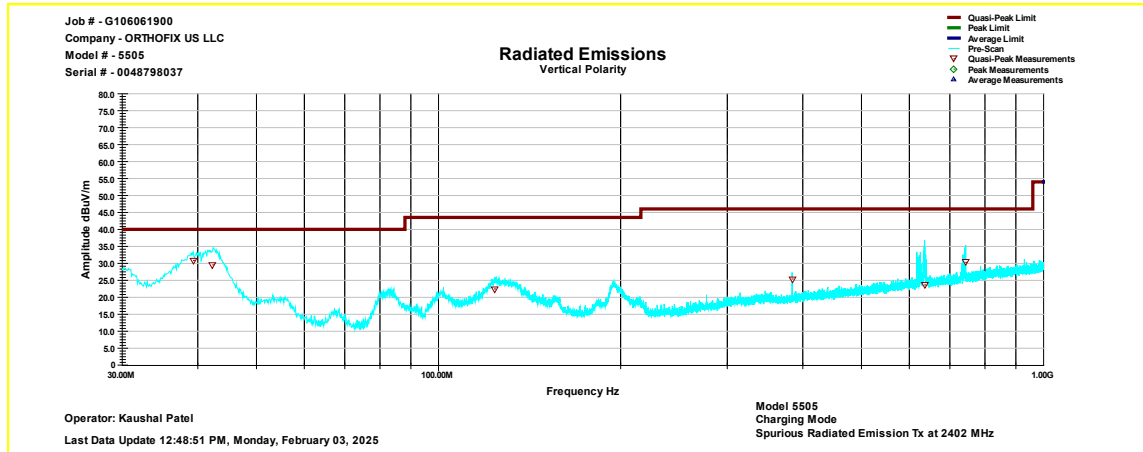
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
40.91	19.4	40	-20.6	170	22	Horizontal	-14.7
92.71	14.6	43.5	-28.9	262	194	Horizontal	-19.9
156.61	19.4	43.5	-24.2	149	55	Horizontal	-15.1
384.01	24.3	46	-21.7	349	202	Horizontal	-10.6
619.55	27.8	46	-18.2	206	283	Horizontal	-5.2
637.25	22.8	46	-23.3	222	279	Horizontal	-4.8

Note: Correction = AF + CF - Preamp

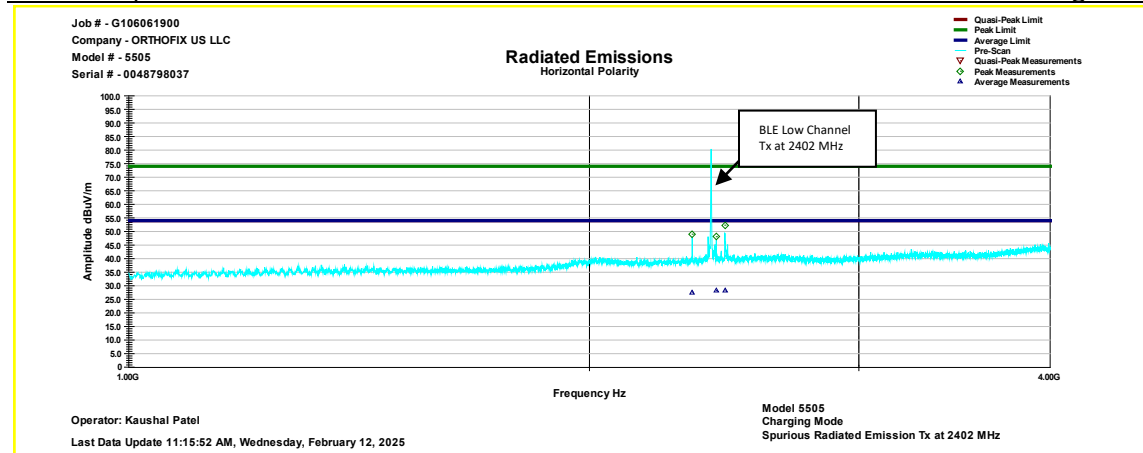
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
39.35	30.9	40	-9.1	100	162	Vertical	-13.7
42.35	29.5	40	-10.5	100	22	Vertical	-15.7
123.75	22.5	43.5	-21.1	101	52	Vertical	-14.3
384.01	25.4	46	-20.6	250	98	Vertical	-10.6
635.85	23.6	46	-22.4	100	72	Vertical	-4.8
743.61	30.3	46	-15.7	163	13	Vertical	-3.1

Note: Correction = AF + CF - Preamp

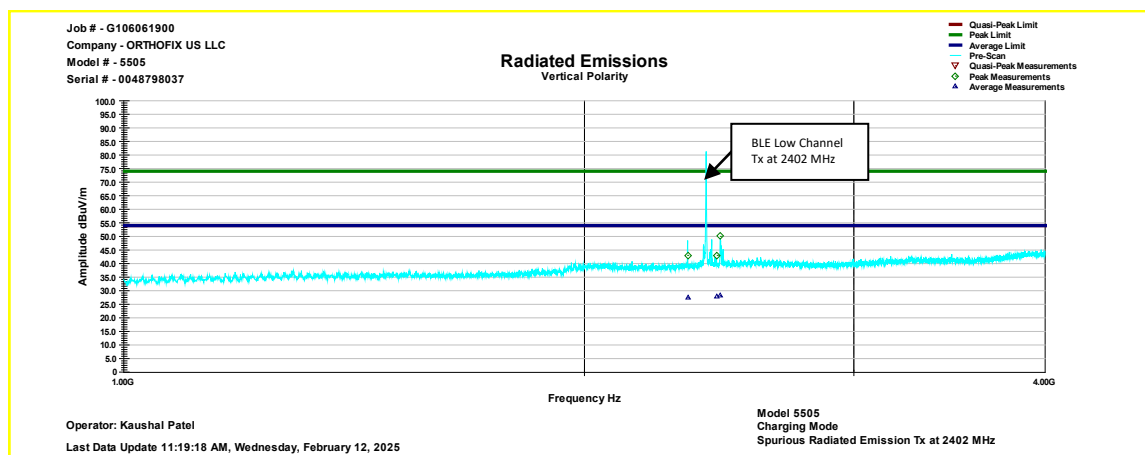
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.45	49	74	-25	101	18	Horizontal	-15.7
2420.95	48	74	-26	344	190	Horizontal	-14.8
2451.95	52.3	74	-21.7	306	18	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.45	27.4	54	-26.6	101	18	Horizontal	-15.7
2420.95	28.1	54	-25.9	344	190	Horizontal	-14.8
2451.95	28.2	54	-25.8	306	18	Horizontal	-14.7

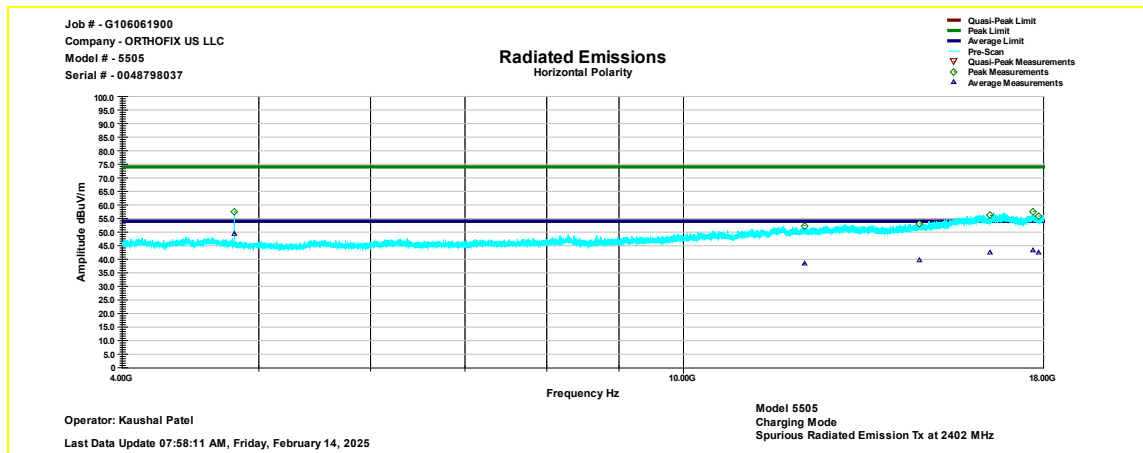
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2336.05	43	74	-31	105	58	Vertical	-15.81
2442.55	43	74	-31	250	131	Vertical	-15.08
2453.95	50	74	-24	306	11	Vertical	-14.96

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2336.05	27.4	54	-26.6	105	58	Vertical	-15.81
2442.55	28.1	54	-25.9	250	131	Vertical	-15.08
2453.95	28.2	54	-25.8	306	11	Vertical	-14.96

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

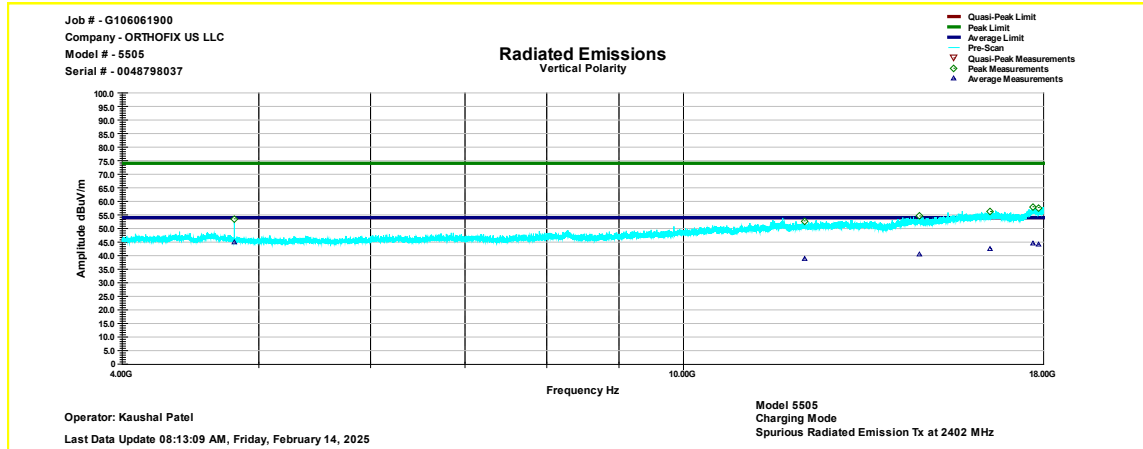
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4804.45	57.4	74	-16.6	100	96	Horizontal	4.40
12177.05	52.4	74	-21.6	400	333	Horizontal	6.00
14706.95	53	74	-21	214	290	Horizontal	9.00
16507.95	56.2	74	-17.8	400	7	Horizontal	11.90
17692.95	57.5	74	-16.5	316	237	Horizontal	13.00
17847.05	55.9	74	-18.1	131	51	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4804.45	49.5	54	-4.5	100	96	Horizontal	4.40
12177.05	38.4	54	-15.6	400	333	Horizontal	6.00
14706.95	39.7	54	-14.3	214	290	Horizontal	9.00
16507.95	42.5	54	-11.5	400	7	Horizontal	11.90
17692.95	43.1	54	-10.8	316	237	Horizontal	13.00
17847.05	42.5	54	-11.4	131	51	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.55	53.6	74	-20.4	350	321	Vertical	3.06
12177.05	52.8	74	-21.2	356	88	Vertical	3.33
14706.95	54.6	74	-19.4	394	334	Vertical	5.93
16507.95	56.2	74	-17.8	393	236	Vertical	8.06
17693.05	58	74	-16	160	263	Vertical	10.15
17846.95	57.7	74	-16.3	300	332	Vertical	10.66

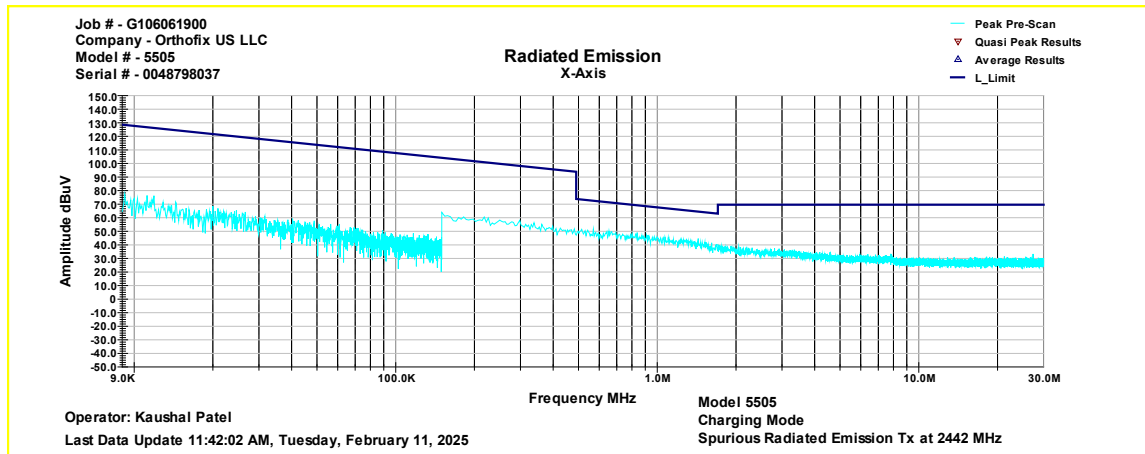
Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.55	45	54	-9	350	321	Vertical	3.06
12177.05	38.8	54	-15.2	356	88	Vertical	3.33
14706.95	40.3	54	-13.7	394	334	Vertical	5.93
16507.95	42.6	54	-11.4	393	236	Vertical	8.06
17693.05	44.4	54	-9.6	160	263	Vertical	10.15
17846.95	44.1	54	-9.8	300	332	Vertical	10.66

