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CERTIFICATION TEST REPORT

Manufacturer: North Pole Engineering, Inc.
1000 Boone Avenue North, Suite 700
Golden Valley, Minnesota 55427 USA

Applicant: Same as Above

Product Name: WYÛR

Product Description: A battery powered device that converts signals between ANT+ and Bluetooth fitness sensors and receivers, converts Bluetooth or ANT+ heart rate to Polar 5kHz receivers, and consolidates multiple sensors into a single connection point for streamlined connection to devices with limited connections such as an Apple TV. WYÛR also enables Apple Watch to be used as a standard heart rate monitor.

Operating Voltage/Freq. of EUT During Testing: EUT is solely battery-operated in normal use. USB for testing only.

Model: W0100-0

FCC ID: XRH-NPE110

Testing Commenced: 2022-06-14

Testing Ended: 2022-07-25

Summary of Test Results: **In Compliance**

The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications and/or manufacturer's statement. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.

Standards:

- ❖ FCC Part 15 Subpart C, Section 15.249
- ❖ FCC Part 15 Subpart C, Section 15.215(c) – Additional provisions to the general radiated emission limitations
- ❖ FCC Part 15 Subpart A, Section 15.31(e) – Measurement Standards



Order Number: F2P26787C

Applicant: North Pole Engineering, Inc.
Model: W0100-0

Evaluation Conducted by:

Julius Chiller, EMC/Wireless Engineer

Report Reviewed by:

Ken Littell, Vice President of EMC

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1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio. Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

1.2 Measurement Procedure:

All measurements were performed according to the 2013 version of ANSI C63.10 and recommended FCC procedure of measurement under Section 15.249. A list of the measurement equipment can be found in Section 6.



1.3 Uncertainty Budget:

The uncertainty in EMC measurements arises from several factors which affect the results, some associated with environmental conditions in the measurement room, the test equipment being used, and the measurement techniques adopted.

The measurement uncertainty budgets detailed below are calculated from the test and calibration data and are expressed with a 95% confidence factor using a coverage factor of $k=2$. The Uncertainty for a laboratory is referred to as U_{lab} . For Radiated and Conducted Emissions, the Expanded Uncertainty is compared to the U_{cispr} values to determine if a specific margin is required to deem compliance.

U_{lab}

Measurement Range	Combined Uncertainty	Expanded Uncertainty
Radiated Emissions <1 GHz @ 3m	2.54	5.07dB
Radiated Emissions <1 GHz @ 10m	2.55	5.09dB
Radiated Emissions 1 GHz to 2.7 GHz	1.81	3.62dB
Radiated Emissions 2.7 GHz to 18 GHz	1.55	3.10dB
AC Power Line Conducted Emissions, 150kHz to 30 MHz	1.38	2.76dB
AC Power Line Conducted Emissions, 9kHz to 150kHz	1.66	3.32dB

U_{cispr}

Measurement Range	Expanded Uncertainty
Radiated Emissions <1 GHz @ 3m	5.2dB
Radiated Emissions <1 GHz @ 10m	5.2dB
Radiated Emissions 1 GHz to 2.7 GHz	Under Consideration
Radiated Emissions 2.7 GHz to 18 GHz	Under Consideration
AC Power Line Conducted Emissions, 150kHz to 30 MHz	3.6dB
AC Power Line Conducted Emissions, 9kHz to 150kHz	4.0dB

If U_{lab} is less than or equal to U_{cispr} , then:

- compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} in table 1, then:

- compliance is deemed to occur if no measured disturbance, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance, increased by $(U_{lab} - U_{cispr})$, exceeds the disturbance limit.

Note: Only measurements listed in the tables above that relate to tests included in this Test Report are applicable.



Order Number: F2P26787C

Applicant: North Pole Engineering, Inc.
Model: W0100-0

1.4 Document History:

Document Number	Description	Issue Date	Approved By
F2P26787C-01E	First Issue	2022-08-31	K. Littell



2 SUMMARY OF TEST RESULTS

Test Name	Standard(s)	Results
99% Occupied Bandwidth	CFR 47 Part 15.215(c)	Complies
-20dB Occupied Bandwidth	CFR 47 Part 15.215(c)	Complies
Field Strength of Emissions	CFR 47 Part 15.249(a)(d)	Complies
Variation of the Input Power	CFR 47 Part 15.231(e)	Complies*
Conducted Emissions	CFR 47 Part 15.207(a)	Not Applicable

Note: Product was operated using fully charged internal battery.

Modifications Made to the Equipment
None



3 TABLE OF MEASURED RESULTS

Test		Low Channel 2402 MHz	Mid Channel BLE: 2440 MHz ANT+: 2457 MHz	High Channel 2480 MHz
Average Field Strength of Fundamental	ANT+	78.8 dB μ V/m, 8.7 mV/m	78.0 dB μ V/m, 7.9 mV/m	77.5 dB μ V/m, 7.5 mV/m
	BLE	72.9 dB μ V/m, 4.4 mV/m	73.4 dB μ V/m, 4.7 mV/m	73.6 dB μ V/m, 4.8 mV/m
Average Limit for Fundamental		50 millivolts/meter (93.97 dB μ V/m)	50 millivolts/meter (93.97 dB μ V/m)	50 millivolts/meter (93.97 dB μ V/m)
Peak Field Strength of Fundamental	ANT+	79.9 dB μ V/m	87.72 dB μ V/m,	78.6 dB μ V/m,
	BLE	79.5 dB μ V/m,	80.7 dB μ V/m,	79.6 dB μ V/m,
Peak Limit for Fundamental		113.97 dB μ V/m	113.97 dB μ V/m	113.97 dB μ V/m
-20dB Occupied Bandwidth	ANT+	0.968 MHz	0.968 MHz	0.969 MHz
	BLE	1.138 MHz	1.140 MHz	1.128 MHz
99% Occupied Bandwidth (MHz)	ANT+	0.910 MHz	0.915 MHz	0.926 MHz
	BLE	1.049 MHz	1.049 MHz	1.049 MHz

The -20dB bandwidth of the emission shall be contained within the frequency band designated in the rule section under which the equipment is operated.



Order Number: F2P26787C

**Applicant: North Pole Engineering, Inc.
Model: W0100-0**

4 ENGINEERING STATEMENT

This report has been prepared on behalf of North Pole Engineering, Inc. to provide documentation for the testing described herein. This equipment has been tested and found to comply with part 15.249 of the FCC Rules using ANSI C63.10 2013 standard. The test results found in this test report relate only to the items tested.



5 EUT INFORMATION AND DATA

5.1 Equipment Under Test:

Product: 2.4 GHz Radio

Model: **W0100-0**

Serial No.: 0021

Firmware: 0.1.31

Hardware: REV1.5

FCC ID: XRH-NPE110

5.2 Trade Name:

North Pole Engineering, Inc.

5.3 Power Supply:

Battery-Operated

5.4 Applicable Rules:

CFR 47, Part 15.249, subpart C

5.5 Antenna:

Integral Antenna, 0dBi Gain

5.6 Accessories:

Device	Manufacturer	Model Number	Serial Number
Laptop	Dell	Latitude	10083
Accessory Software Version:		GemHciHostSimulator v3.33.0	

5.7 Test Item Condition:

The equipment to be tested was received in good condition.

5.8 Testing Algorithm:

EUT was set to transmit a continuously modulated signal in the 2.4 GHz band using both BLE and ANT+ modulations.



6 LIST OF MEASUREMENT INSTRUMENTATION

Equipment Type	Asset Number	Manufacturer	Model	Serial Number	Calibration Due Date
Shielded Chamber	CL166-E	Albatross Projects	B83117-DF435-T261	US140023	2022-09-09
Receiver	CL151	Rohde & Schwarz	ESU40	100319	2023-03-31
Low Loss Cable Set	--	Pasternack	PE3C0666-252 / PE3C066-50CM	None Spec.	2023-10-12
Horn Antenna	CL098	Emco	3115	9809-5580	2023-01-26
Horn Antenna 18-26.5 GHz	CL114	A.H. Systems, Inc.	SAS-572	237	2023-07-30
18" Active Loop	CL194	AH Systems, Inc.	SAS-562B	281	2022-08-21
Pre-Amplifier	CL153	Keysight Tech.	83006A	MY39500791	2022-08-12
Antenna, JB3 Combination	CL175	Sunol Sciences	JB3	A030315	2022-09-14
Preamplifier	CL285	AH Systems, Inc.	PAM-0207	322	2023-03-30
Temp/Hum Recorder	CL294	Thermpro	TP50	2	2023-04-15
Software:	Tile Version 3.4.B.3		Software Verified: 2022-06-16 to 2022-07-25		
Software:	EMC 32, Version 8.53.0		Software Verified: 2022-06-16 to 2022-07-25		



7 FCC PART 15.215(e), OCCUPIED BANDWIDTH

7.1 Requirements:

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the -20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