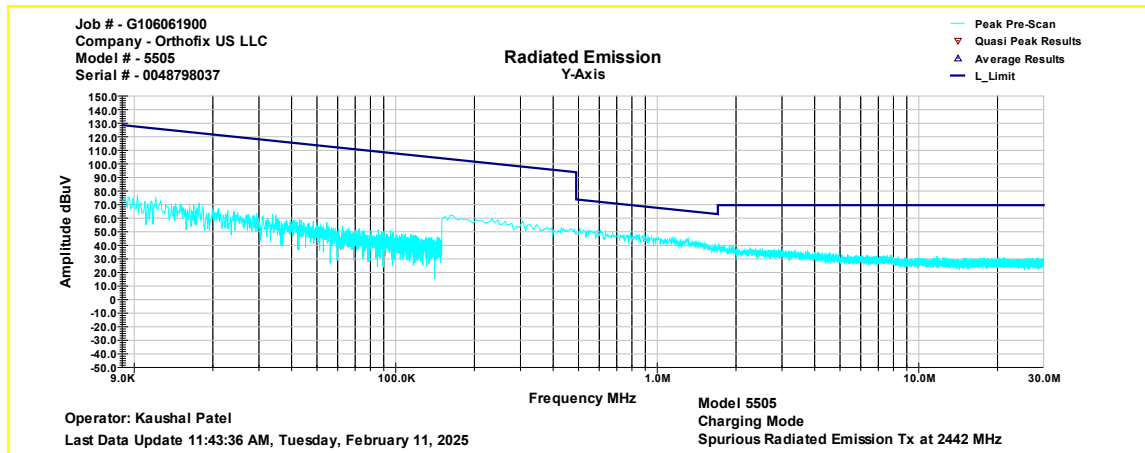
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions Mid Channel, Tx at 2442MHz

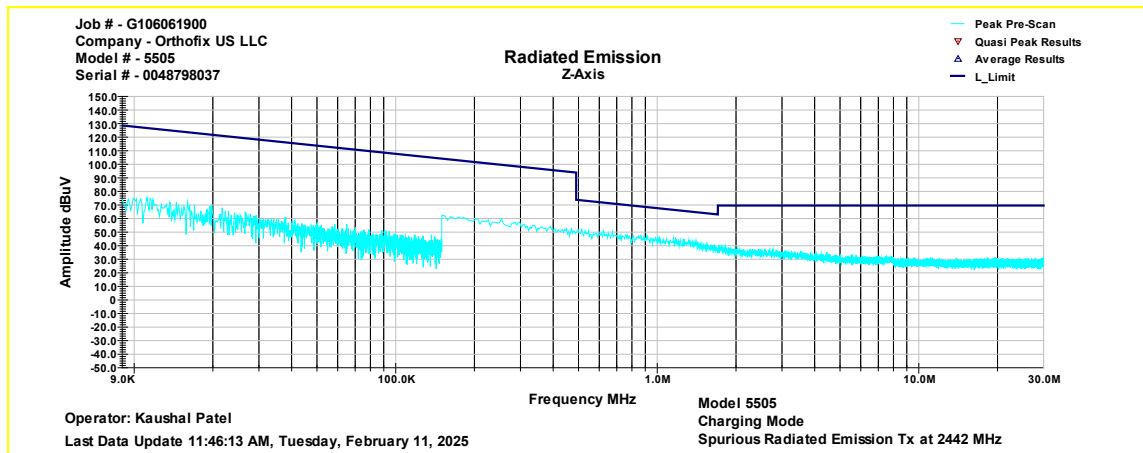
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



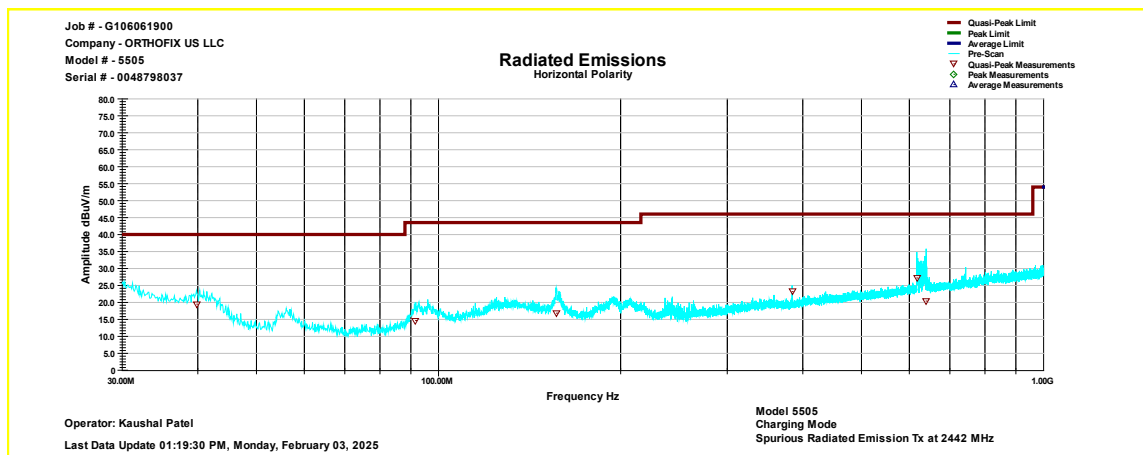
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



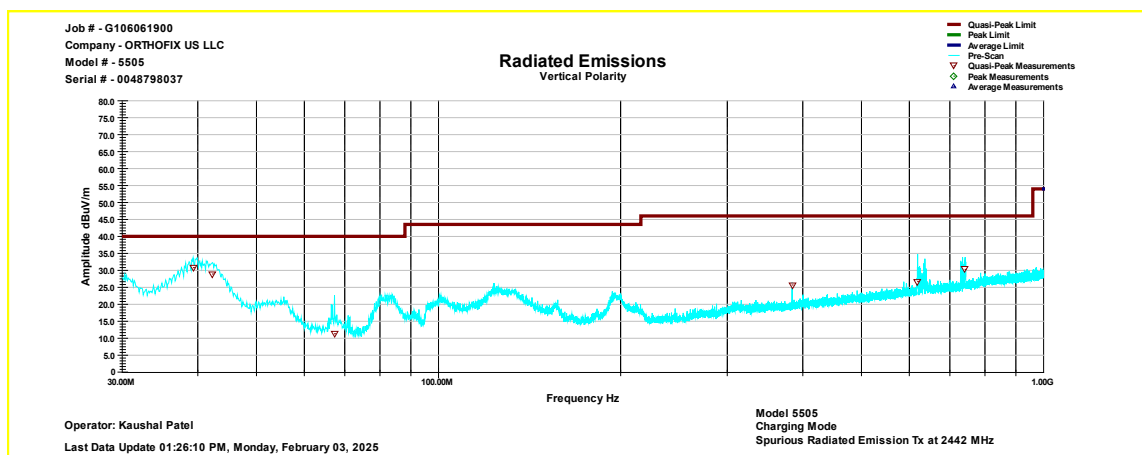
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
39.85	19.5	40	-20.5	132	49	Horizontal	-14.1
91.65	14.7	43.5	-28.9	218	201	Horizontal	-20.2
156.65	16.8	43.5	-26.7	249	286	Horizontal	-15.1
384.01	23.2	46	-22.9	347	174	Horizontal	-10.6
617.35	27.2	46	-18.9	249	288	Horizontal	-5.2
639.65	20.4	46	-25.6	249	261	Horizontal	-4.7

Note: Correction = AF + CF - Preamp

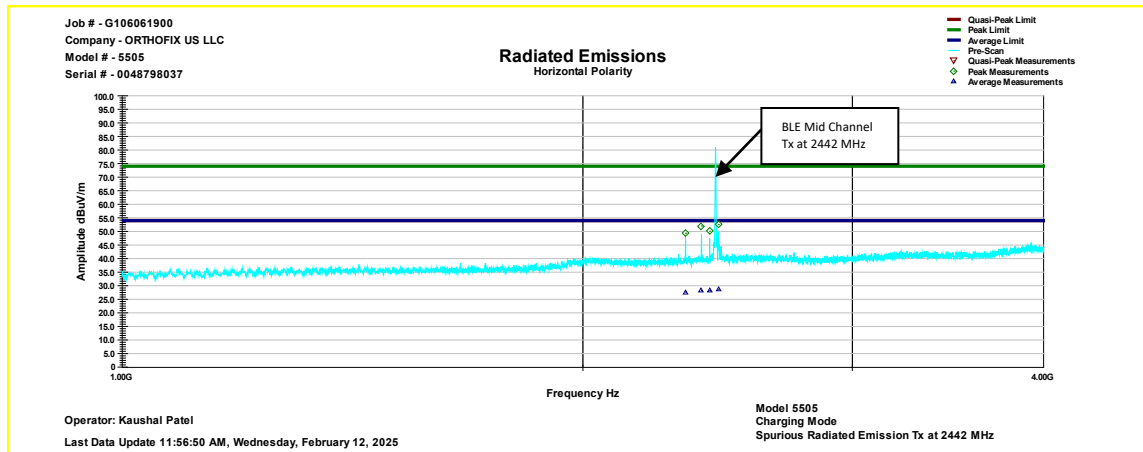
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
39.35	30.8	40	-9.2	101	122	Vertical	-13.7
42.31	28.9	40	-11.1	150	170	Vertical	-15.7
67.31	11.3	40	-28.7	179	184	Vertical	-20.3
384.01	25.7	46	-20.4	105	233	Vertical	-10.6
619.15	26.7	46	-19.4	122	6	Vertical	-5.2
741.81	30.3	46	-15.8	100	323	Vertical	-3.1

Note: Correction = AF + CF - Preamp

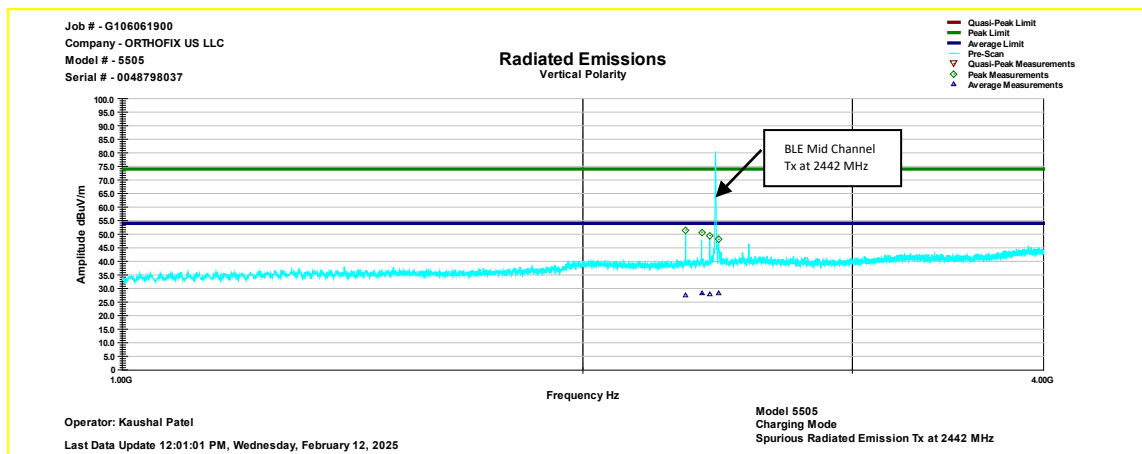
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.05	49.3	74	-24.7	100	18	Horizontal	-15.7
2390.55	52	74	-22	123	56	Horizontal	-15.2
2420.05	50	74	-24	239	194	Horizontal	-14.8
2451.95	52.5	74	-21.5	166	31	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.05	27.6	54	-26.3	100	18	Horizontal	-15.7
2390.55	28.2	54	-25.8	123	56	Horizontal	-15.2
2420.05	28.2	54	-25.8	239	194	Horizontal	-14.8
2451.95	28.7	54	-25.3	166	31	Horizontal	-14.7

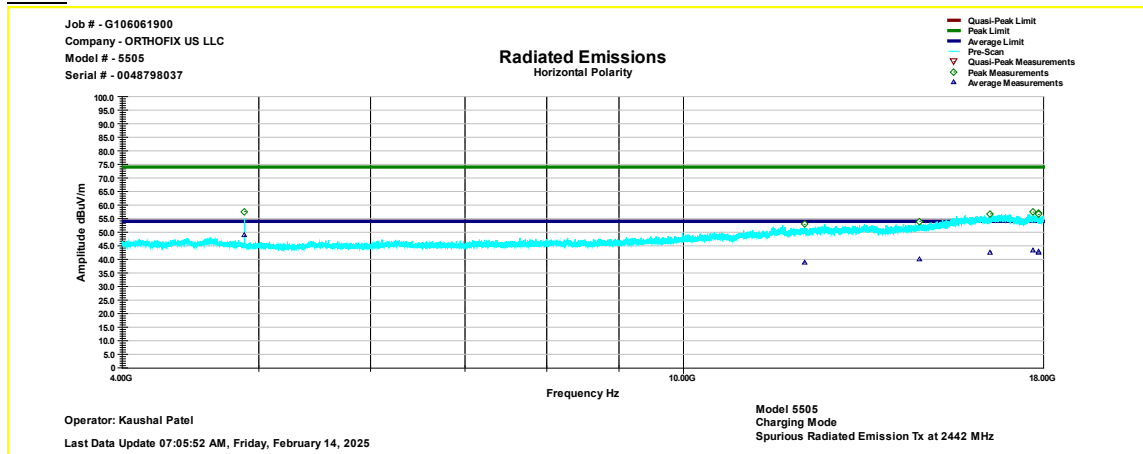
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.55	51.5	74	-22.5	115	56	Vertical	-15.82
2390.95	50.8	74	-23.2	283	193	Vertical	-15.34
2420.55	49.4	74	-24.6	149	177	Vertical	-15.20
2451.95	48.1	74	-25.9	108.9	166	Vertical	-14.97

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2334.55	27.6	54	-26.3	115	56	Vertical	-15.82
2390.95	28.2	54	-25.8	283	193	Vertical	-15.34
2420.55	28.1	54	-25.9	149	177	Vertical	-15.20
2451.95	28.3	54	-25.6	108.9	166	Vertical	-14.97

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

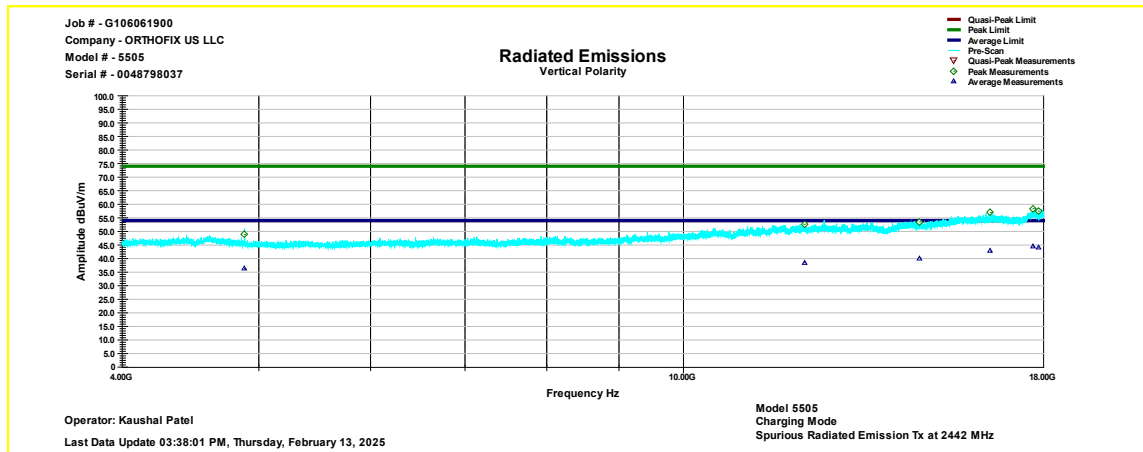
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.55	57.6	74	-16.4	130	133	Horizontal	3.70
12176.95	52.9	74	-21.1	166.9	29	Horizontal	6.00
14707.05	54	74	-20	400	343	Horizontal	9.00
16508.05	56.8	74	-17.2	315	146	Horizontal	11.90
17693.05	57.4	74	-16.6	196	333	Horizontal	13.00
17846.95	57.2	74	-16.8	125	78	Horizontal	13.10
17847.05	56.6	74	-17.4	375	19	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.55	48.9	54	-5.1	130	133	Horizontal	3.70
12176.95	38.9	54	-15.1	166.9	29	Horizontal	6.00
14707.05	39.9	54	-14.1	400	343	Horizontal	9.00
16508.05	42.7	54	-11.3	315	146	Horizontal	11.90
17693.05	43.1	54	-10.9	196	333	Horizontal	13.00
17846.95	42.6	54	-11.4	125	78	Horizontal	13.10
17847.05	42.8	54	-11.1	375	19	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	48.8	74	-25.2	250	17	Vertical	2.31
12177.05	52.6	74	-21.4	376	47	Vertical	3.33
14707.05	53.5	74	-20.5	298	242	Vertical	5.93
16508.05	56.9	74	-17.1	114	224	Vertical	8.06
17693.05	58.4	74	-15.6	400	219	Vertical	10.15
17847.05	57.5	74	-16.5	356	173	Vertical	10.66

Note: Correction = AF + CF - Preamp

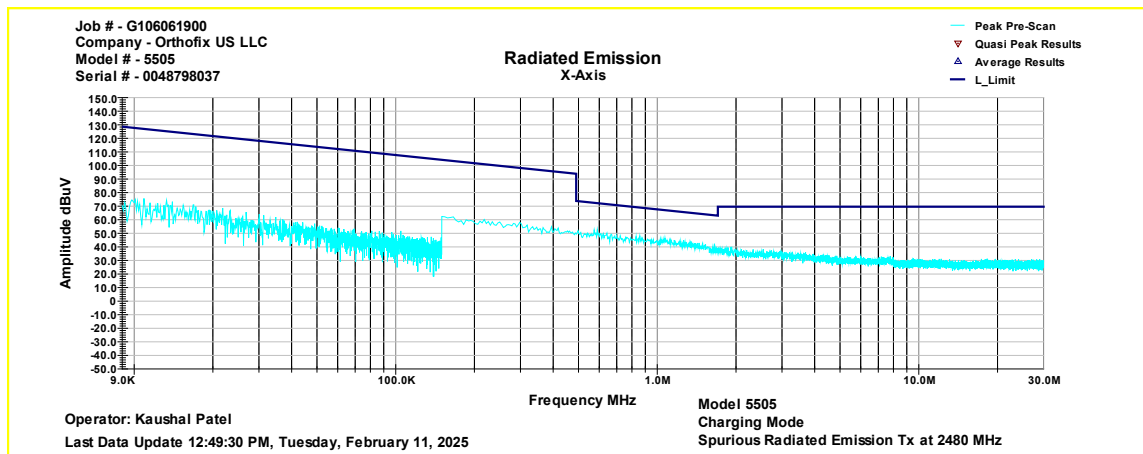
Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	36.4	54	-17.6	250	17	Vertical	2.31
12177.05	38.6	54	-15.4	376	47	Vertical	3.33
14707.05	40.2	54	-13.7	298	242	Vertical	5.93
16508.05	42.7	54	-11.2	114	224	Vertical	8.06
17693.05	44.5	54	-9.5	400	219	Vertical	10.15
17847.05	44.2	54	-9.8	356	173	Vertical	10.66

Note: Correction = AF + CF - Preamp

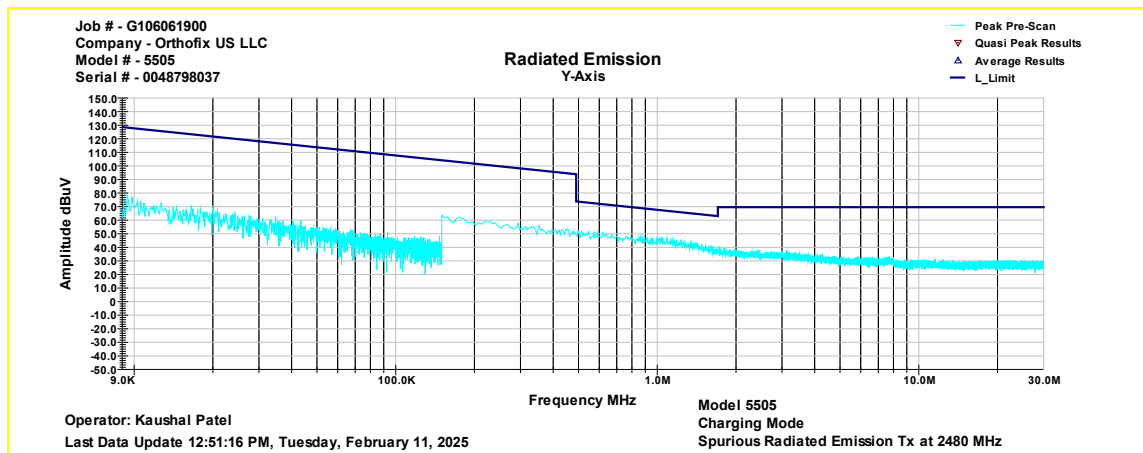
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions High Channel, Tx at 2480MHz

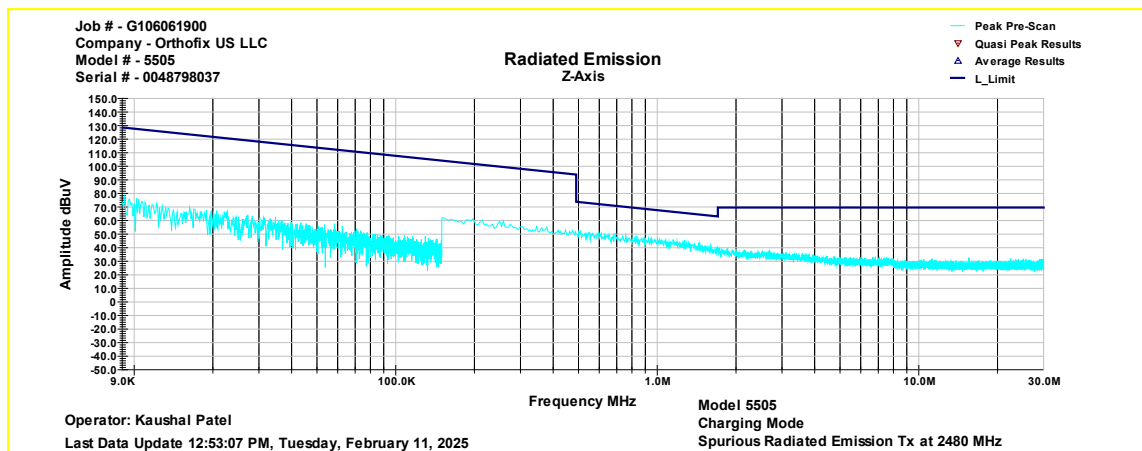
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



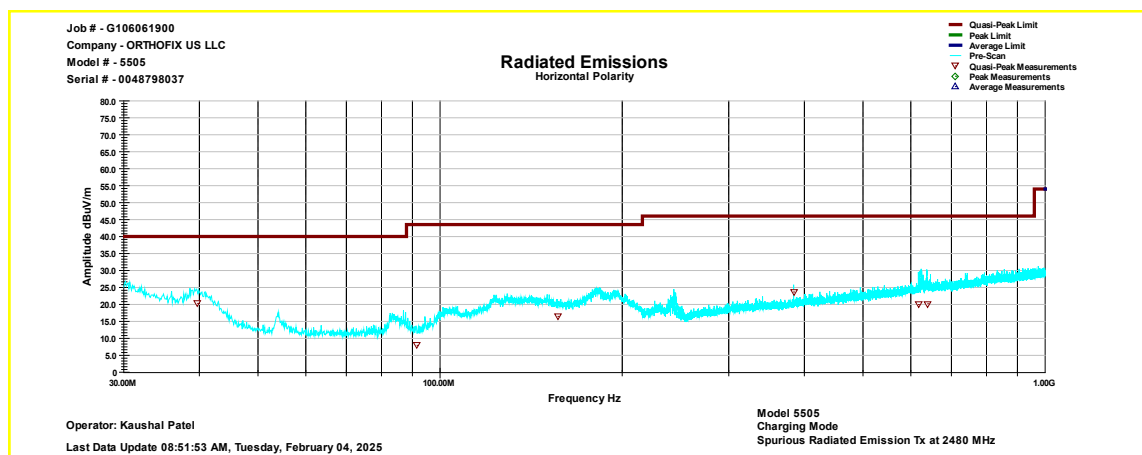
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