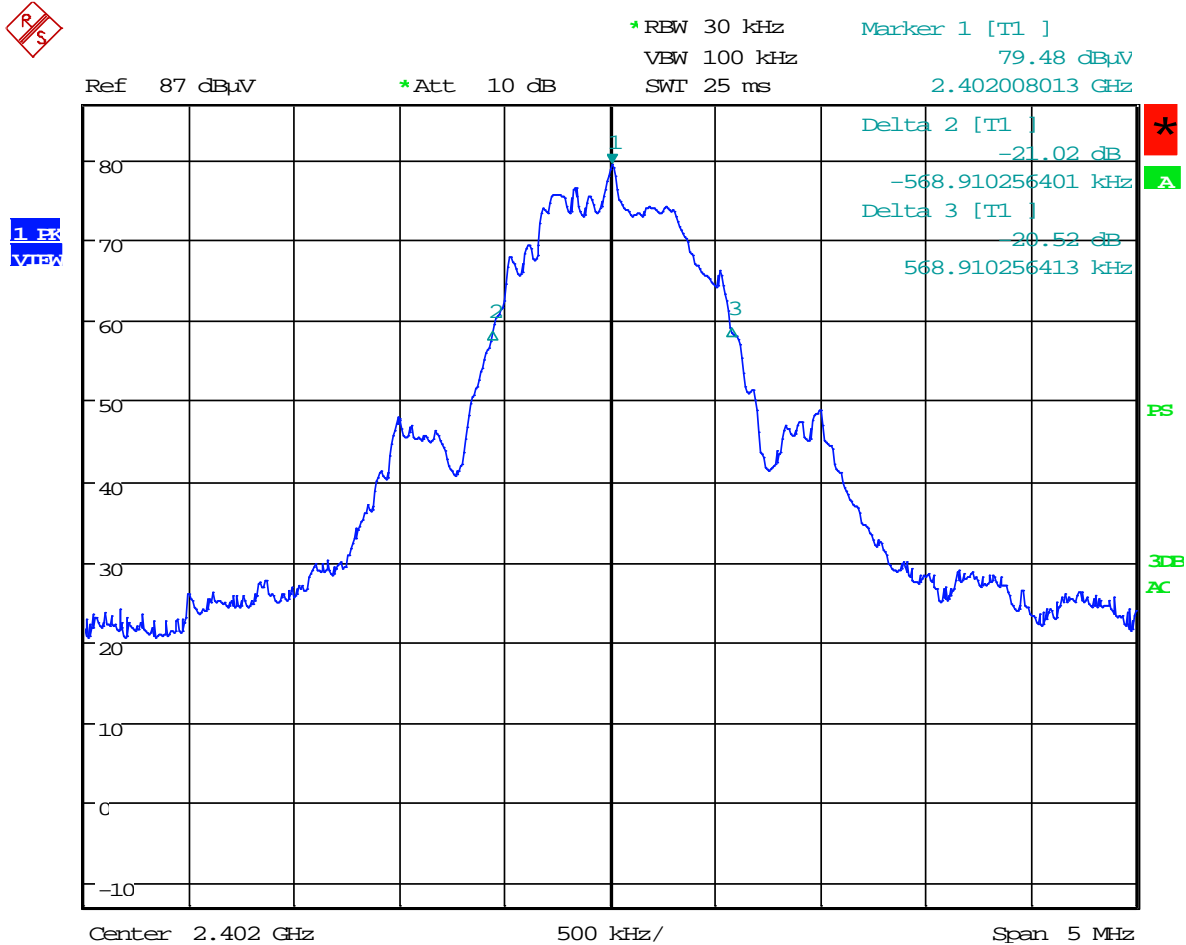
Bandwidth measurements were made at the low (2.402 GHz), mid (2.440 GHz) and upper (2.480 GHz) frequencies. The -20dB bandwidth was measured using the marker delta method. The 99% bandwidth was measured using the receiver's OBW function.



7.2 Occupied Bandwidth Test Data

Test Date(s):	2022-06-14	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.215(c)	Air Temperature:	23.2°C
		Relative Humidity:	44%