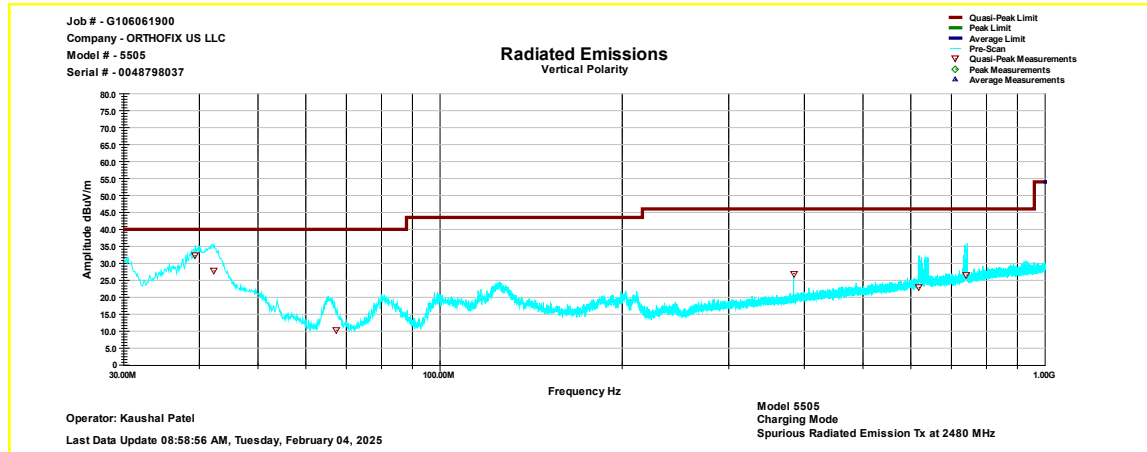
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
39.75	20.3	40	-19.7	149	23	Horizontal	-14
91.65	7.9	43.5	-35.6	232	147	Horizontal	-20.2
156.61	16.4	43.5	-27.1	110	54	Horizontal	-15.1
384.01	23.6	46	-22.4	290	157	Horizontal	-10.6
617.25	19.9	46	-26.1	350	40	Horizontal	-5.2
639.61	20.1	46	-25.9	214	248	Horizontal	-4.7

Note: Correction = AF + CF - Preamp

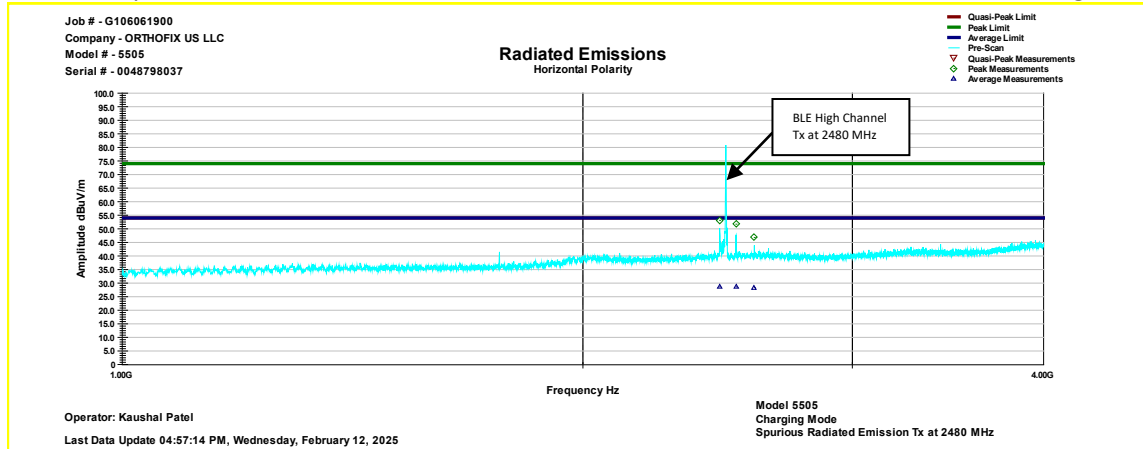
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
39.31	32.2	40	-7.8	162	277	Vertical	-13.7
42.25	27.8	40	-12.2	105	67	Vertical	-15.7
67.31	10.3	40	-29.7	150	83	Vertical	-20.3
384.01	27	46	-19	100	181	Vertical	-10.6
619.21	22.9	46	-23.2	247	75	Vertical	-5.2
741.81	26.5	46	-19.5	100	272	Vertical	-3.1

Note: Correction = AF + CF - Preamp

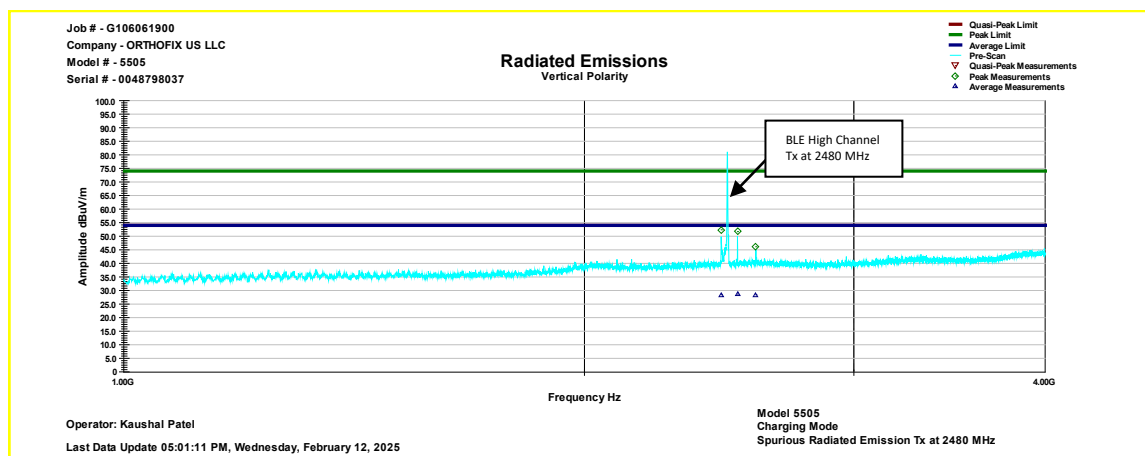
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2456.95	53.1	74	-20.9	100	46	Horizontal	-14.7
2518.05	51.7	74	-22.3	115	61	Horizontal	-14.6
2588.45	46.7	74	-27.3	150	199	Horizontal	-14.3

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2456.95	28.6	54	-25.5	100	46	Horizontal	-14.7
2518.05	28.6	54	-25.5	115	61	Horizontal	-14.6
2588.45	28.3	54	-25.7	150	199	Horizontal	-14.3

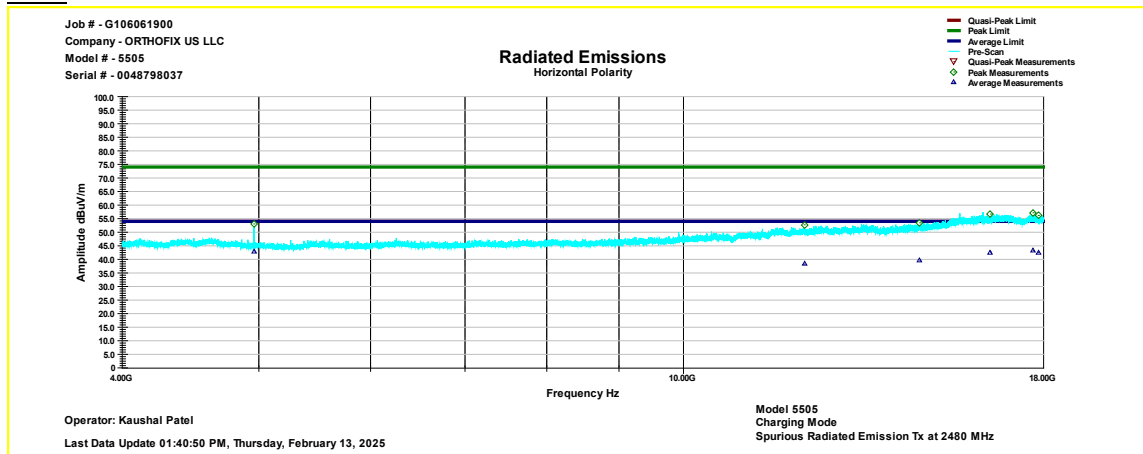
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2457.05	52.3	74	-21.7	289	71	Vertical	-14.96
2518.05	51.7	74	-22.3	349	47	Vertical	-14.69
2588.45	46.1	74	-27.9	249	192	Vertical	-14.30

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2457.05	28.4	54	-25.6	289	71	Vertical	-14.96
2518.05	28.7	54	-25.3	349	47	Vertical	-14.69
2588.45	28.4	54	-25.6	249	192	Vertical	-14.30

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

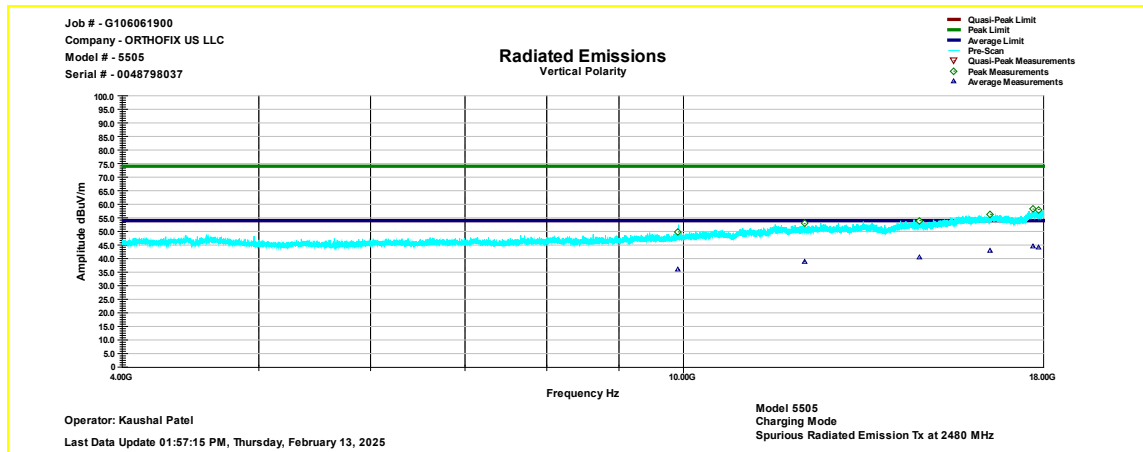
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4959.45	53	74	-21	150	155	Horizontal	3.00
12176.95	52.7	74	-21.3	345	270	Horizontal	6.00
14707.05	53.4	74	-20.6	213	323	Horizontal	9.00
16508.05	56.7	74	-17.3	376	256	Horizontal	11.90
17692.95	57.2	74	-16.8	344	55	Horizontal	13.00
17846.95	56.1	74	-17.9	100	220	Horizontal	13.10

Note: Correction = AF + CF - Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4959.45	43.1	54	-10.9	150	155	Horizontal	3.00
12176.95	38.2	54	-15.7	345	270	Horizontal	6.00
14707.05	39.7	54	-14.3	213	323	Horizontal	9.00
16508.05	42.7	54	-11.3	376	256	Horizontal	11.90
17692.95	43.2	54	-10.8	344	55	Horizontal	13.00
17846.95	42.6	54	-11.4	100	220	Horizontal	13.10

Note: Correction = AF + CF - Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
9916.15	49.8	74	-24.2	400	234	Vertical	1.03
12176.95	52.8	74	-21.2	129	340	Vertical	3.33
14706.95	53.9	74	-20.1	332	138	Vertical	5.93
16507.95	56.3	74	-17.7	300	261	Vertical	8.06
17693.05	58.2	74	-15.8	247	152	Vertical	10.15
17846.95	58.1	74	-15.9	317	301	Vertical	10.66

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
9916.15	35.9	54	-18	400	234	Vertical	1.03
12176.95	38.8	54	-15.1	129	340	Vertical	3.33
14706.95	40.3	54	-13.7	332	138	Vertical	5.93
16507.95	42.8	54	-11.2	300	261	Vertical	8.06
17693.05	44.5	54	-9.5	247	152	Vertical	10.15
17846.95	44.2	54	-9.8	317	301	Vertical	10.66

Note: Correction = AF + CF – Preamp

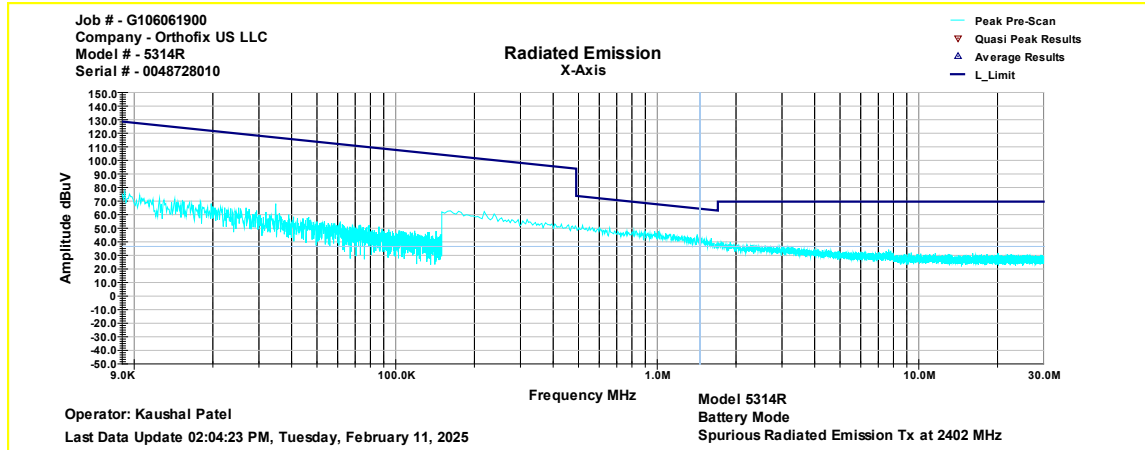
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Model 5314R

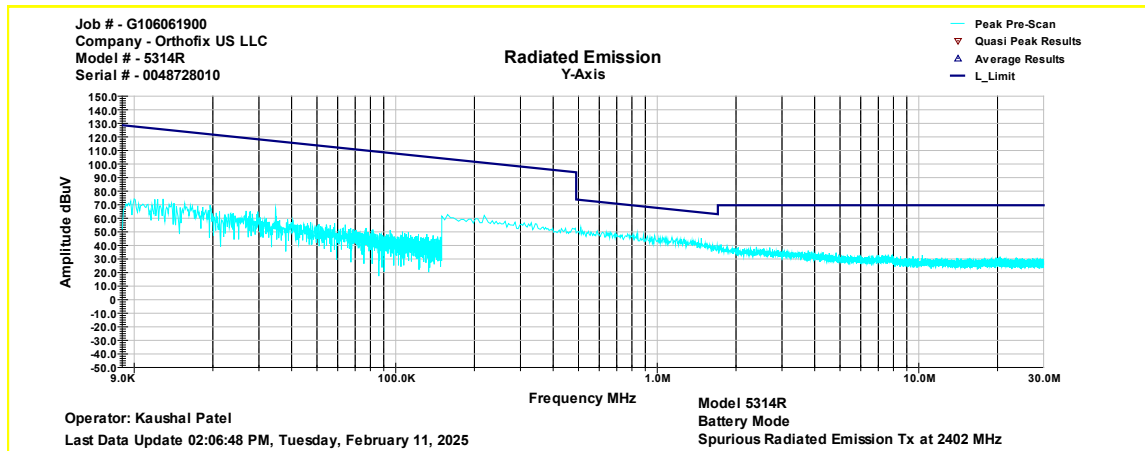
Battery Mode

Test Results: Part 15.209 Radiated Spurious Emissions Low Channel, Tx at 2402MHz

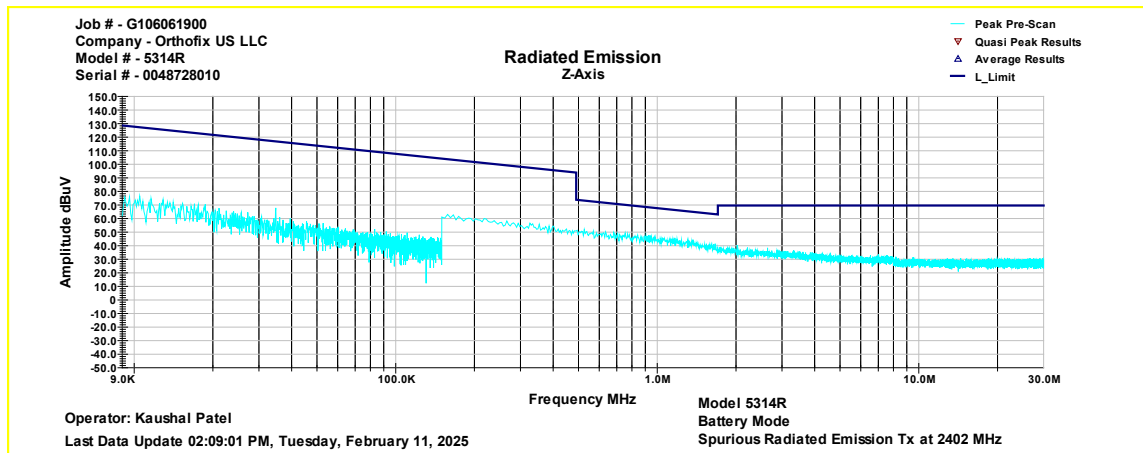
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



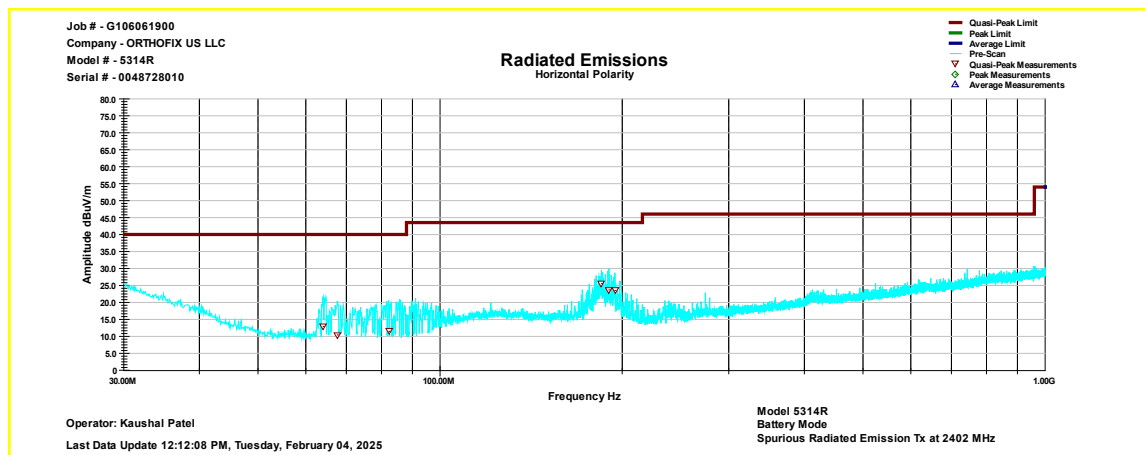
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



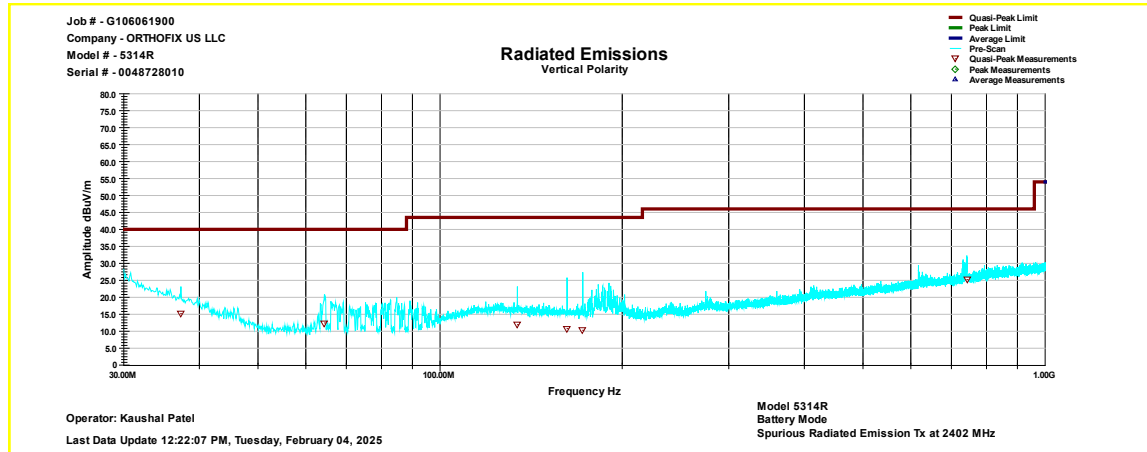
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
64.11	12.9	40	-27.1	349	202	Horizontal	-20.4
67.65	10.4	40	-29.6	339	23	Horizontal	-20.3
82.31	11.4	40	-28.6	332	202	Horizontal	-20.6
184.91	25.6	43.5	-17.9	149	23	Horizontal	-16.3
190.15	23.7	43.5	-19.9	149	187	Horizontal	-16.2
194.51	23.5	43.5	-20	149	202	Horizontal	-15.7

Note: Correction = AF + CF - Preamp

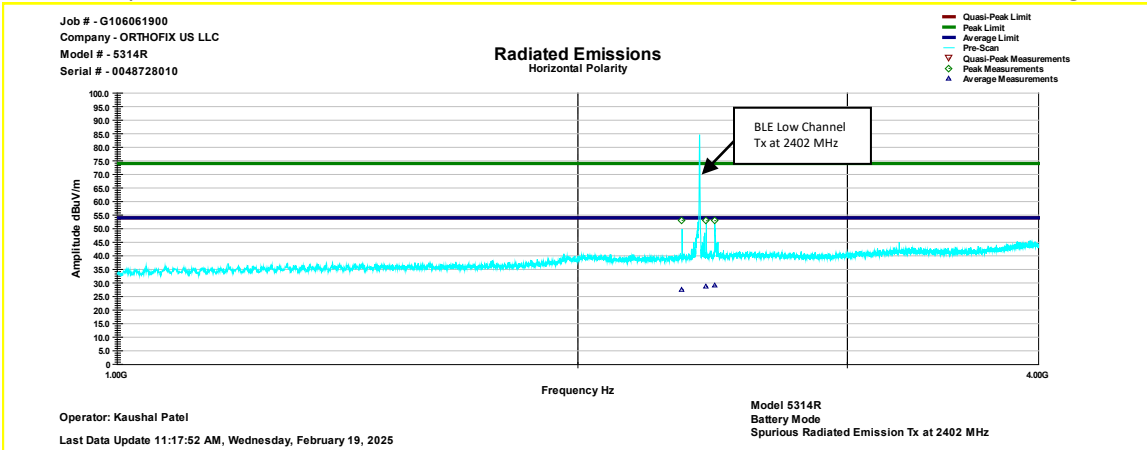
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
37.25	15.1	40	-24.9	99.9	233	Vertical	-12.1
64.45	12.4	40	-27.6	350	125	Vertical	-20.4
134.25	11.9	43.5	-31.6	250	13	Vertical	-14.6
162.15	10.8	43.5	-32.8	162	49	Vertical	-15.2
172.11	10.3	43.5	-33.3	338	26	Vertical	-15.9
742.51	25.2	46	-20.8	132	54	Vertical	-3.1

Note: Correction = AF + CF - Preamp

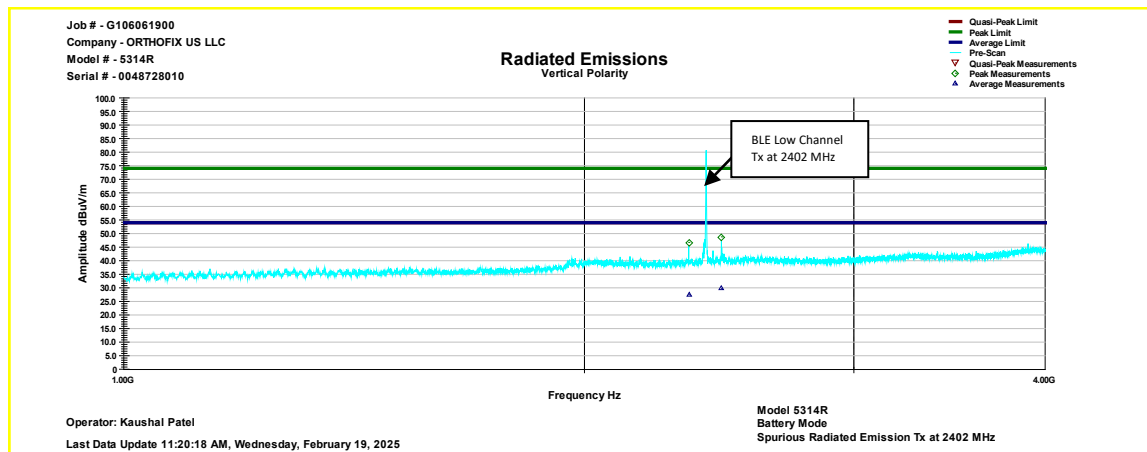
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	53	74	-21	339	244	Horizontal	-15.7
2426.45	52.9	74	-21.1	281	99	Horizontal	-14.8
2457.55	52.9	74	-21.1	306	99	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.6	54	-26.4	339	244	Horizontal	-15.7
2426.45	28.7	54	-25.3	281	99	Horizontal	-14.8
2457.55	29	54	-25	306	99	Horizontal	-14.7