BLE: -20dB, Low Channel



Date: 14.JUN.2022 17:30:16



BLE: -20dB, Mid Channel

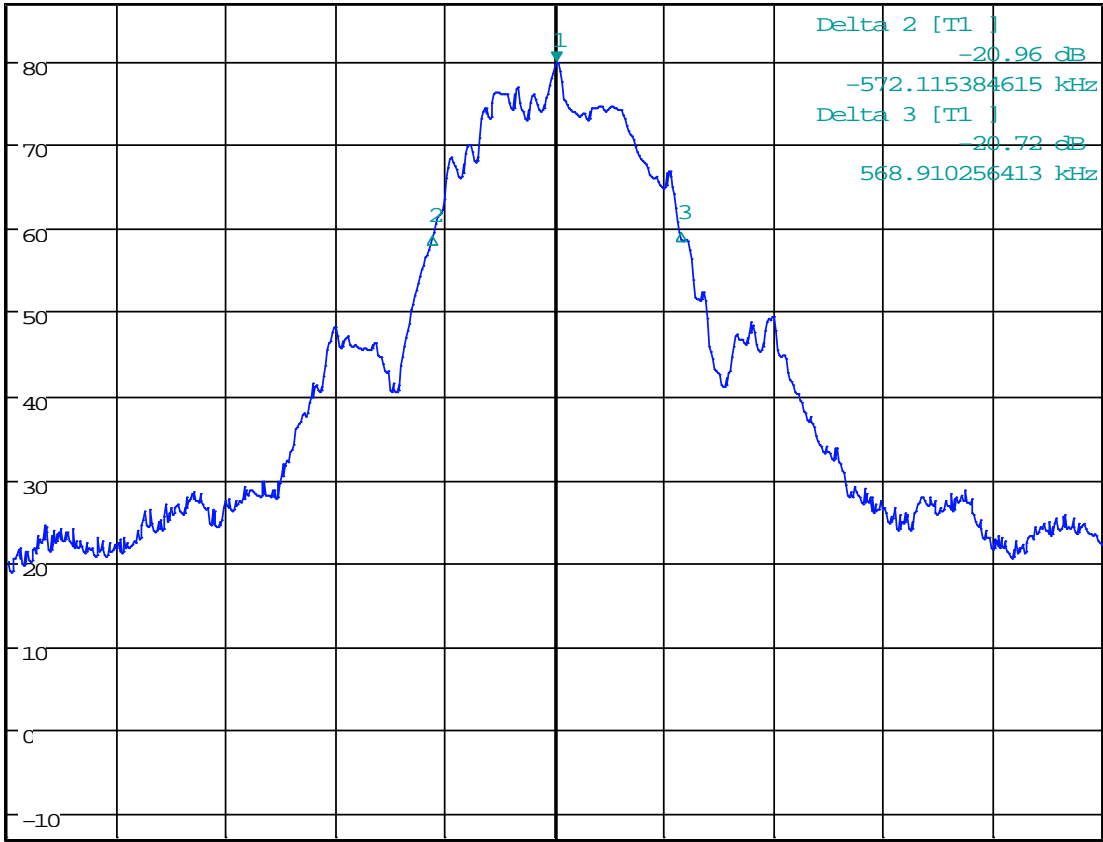


*RBW 30 kHz Marker 1 [T1]
VBW 100 kHz 80.00 dBuV
SWI 25 ms 2.440008013 GHz

Ref 87 dBuV

*Att 10 dB

1 ER
VIEW



Center 2.44 GHz

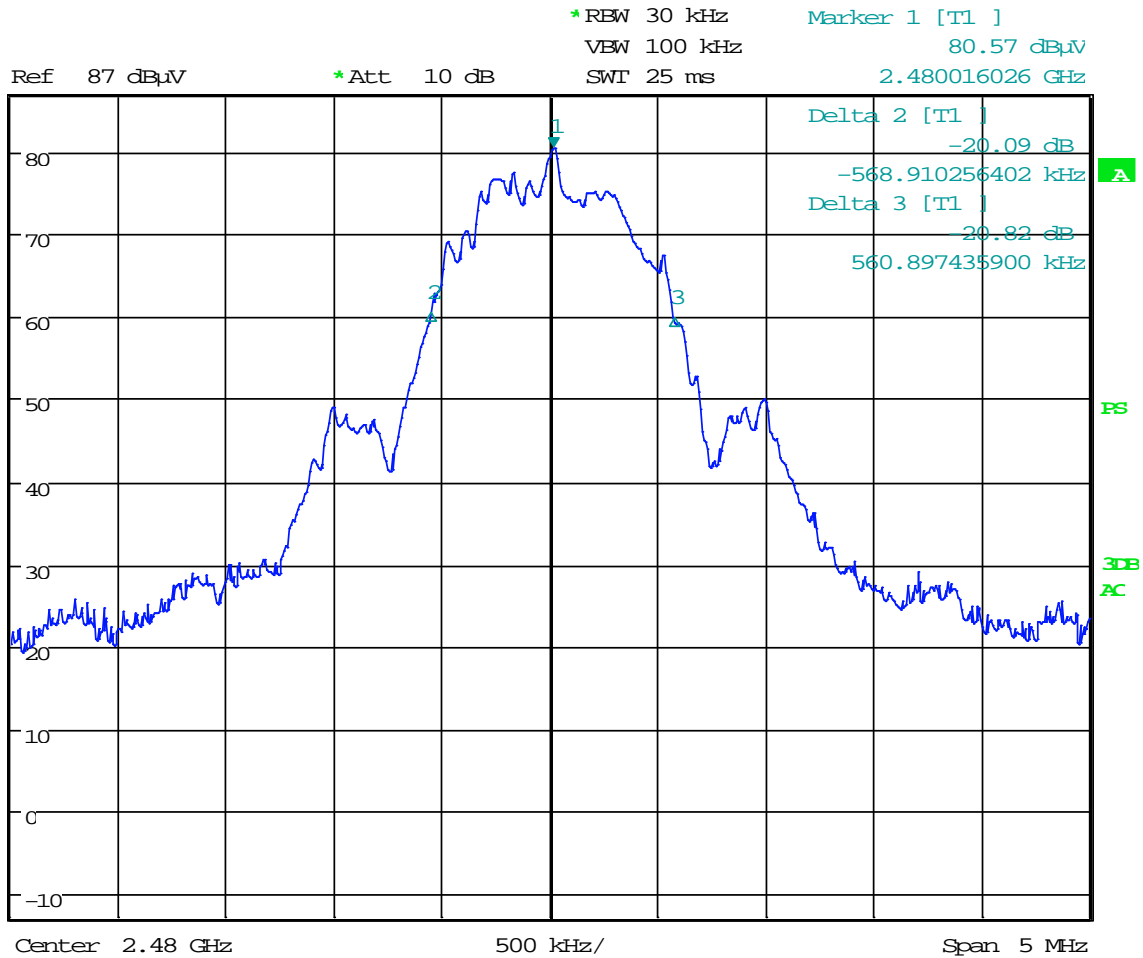
500 kHz/

Span 5 MHz

Date: 14.JUN.2022 17:35:26



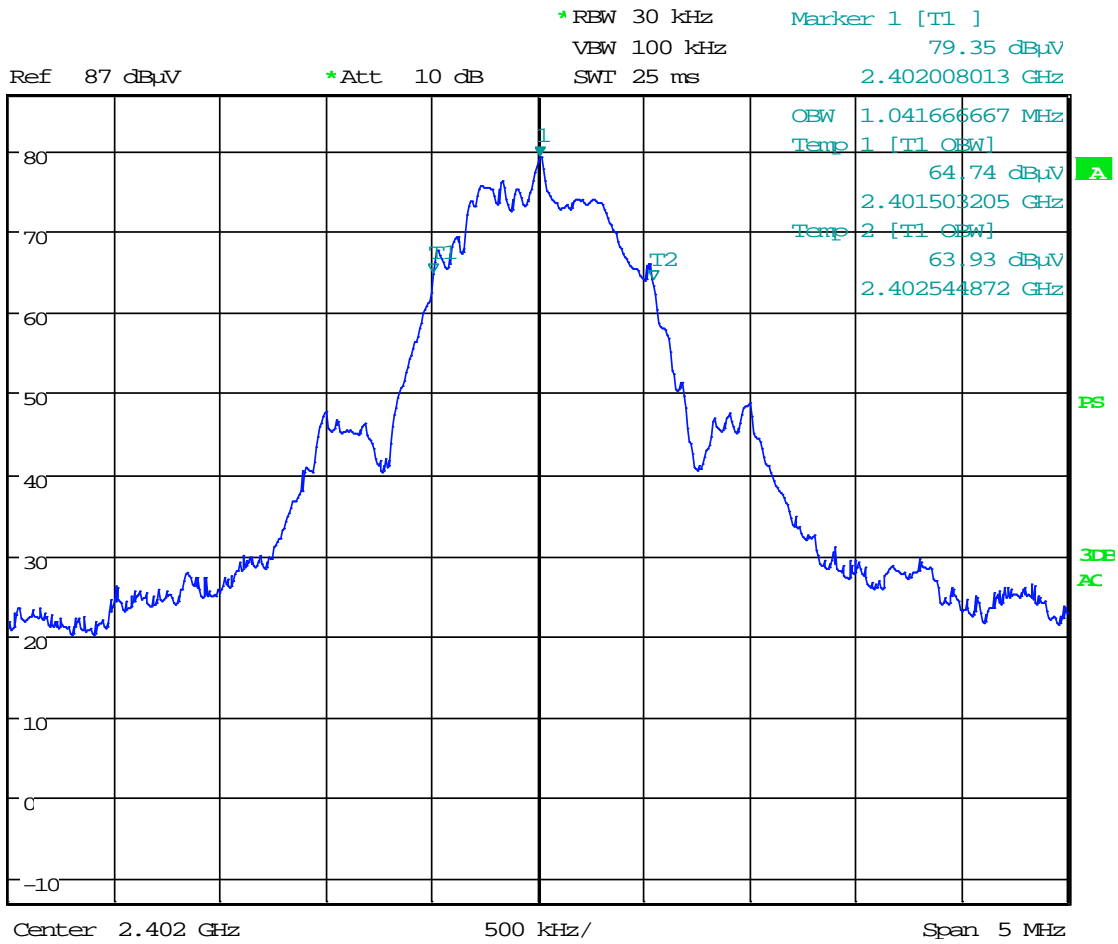
BLE: -20dB, High Channel



Date: 14.JUN.2022 17:40:41



BLE: 99%, Low Channel



Date: 14.JUN.2022 17:39:15

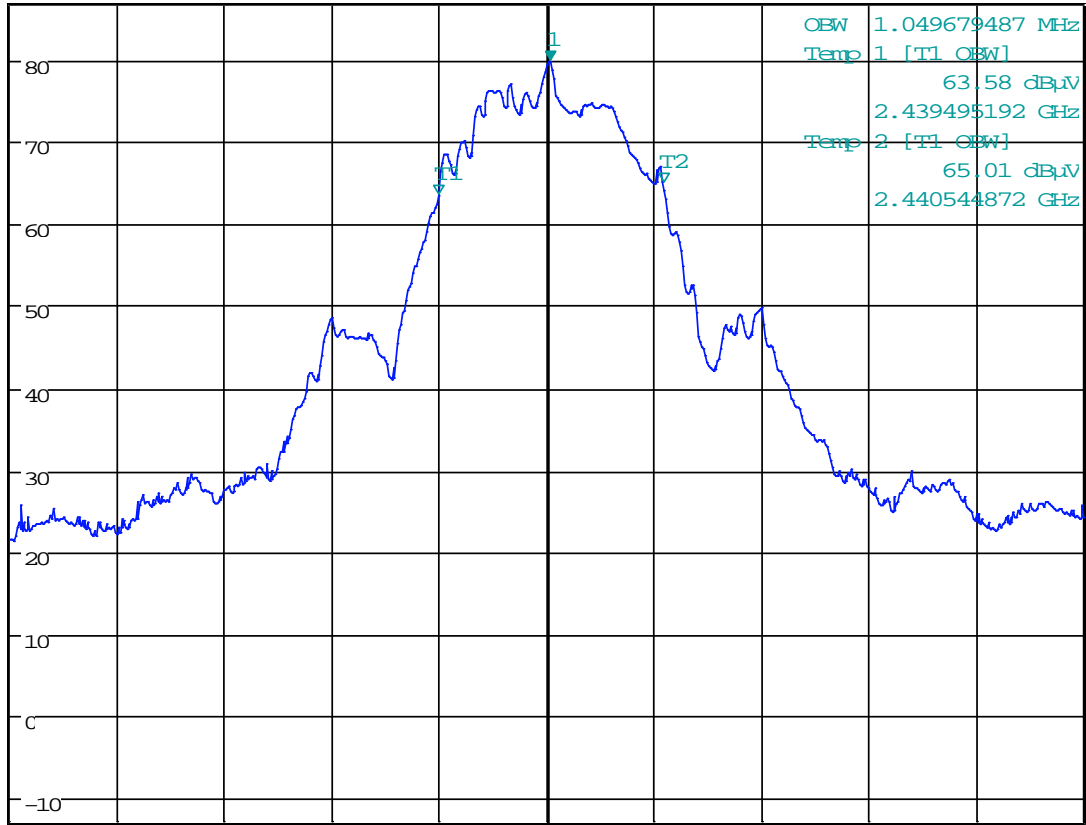


BLE: 99%, Mid Channel



Ref 87 dBuV *Att 10 dB *RBW 30 kHz Marker 1 [T1] 80.03 dBuV
 VBW 100 kHz SWT 25 ms 2.440016026 GHz

1. PK
MAX



Center 2.44 GHz 500 kHz/ Span 5 MHz

Date: 14.JUN.2022 17:33:07

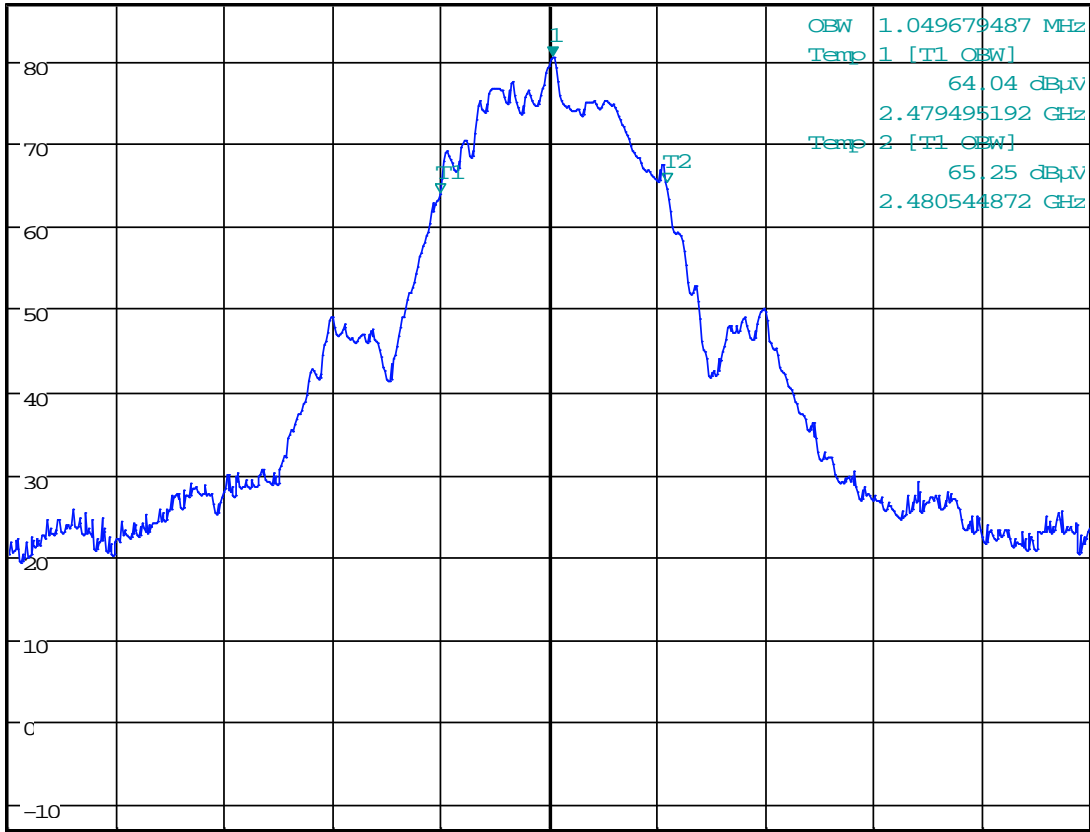


BLE: 99%, High Channel



*REW 30 kHz Marker 1 [T1]
 VEW 100 kHz 80.57 dBuV
 *Att 10 dB SWI 25 ms 2.480016026 GHz