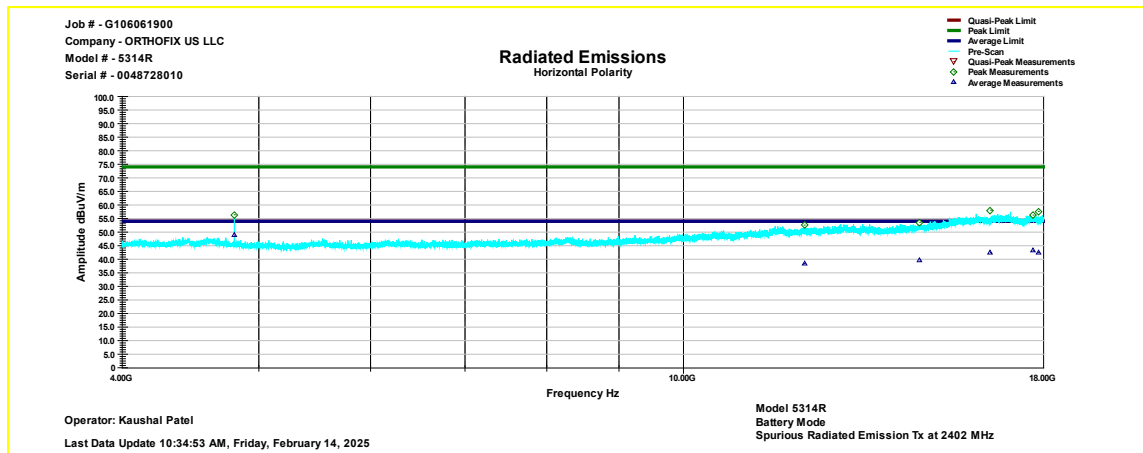
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.95	46.7	74	-27.3	100	84	Vertical	-15.56
2457.95	48.8	74	-25.2	333	193	Vertical	-14.80

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.95	27.4	54	-26.6	100	84	Vertical	-15.56
2457.95	28.3	54	-25.7	333	193	Vertical	-14.80

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

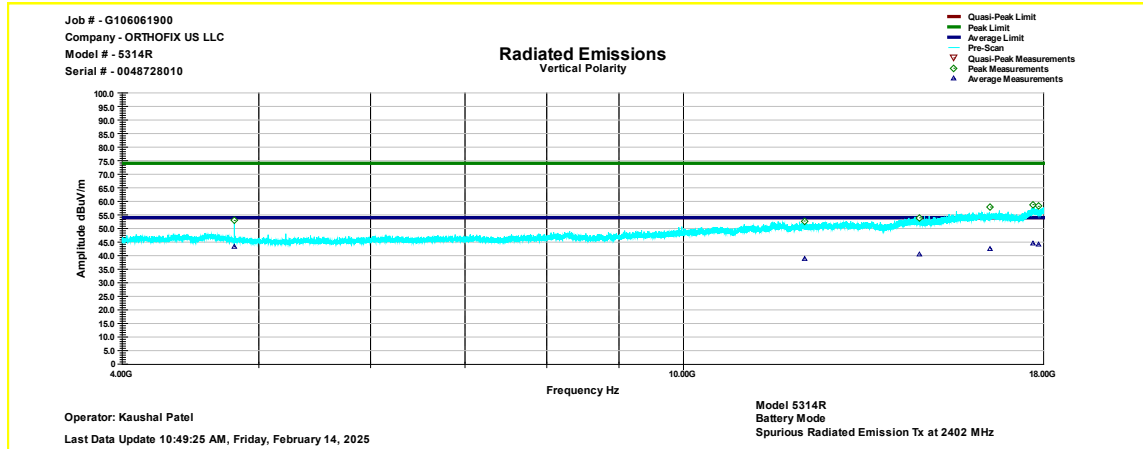
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.55	56.4	74	-17.6	250	63	Horizontal	4.4
12177.05	52.5	74	-21.5	330	317	Horizontal	6
14706.95	53.6	74	-20.4	389	117	Horizontal	9
16507.95	58.1	74	-15.9	100	201	Horizontal	11.9
17692.95	56.2	74	-17.8	109	203	Horizontal	13
17847.05	57.6	74	-16.4	352	188	Horizontal	13.1

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.55	48.9	54	-5.1	250	63	Horizontal	4.4
12177.05	38.4	54	-15.6	330	317	Horizontal	6
14706.95	39.7	54	-14.3	389	117	Horizontal	9
16507.95	42.5	54	-11.5	100	201	Horizontal	11.9
17692.95	43.1	54	-10.8	109	203	Horizontal	13
17847.05	42.5	54	-11.5	352	188	Horizontal	13.1

Note: Correction = AF + CF – Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	53	74	-21	332	78	Vertical	3.05
12176.95	52.7	74	-21.3	214	335	Vertical	3.33
14707.05	53.9	74	-20.1	285	161	Vertical	5.93
16507.95	57.9	74	-16.1	198	324	Vertical	8.06
17692.95	58.8	74	-15.2	332	157	Vertical	10.15
17846.95	58.1	74	-15.9	300	232	Vertical	10.66

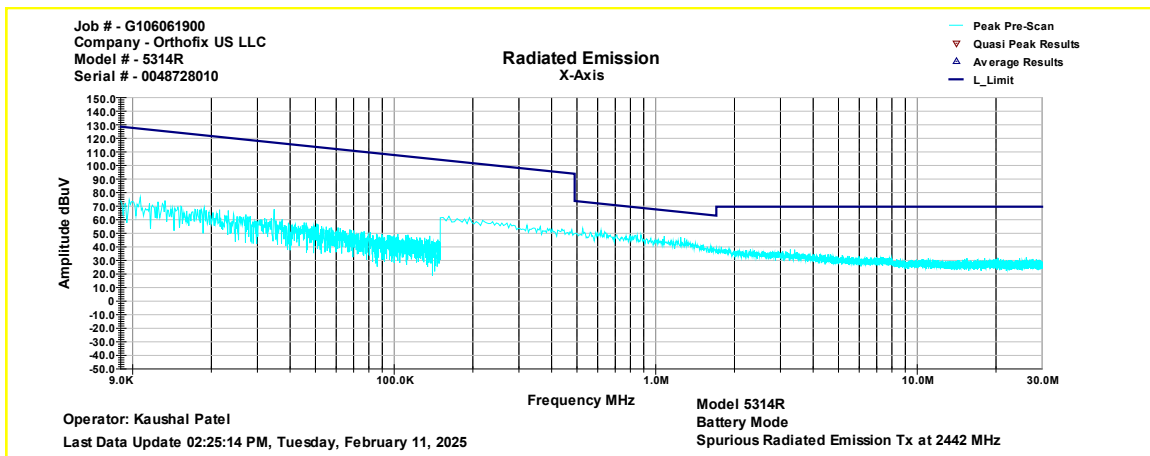
Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4803.45	43.3	54	-10.6	332	78	Vertical	3.05
12176.95	38.8	54	-15.2	214	335	Vertical	3.33
14707.05	40.3	54	-13.7	285	161	Vertical	5.93
16507.95	42.5	54	-11.4	198	324	Vertical	8.06
17692.95	44.4	54	-9.6	332	157	Vertical	10.15
17846.95	44.1	54	-9.9	300	232	Vertical	10.66

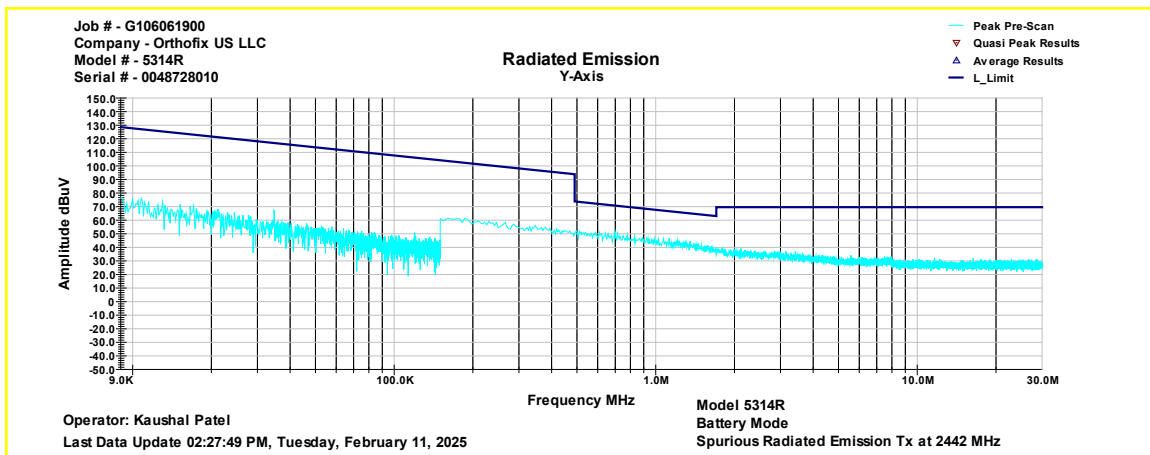
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions Mid Channel, Tx at 2442MHz

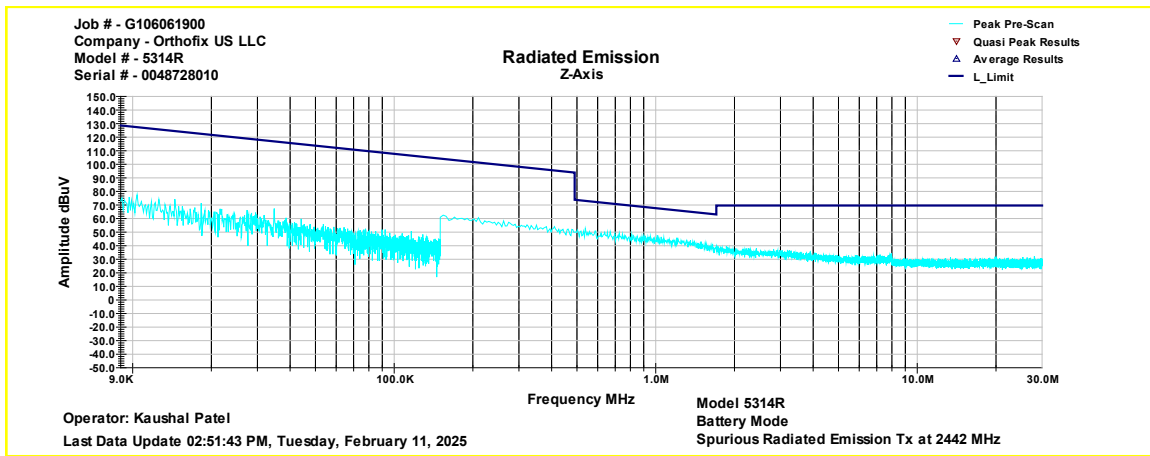
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



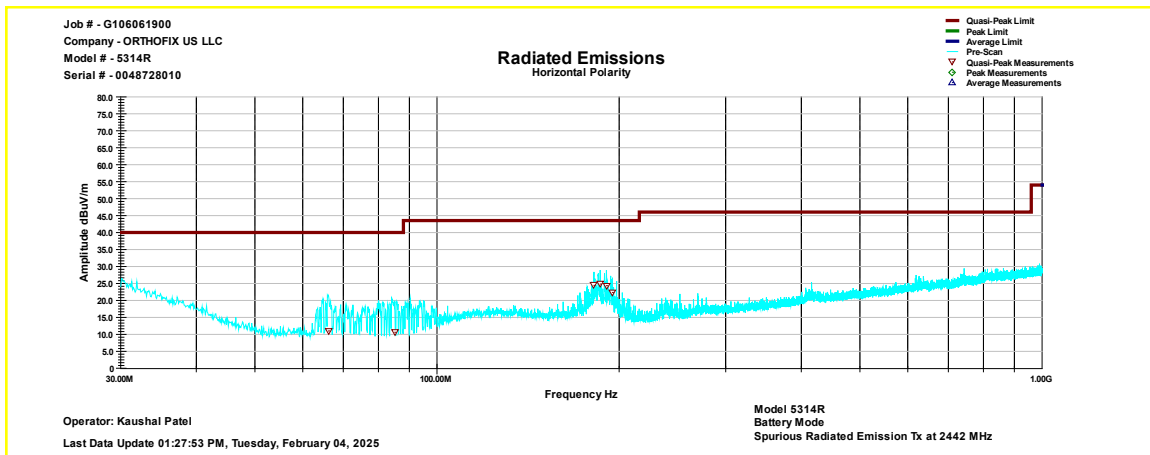
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



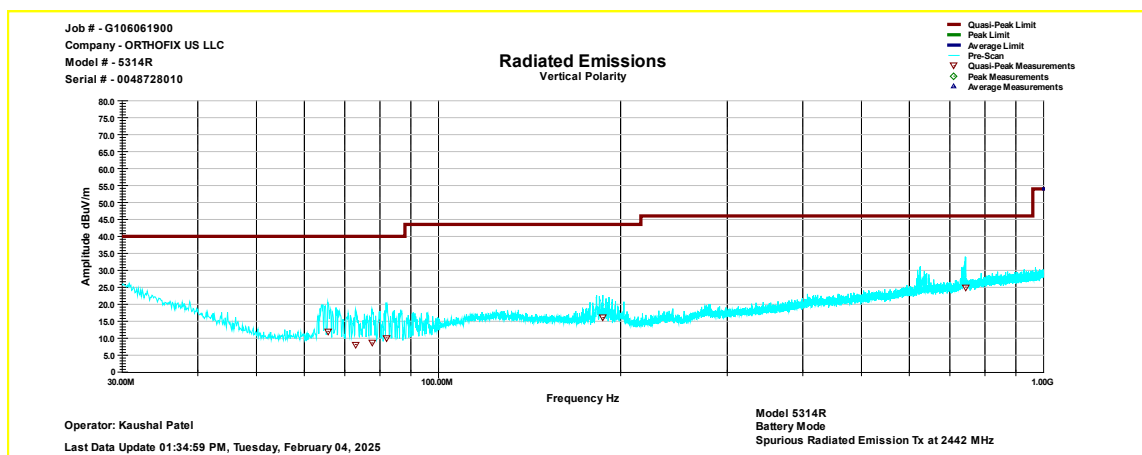
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
66.15	11	40	-29	308	198	Horizontal	-20.3
85.15	10.6	40	-29.4	234	189	Horizontal	-20.8
181.71	24.4	43.5	-19.1	149	191	Horizontal	-16.3
186.11	24.8	43.5	-18.7	133	188	Horizontal	-16.3
190.55	24.3	43.5	-19.2	105	192	Horizontal	-16.1
194.95	22.4	43.5	-21.2	149	192	Horizontal	-15.6

Note: Correction = AF + CF - Preamp

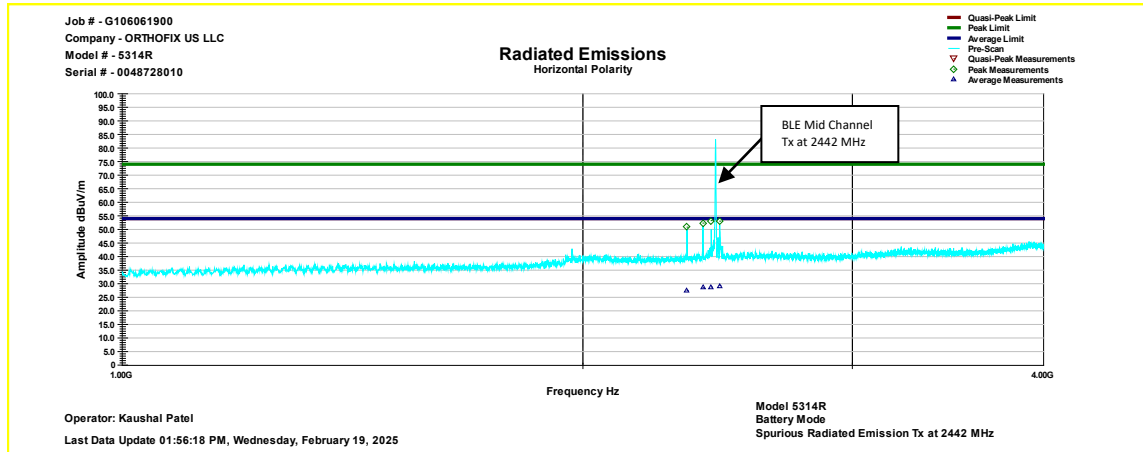
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
65.61	12	40	-28	335	313	Vertical	-20.3
72.85	8.1	40	-31.9	339	88	Vertical	-20.3
77.55	8.6	40	-31.4	339	89	Vertical	-20.4
81.91	10.1	40	-29.9	350	89	Vertical	-20.6
186.85	16.1	43.5	-27.5	149	89	Vertical	-16.3
742.35	25.1	46	-21	110	270	Vertical	-3.1

Note: Correction = AF + CF - Preamp

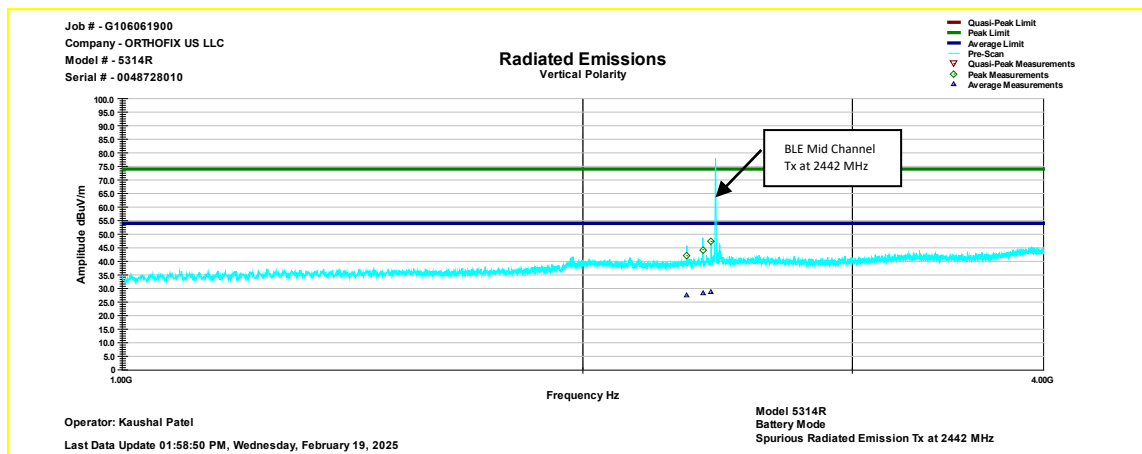
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	50.8	74	-23.2	226	109	Horizontal	-15.7
2395.95	52.3	74	-21.7	325	138	Horizontal	-15.1
2425.95	53.2	74	-20.8	350	146	Horizontal	-14.8
2457.55	53	74	-21	306	98	Horizontal	-14.7

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2339.55	27.5	54	-26.5	226	109	Horizontal	-15.7
2395.95	28.5	54	-25.5	325	138	Horizontal	-15.1
2425.95	28.8	54	-25.2	350	146	Horizontal	-14.8
2457.55	29.3	54	-24.7	306	98	Horizontal	-14.7

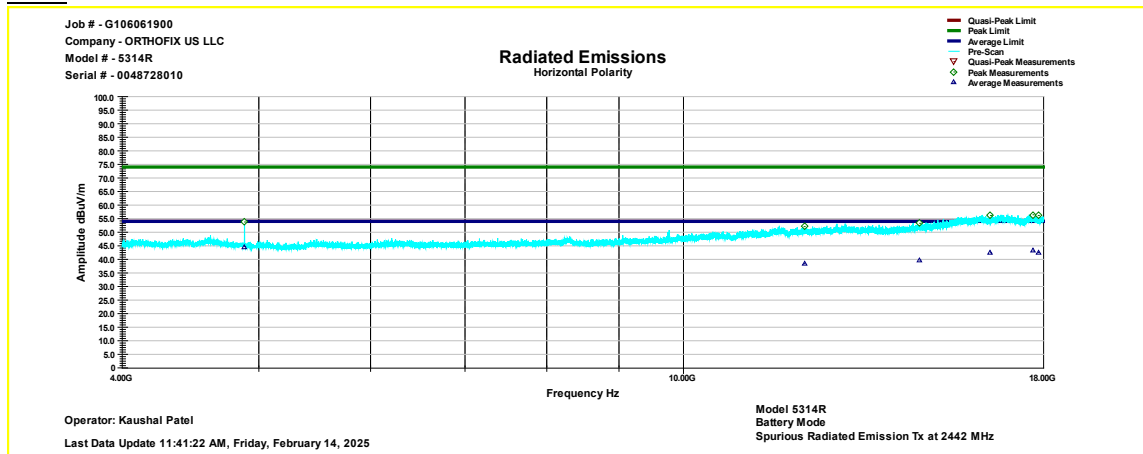
Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2338.45	42	74	-32	250	18	Vertical	-15.66
2395.45	44.3	74	-29.7	104	88	Vertical	-15.19
2425.55	47.3	74	-26.7	150	101	Vertical	-15.04

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2338.45	27.5	54	-26.5	250	18	Vertical	-15.66
2395.45	28.3	54	-25.7	104	88	Vertical	-15.19
2425.55	28.5	54	-25.5	150	101	Vertical	-15.04

Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

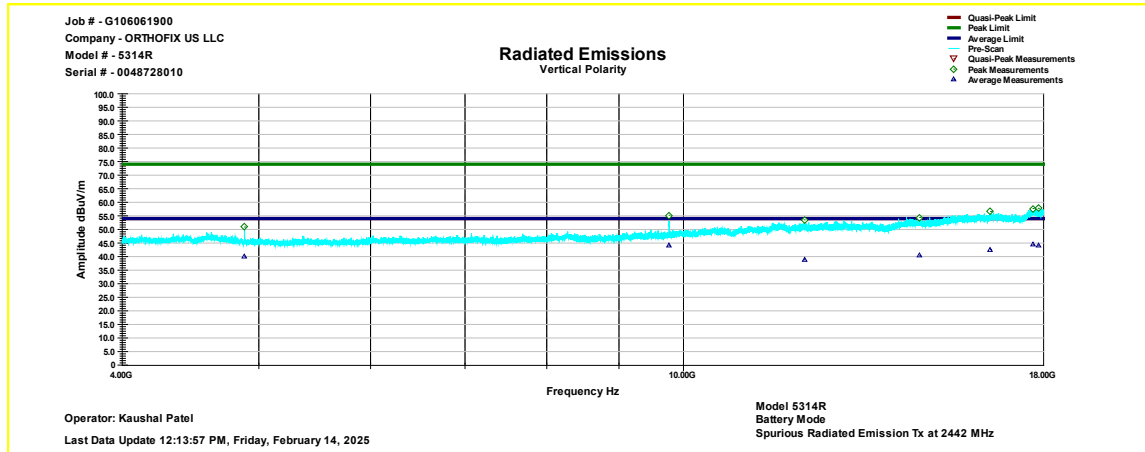
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	53.7	74	-20.3	100	60	Horizontal	3.70
12176.95	52.1	74	-21.9	155	20	Horizontal	6.00
14707.05	53.2	74	-20.8	331	221	Horizontal	9.00
16508.05	56.1	74	-17.9	140	21	Horizontal	11.90
17692.95	56.4	74	-17.6	384	91	Horizontal	13.00
17846.95	56.1	74	-17.9	180	122	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	44.7	54	-9.3	100	60	Horizontal	3.70
12176.95	38.4	54	-15.6	155	20	Horizontal	6.00
14707.05	39.7	54	-14.3	331	221	Horizontal	9.00
16508.05	42.4	54	-11.5	140	21	Horizontal	11.90
17692.95	43.1	54	-10.9	384	91	Horizontal	13.00
17846.95	42.5	54	-11.5	180	122	Horizontal	13.10

Note: Correction = AF + CF – Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	50.9	74	-23.1	325	91	Vertical	2.31
9767.15	55.2	74	-18.8	331	241	Vertical	0.28
12176.95	53.5	74	-20.5	114	199	Vertical	3.33
14707.05	54.4	74	-19.6	250	112	Vertical	5.93
16507.95	56.6	74	-17.4	121	50	Vertical	8.06
17693.05	57.7	74	-16.3	332	131	Vertical	10.15
17846.95	57.8	74	-16.2	139	62	Vertical	10.66

Note: Correction = AF + CF - Preamp

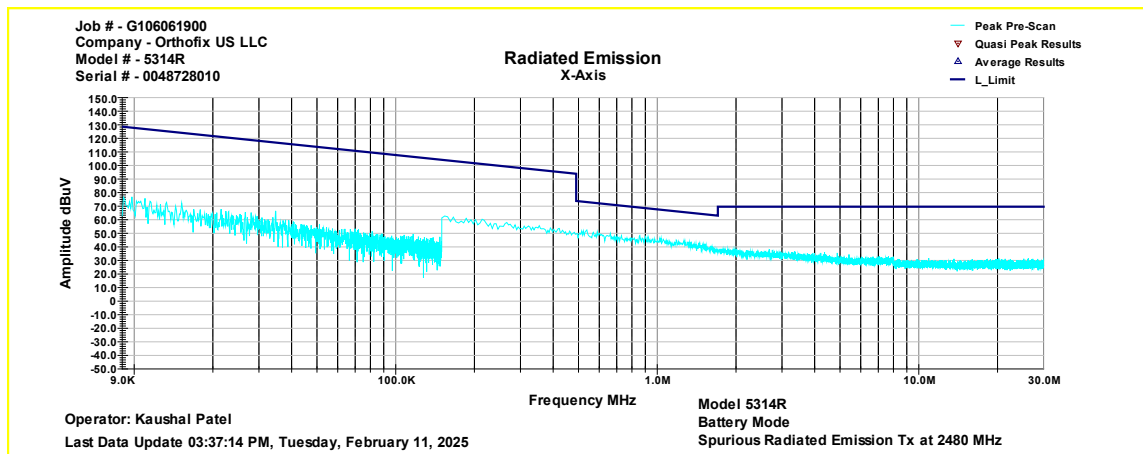
Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
4884.45	40.1	54	-13.9	325	91	Vertical	2.31
9767.15	44.1	54	-9.9	331	241	Vertical	0.28
12176.95	38.8	54	-15.1	114	199	Vertical	3.33
14707.05	40.3	54	-13.7	250	112	Vertical	5.93
16507.95	42.5	54	-11.4	121	50	Vertical	8.06
17693.05	44.4	54	-9.6	332	131	Vertical	10.15
17846.95	44.1	54	-9.8	139	62	Vertical	10.66