1 EK
VIEW



Center 2.48 GHz 500 kHz/ Span 5 MHz

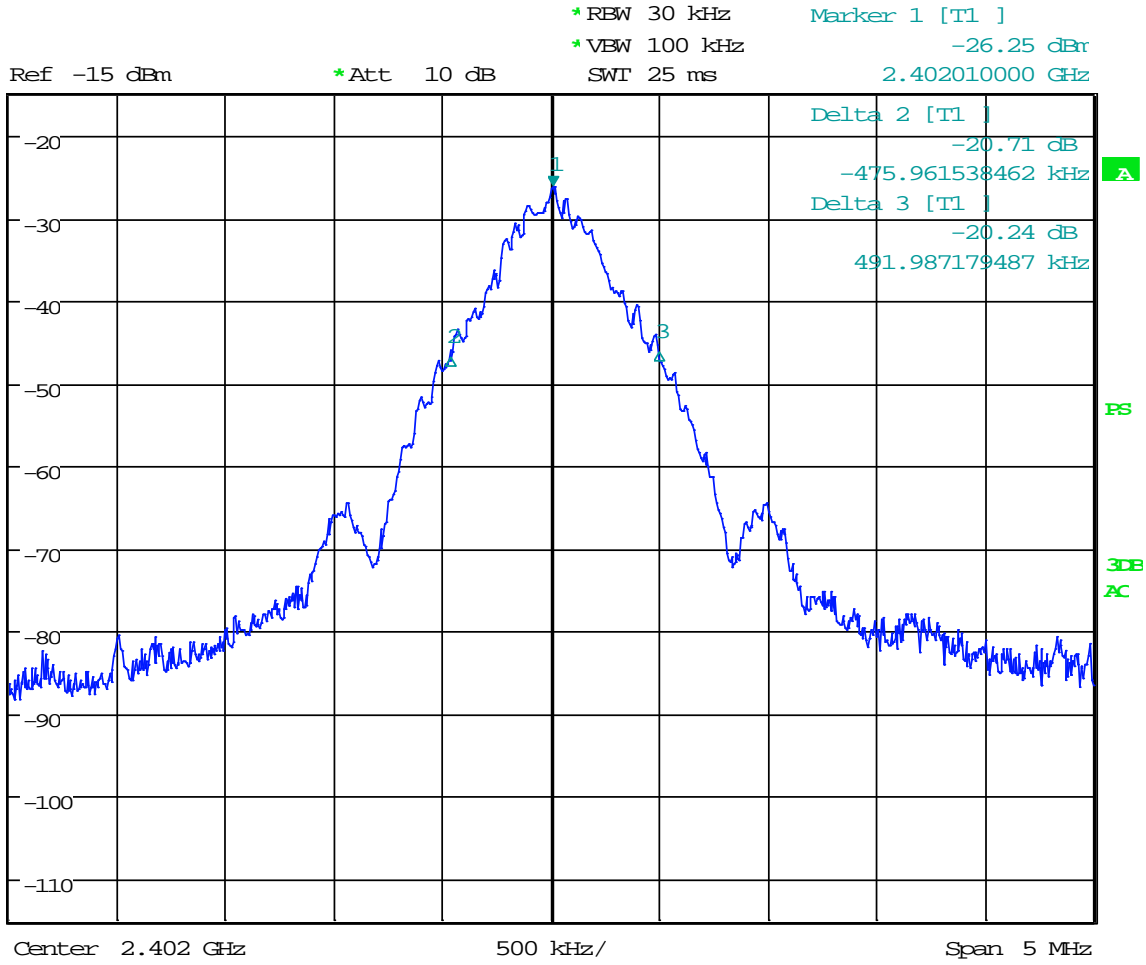
Date: 14.JUN.2022 17:41:41



ANT+: -20dB, Low Channel



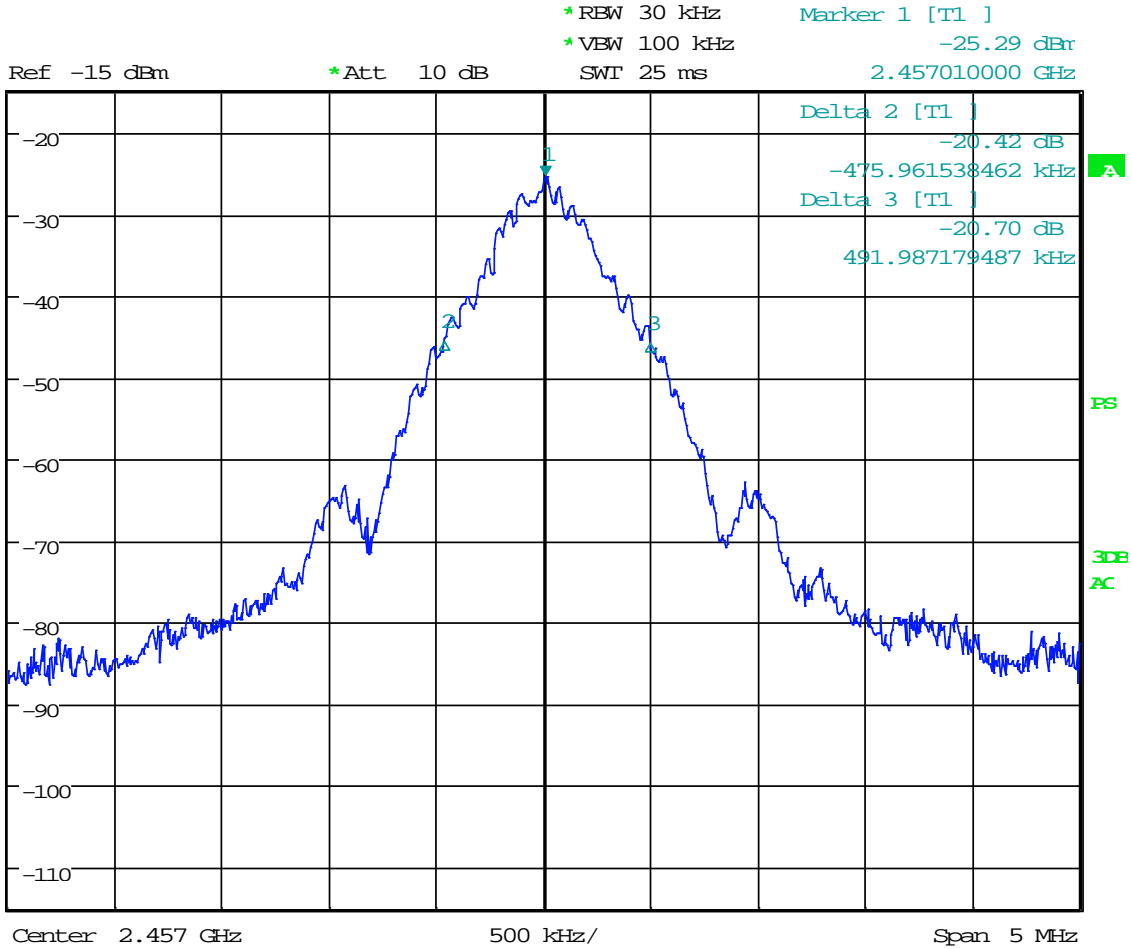
1.0k
VIEW



Date: 14.JUN.2022 16:53:47



ANT+: -20dB, Mid Channel



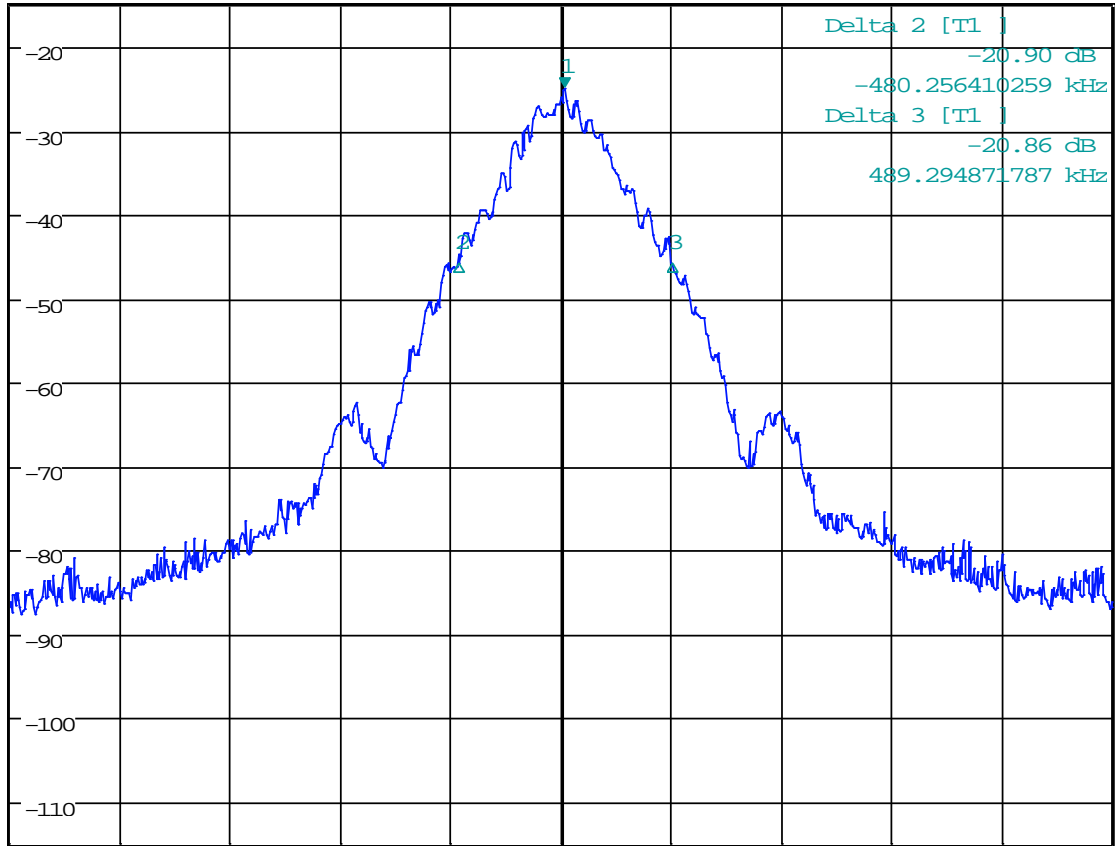
Date: 14.JUN.2022 16:51:53



ANT+: -20dB, High Channel



*RBW 30 kHz Marker 1 [T1]
 *VBW 100 kHz -25.04 dBm
 Ref -15 dBm *Att 10 dB SWF 25 ms 2.480015000 GHz

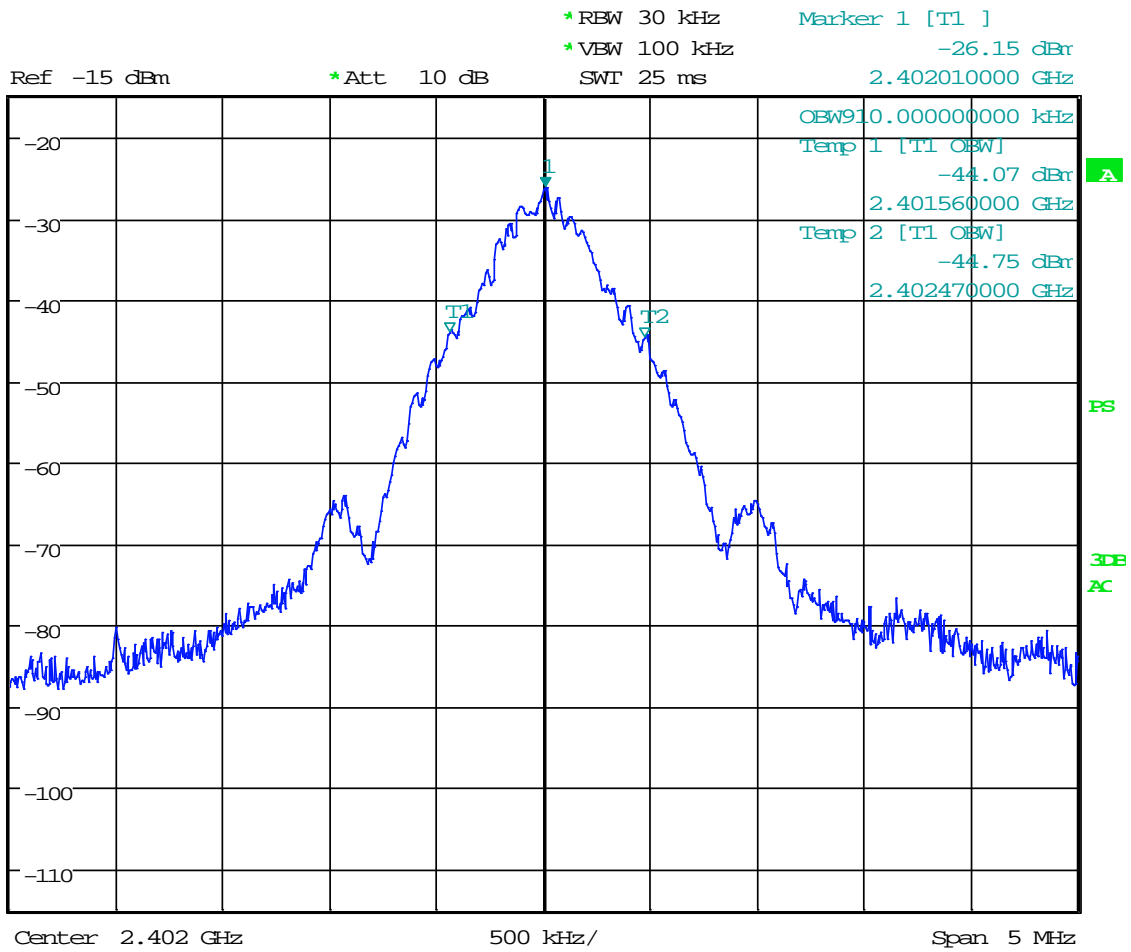


Center 2.48 GHz 500 kHz/ Span 5 MHz

Date: 14.JUN.2022 16:48:19



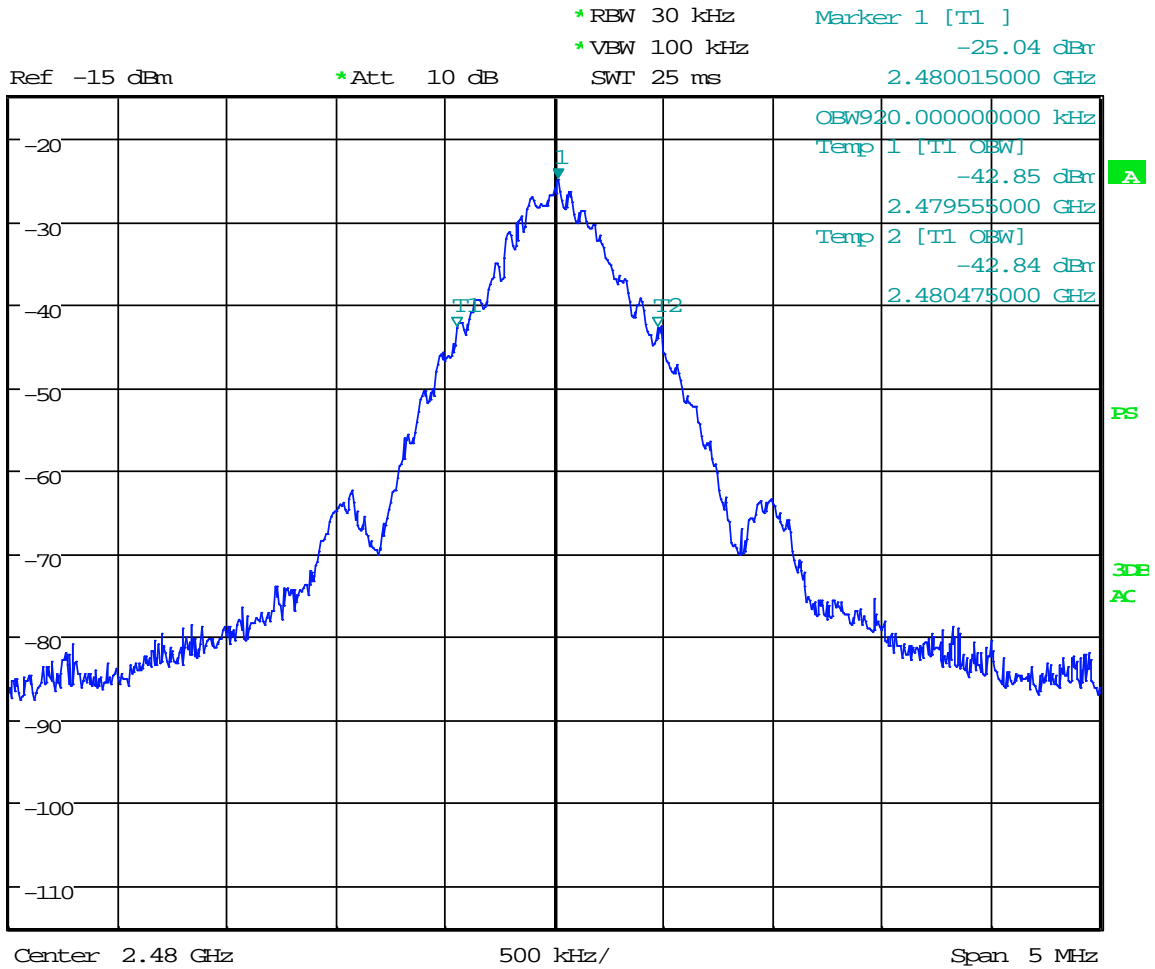
ANT+: 99%, Low Channel



Date: 14.JUN.2022 16:44:33



ANT+: 99%, High Channel



Date: 14.JUN.2022 16:47:14



8 FIELD STRENGTH OF EMISSIONS FROM INTENTIONAL RADIATORS

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

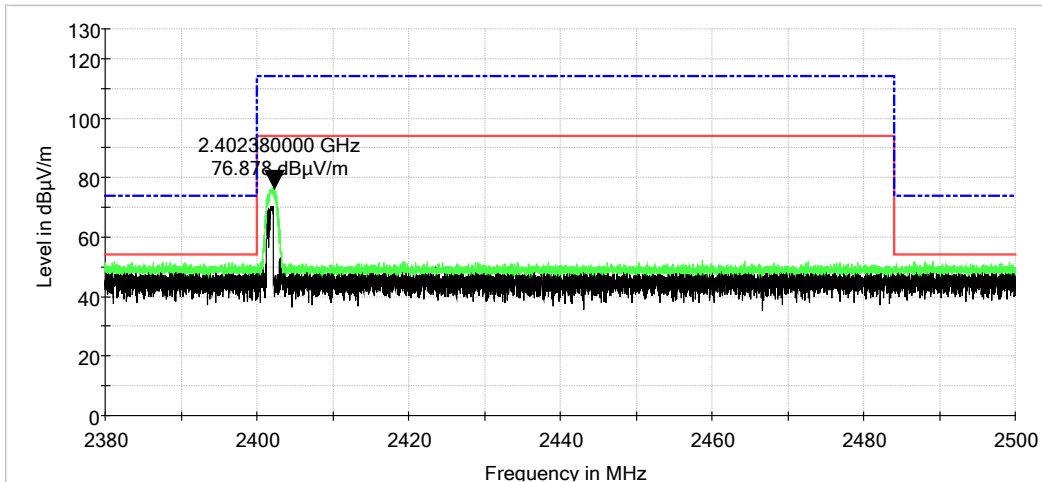
NOTE: During the pre-scan evaluation, the EUT was rotated in all possible directions to find the maximum emissions. The orthogonal position that showed the highest emissions was used. The antenna was raised between 1 and 4 meters and the EUT turntable was rotated 360 degrees to maximize the emissions.