Note: Correction = AF + CF - Preamp

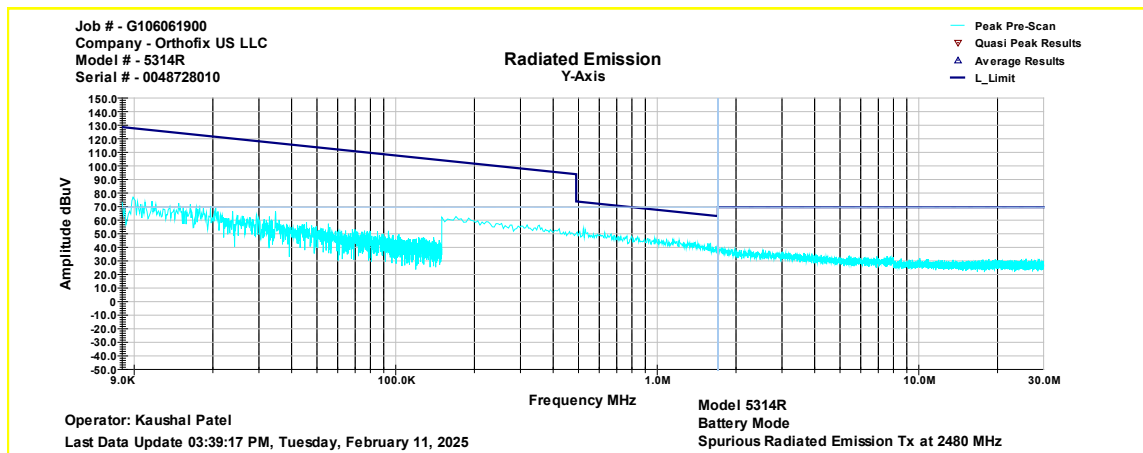
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz

Test Results: Part 15.209 Radiated Spurious Emissions High Channel, Tx at 2480MHz

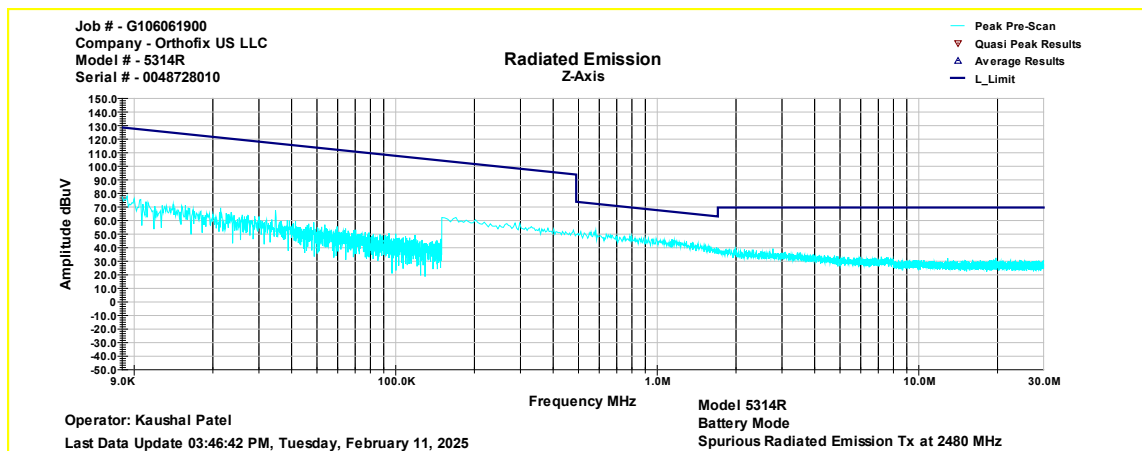
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



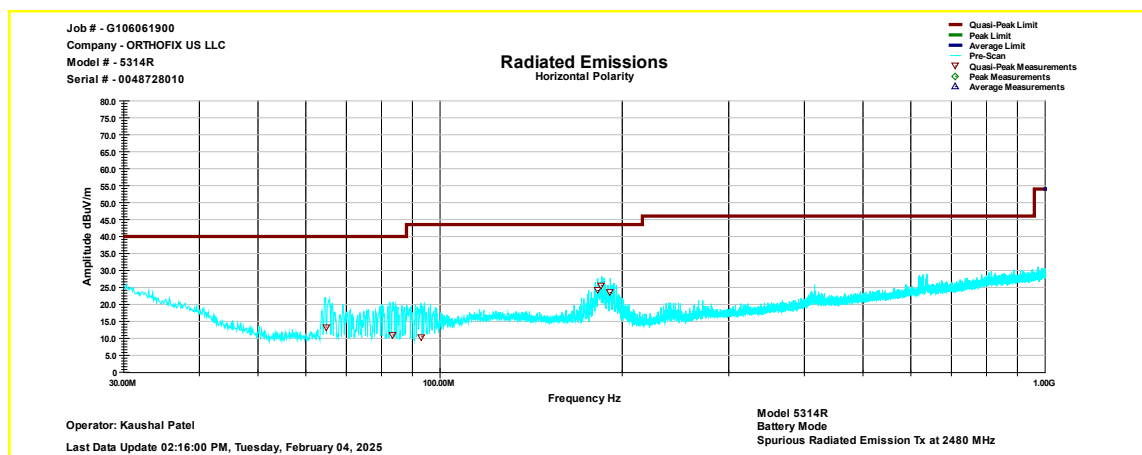
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



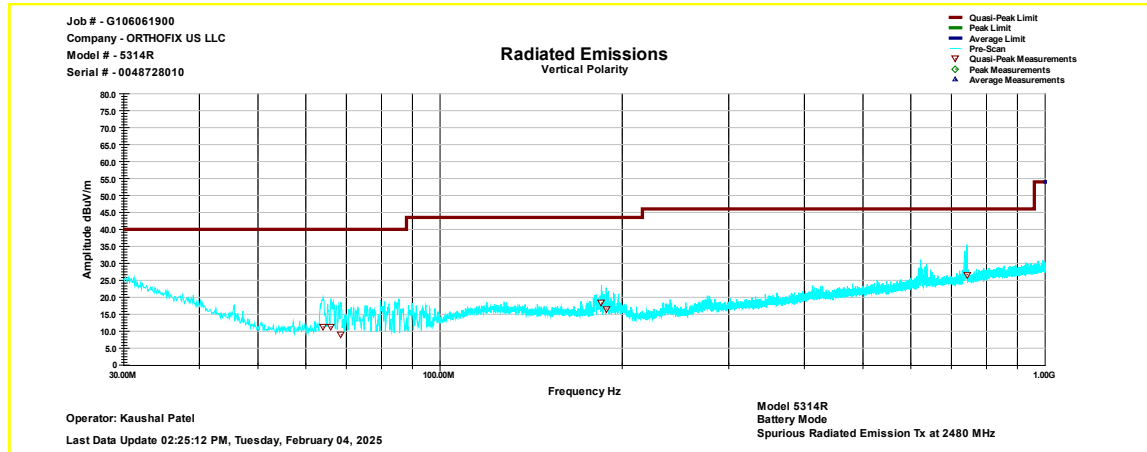
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
64.75	13.3	40	-26.7	347	23	Horizontal	-20.4
83.61	11	40	-29	350	201	Horizontal	-20.7
93.15	10.4	43.5	-33.1	250	189	Horizontal	-19.8
182.31	24.1	43.5	-19.4	149	23	Horizontal	-16.3
184.85	25.6	43.5	-17.9	132	201	Horizontal	-16.3
191.05	23.5	43.5	-20	149	23	Horizontal	-16.1

Note: Correction = AF + CF - Preamp

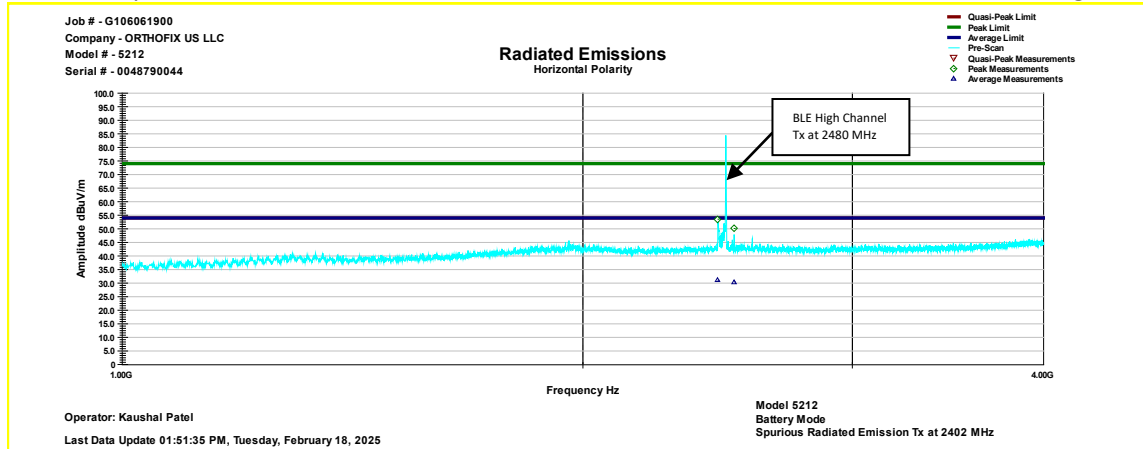
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
64.05	11.2	40	-28.8	250	323	Vertical	-20.4
65.95	11.3	40	-28.7	332	126	Vertical	-20.3
68.61	8.9	40	-31.1	347	318	Vertical	-20.3
184.91	18.3	43.5	-25.2	208	122	Vertical	-16.3
188.05	16.5	43.5	-27	149	121	Vertical	-16.3
742.45	26.6	46	-19.4	100	33	Vertical	-3.1

Note: Correction = AF + CF - Preamp

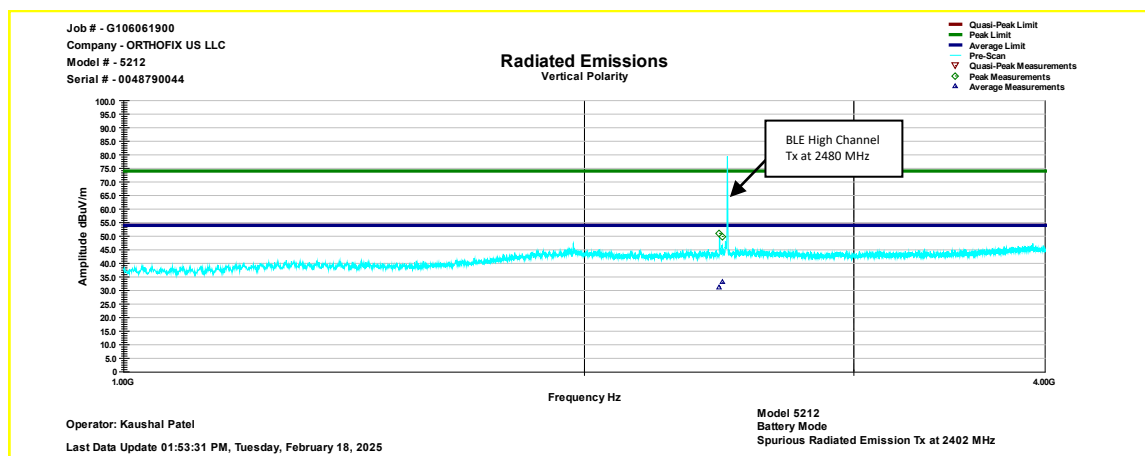
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2450.95	53.5	74	-20.5	313	326	Horizontal	-14.7
2511.05	50.1	74	-23.9	290	318	Horizontal	-14.6

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2450.95	31	54	-23	313	326	Horizontal	-14.7
2511.05	30.4	54	-23.6	290	318	Horizontal	-14.6

Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2450.55	51	74	-23	224	315	Vertical	-14.96
2460.95	49.9	74	-24.1	250	312	Vertical	-14.69

Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2450.55	31.3	54	-22.7	224	315	Vertical	-14.96
2460.95	33	54	-21	250	312	Vertical	-14.69