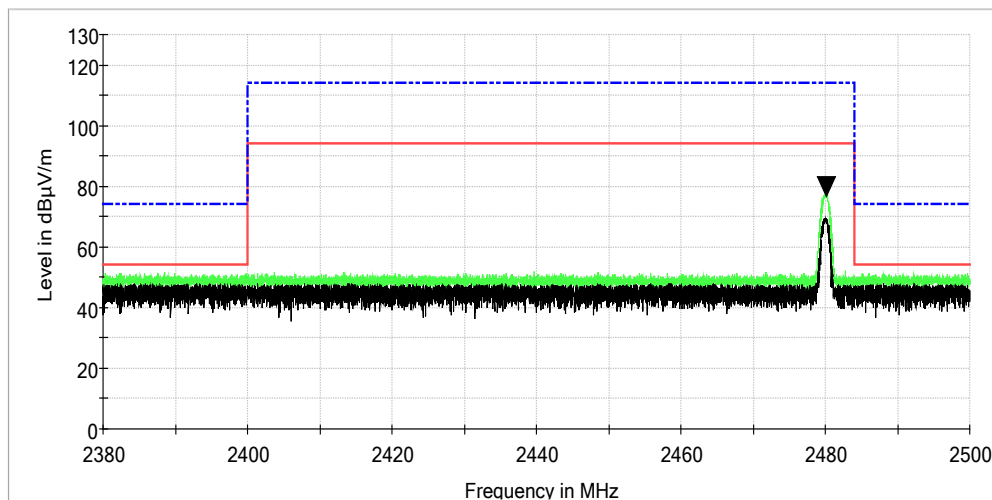
8.1 Test Data - Field Strength of Emissions from Intentional Radiators

Test Date(s):	2022-06-14	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.249(a)	Air Temperature:	23.1°C
		Relative Humidity:	40%

Band Edge, BLE: Low, Vertical

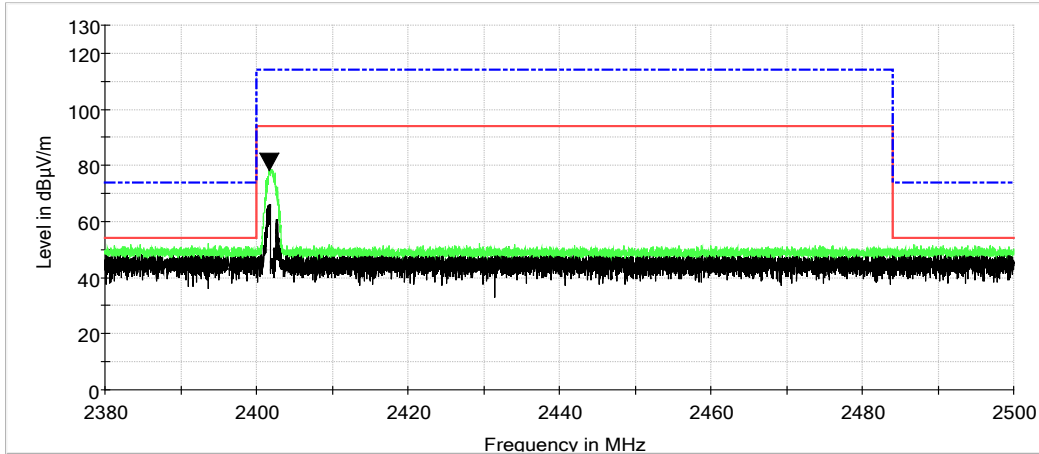


Band Edge, BLE: High, Vertical

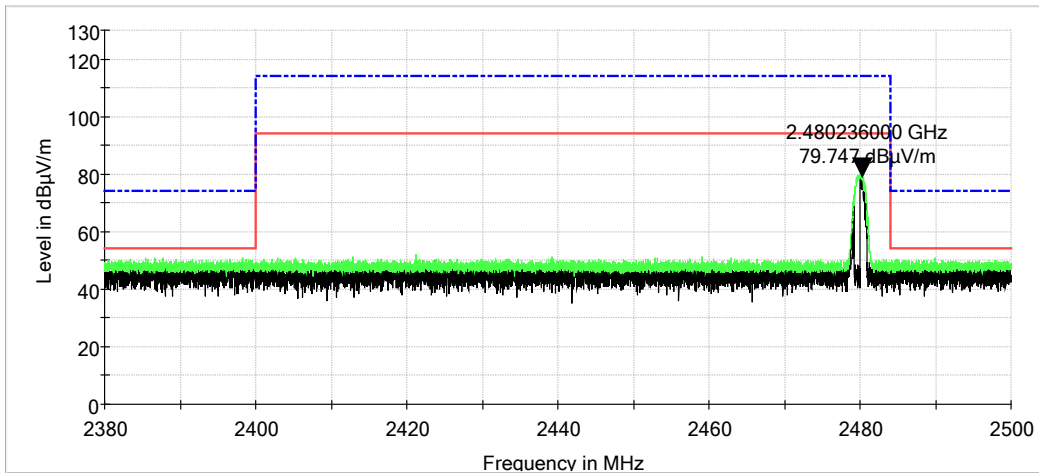




Band Edge, BLE: Low, Horizontal



Band Edge, BLE: High, Horizontal





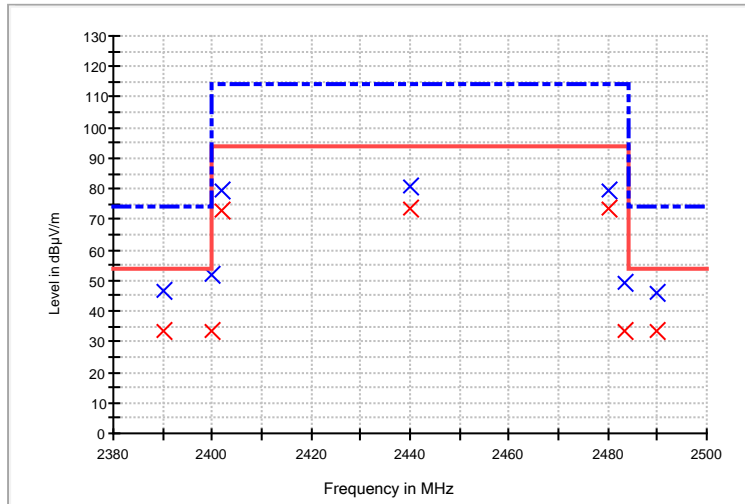
BLE: Band Edge and Field Strength of the Fundamentals

MaxPeak

Frequency (MHz)	Antenna Polarization	Bandwidth (kHz)	Antenna Height (cm)	Azimuth (deg)	Reading (dBμV)	Cable Loss & Antenna Factor (dB)	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	H	1000.00	150.00	300.00	36.3	10.6	46.90	74.0	-27.1
2400.00	H	1000.00	150.00	300.00	41.2	10.5	51.70	74.0	-22.3
2402.00	H	1000.00	150.00	300.00	69.0	10.5	79.50	114.0	-34.5
2440.00	H	1000.00	150.00	292.00	70.2	10.5	80.70	114.0	-33.3
2480.00	H	1000.00	150.00	316.00	69.1	10.5	79.60	114.0	-34.4
2483.50	H	1000.00	150.00	316.00	38.6	10.5	49.10	74.0	-24.9
2490.00	H	1000.00	150.00	316.00	35.7	10.6	46.30	74.0	-27.7

AVG

Frequency (MHz)	Antenna Polarization	Bandwidth (kHz)	Antenna Height (cm)	Azimuth (deg)	Reading (dBμV)	Cable Loss & Antenna Factor (dB)	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2390.00	H	1000.00	150.00	300.00	22.7	10.6	33.30	54.0	-20.7
2400.00	H	1000.00	150.00	300.00	23.2	10.5	33.70	54.0	-20.3
2402.00	H	1000.00	150.00	300.00	62.4	10.5	72.90	94.0	-21.1
2440.00	H	1000.00	150.00	292.00	62.9	10.5	73.40	94.0	-20.6
2480.00	H	1000.00	150.00	316.00	63.1	10.5	73.60	94.0	-20.4
2483.50	H	1000.00	150.00	316.00	23.1	10.5	33.60	54.0	-20.4
2490.00	H	1000.00	150.00	316.00	22.9	10.6	33.50	54.0	-20.5





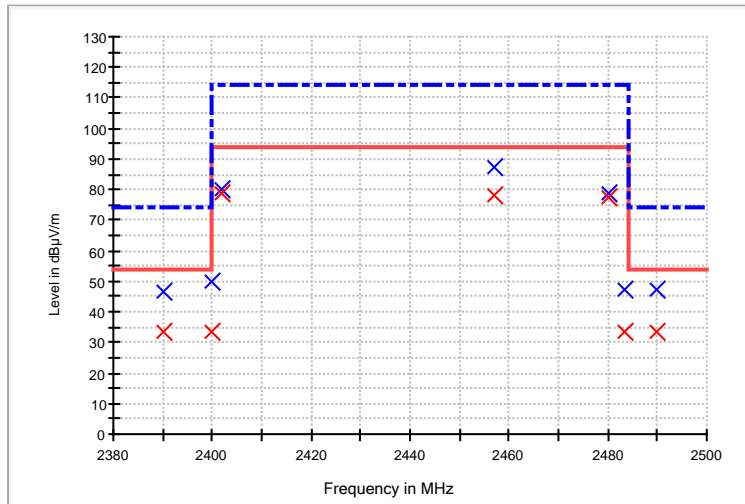
ANT+: Band Edge and Field Strength of the Fundamentals

MaxPeak

Frequency (MHz)	Antenna Polarization	Bandwidth (kHz)	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2390.00	H	1000.00	100.00	295.00	35.9	10.6	46.50	74.0	-27.5
2400.00	H	1000.00	100.00	295.00	39.5	10.5	50.00	74.0	-24.0
2402.00	H	1000.00	100.00	295.00	69.4	10.5	79.90	114.0	-34.1
2457.00	H	1000.00	100.00	286.00	76.7	10.5	87.20	114.0	-26.8
2480.00	H	1000.00	100.00	284.00	68.1	10.5	78.60	114.0	-35.4
2483.50	H	1000.00	100.00	284.00	36.7	10.5	47.20	74.0	-26.8
2490.00	H	1000.00	100.00	284.00	36.7	10.6	47.30	74.0	-26.7

AVG

Frequency (MHz)	Antenna Polarization	Bandwidth (kHz)	Antenna Height (cm)	Azimuth (deg)	Reading (dBµV)	Cable Loss & Antenna Factor (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2390.00	H	1000.00	100.00	295.00	22.7	10.6	33.30	54.0	-20.7
2400.00	H	1000.00	100.00	295.00	23.0	10.5	33.50	54.0	-20.5
2402.00	H	1000.00	100.00	295.00	68.3	10.5	78.80	94.0	-15.2
2457.00	H	1000.00	100.00	286.00	67.5	10.5	78.00	94.0	-16.0
2480.00	H	1000.00	100.00	284.00	67.0	10.5	77.50	94.0	-16.5
2483.50	H	1000.00	100.00	284.00	23.1	10.5	33.60	54.0	-20.4
2490.00	H	1000.00	100.00	284.00	22.9	10.6	33.50	54.0	-20.5





8.2 Test Data – Spurious Emissions

Notes: Plots are peak, max hold pre-scan data included only to determine what frequencies to investigate and measure. During the pre-scan evaluation, the EUT was rotated in all possible directions to find the maximum emissions. The orthogonal position that showed the highest emissions was used. At some frequencies, no emissions from the EUT were measurable over the ambient noise floor. The readings did not change with EUT on and EUT off.

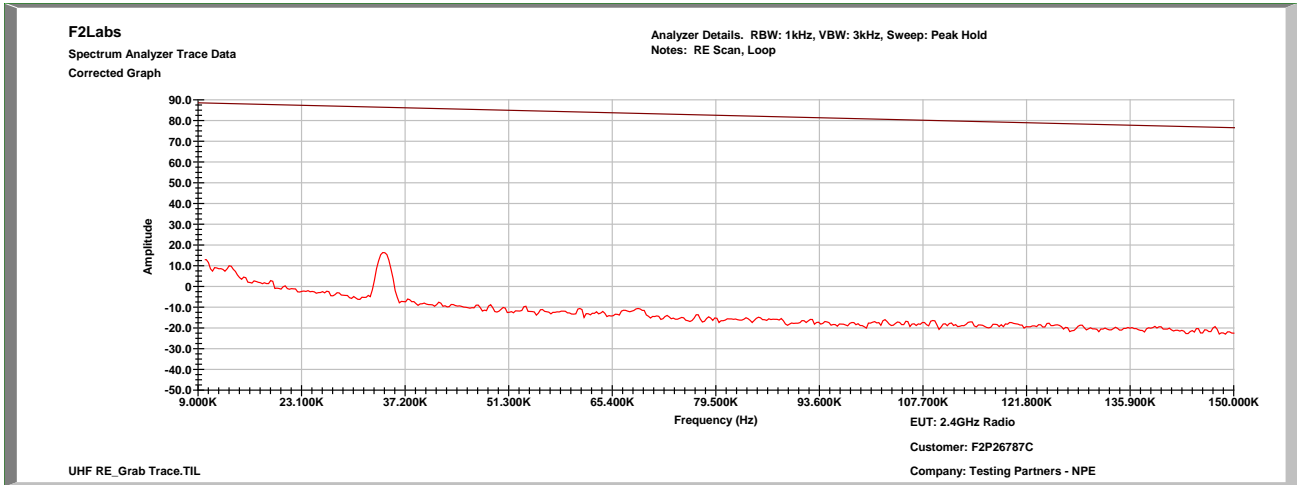
At least 6 of the highest frequencies were measured per ANSI 63.4 in a 3-meter anechoic chamber. Frequencies below 1 GHz were measured using a quasi-peak detector. The antenna was raised between 1 and 4 meters and the EUT turntable was rotated 360 degrees to maximize the emissions. Some of the frequencies did not change with the EUT on or off. At those frequencies, the test distance was shortened to 1 meter and still no emissions from the EUT were visible or over the ambient or limit. Frequencies were scanned from 9kHz to 26 GHz and the highest emissions are listed below.

Emissions to be found by the EUT were measured and listed in tables below.

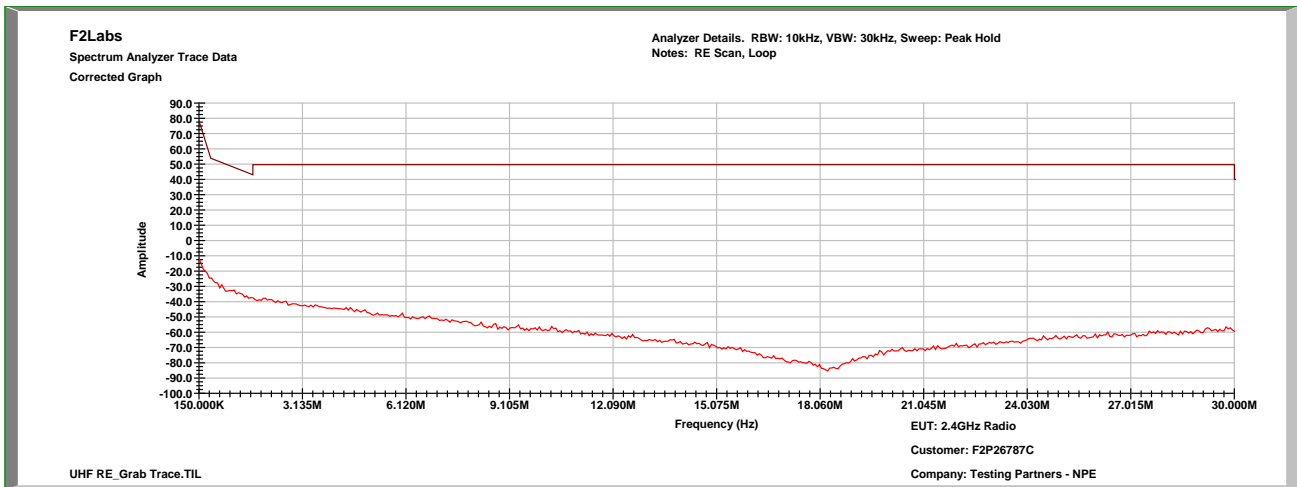


Test Date(s):	2022-06-14; 2022-07-25	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.249(d) / Part 15.209	Air Temperature:	23.1°C
		Relative Humidity:	40%

Characterization Scan, 9 kHz to 150 kHz



Characterization Scan, 150 kHz to 30 MHz

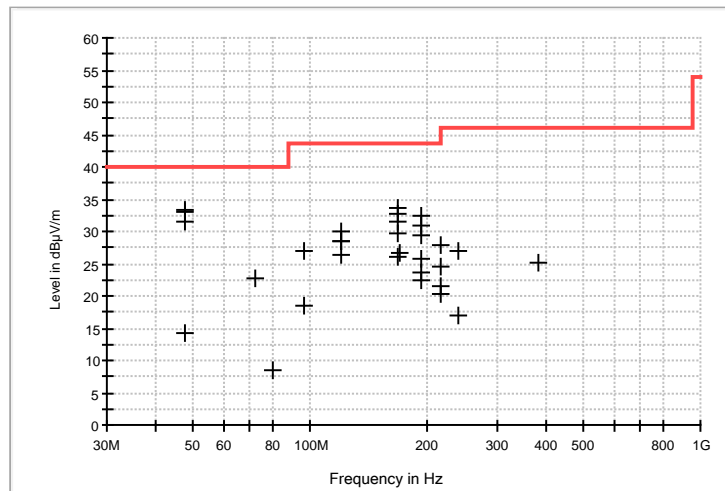




30 MHz to 1000 MHz

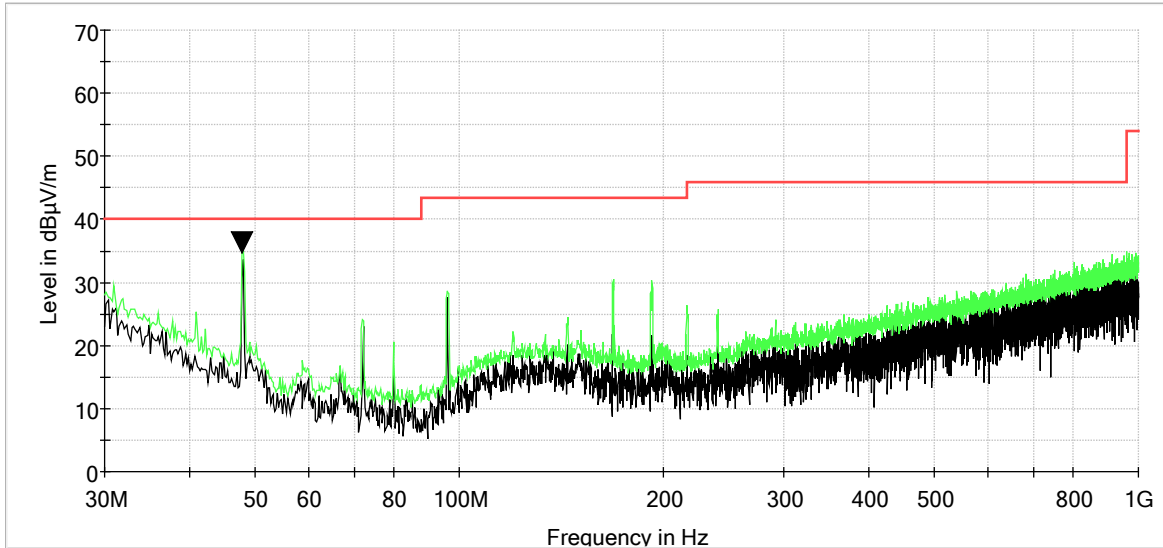
Note: Chart below includes data from all three channels.

Frequency (MHz)	Ant. Pol.	Antenna Height (cm)	Azimuth (degrees)	Reading (dBµV)	Correcton Factors (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
47.840000	V	100.0	291.00	46.4	-13.5	32.90	40.0	-7.1
47.840000	V	100.0	324.00	46.8	-13.5	33.30	40.0	-6.7
47.840000	H	100.0	2.00	27.8	-13.5	14.30	40.0	-25.7
47.840000	V	100.0	42.00	45.1	-13.5	31.60	40.0	-8.4
71.920000	V	100.0	229.00	37.2	-14.4	22.80	40.0	-17.2
79.840000	H	100.0	139.00	23.2	-14.7	8.50	40.0	-31.5
95.960000	V	100.0	143.00	40.4	-13.3	27.10	43.5	-16.4
96.160000	H	100.0	139.00	31.9	-13.3	18.60	43.5	-24.9
119.840000	H	100.0	236.00	37.0	-8.5	28.50	43.5	-15.0
119.840000	V	100.0	359.00	34.9	-8.5	26.40	43.5	-17.1
120.000000	V	100.0	0.00	36.9	-8.5	28.40	43.5	-15.1
120.000000	H	100.0	159.00	38.4	-8.5	29.90	43.5	-13.6
167.920000	H	100.0	139.00	35.9	-9.7	26.20	43.5	-17.3
167.920000	H	100.0	39.00	43.4	-9.7	33.70	43.5	-9.8
167.920000	V	100.0	216.00	41.3	-9.7	31.60	43.5	-11.9
168.120000	H	100.0	163.00	42.5	-9.7	32.80	43.5	-10.7
168.120000	V	100.0	0.00	39.5	-9.7	29.80	43.5	-13.7
168.520000	V	100.0	323.00	36.5	-9.8	26.70	43.5	-16.8
191.200000	V	100.0	329.00	33.8	-10.1	23.70	43.5	-19.8
191.800000	H	100.0	157.00	42.3	-10.0	32.30	43.5	-11.2
192.000000	V	100.0	0.00	40.8	-10.0	30.80	43.5	-12.7
192.000000	H	100.0	167.00	32.6	-10.0	22.60	43.5	-20.9
192.000000	V	100.0	0.00	39.4	-10.0	29.40	43.5	-14.1
192.360000	H	100.0	139.00	35.6	-9.9	25.70	43.5	-17.8
215.840000	V	100.0	0.00	30.7	-10.5	20.20	43.5	-23.3
216.240000	H	100.0	22.00	38.4	-10.5	27.90	46.0	-18.1
216.440000	V	100.0	313.00	35.1	-10.5	24.60	46.0	-21.4
216.840000	H	100.0	139.00	32.0	-10.5	21.50	46.0	-24.5
239.920000	H	100.0	272.00	36.5	-9.5	27.00	46.0	-19.0
239.920000	H	100.0	167.00	26.5	-9.5	17.00	46.0	-29.0
383.480000	H	100.0	167.00	30.3	-5.1	25.20	46.0	-20.8

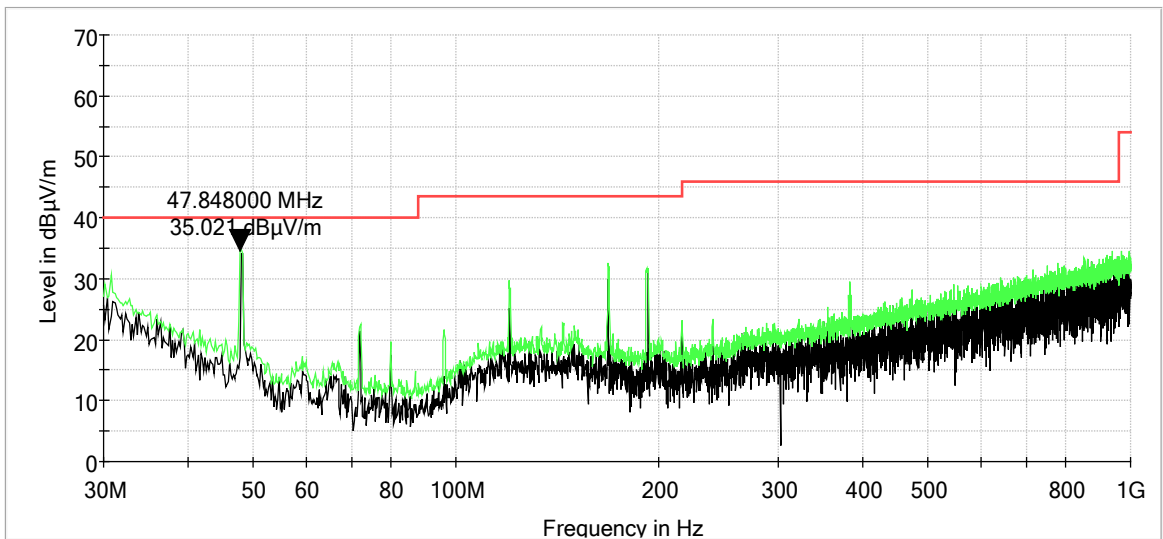




Low Channel, 30 MHz to 1000 MHz, Vertical

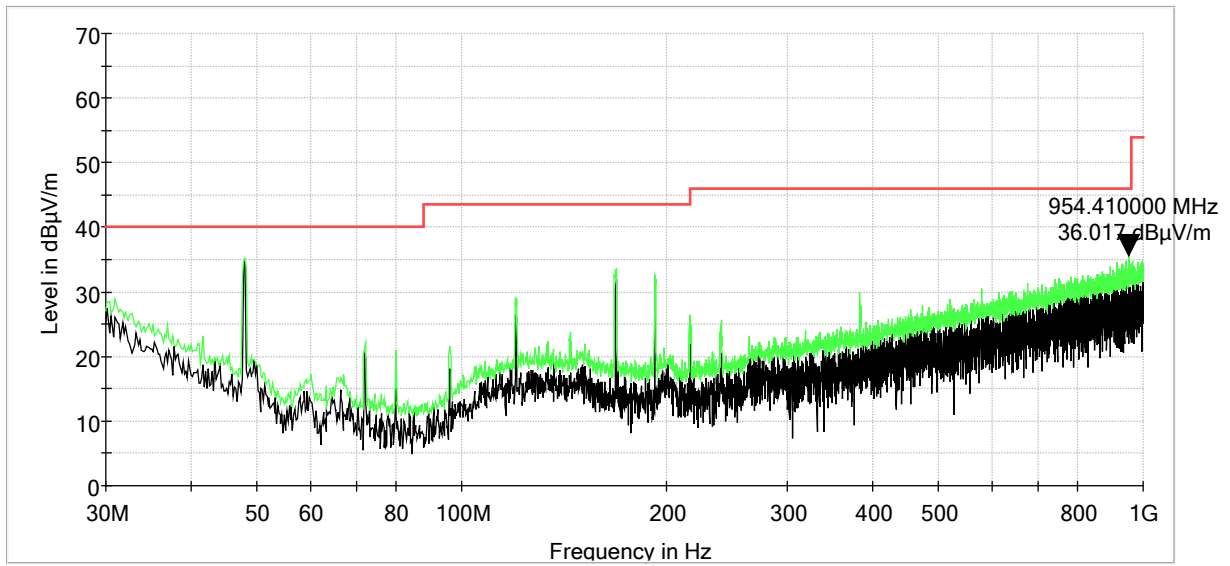


Mid Channel, 30 MHz to 1000 MHz, Vertical



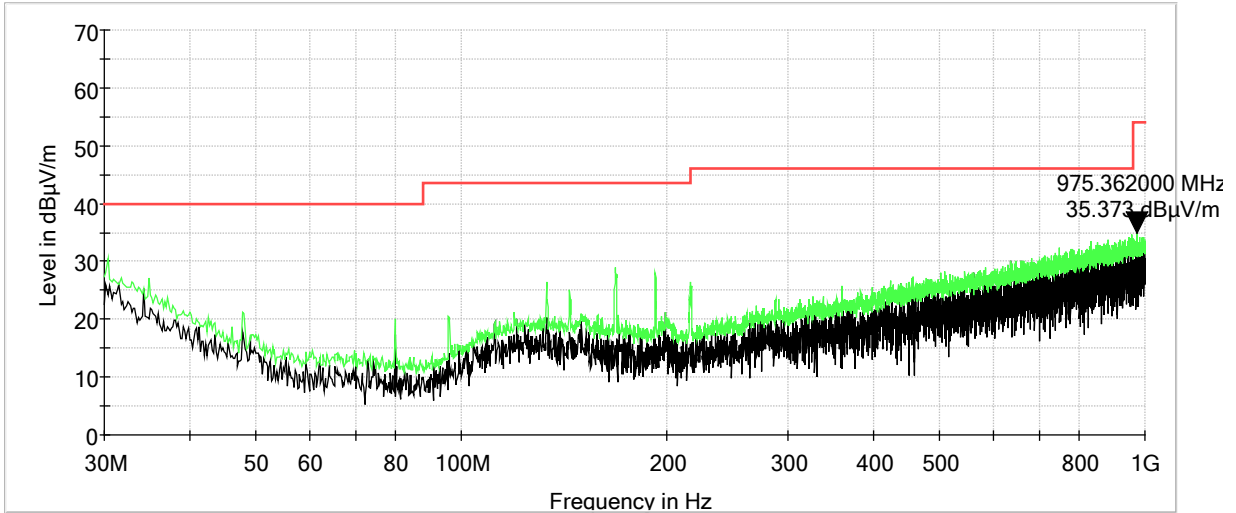


High Channel, 30 MHz to 1000 MHz, Vertical

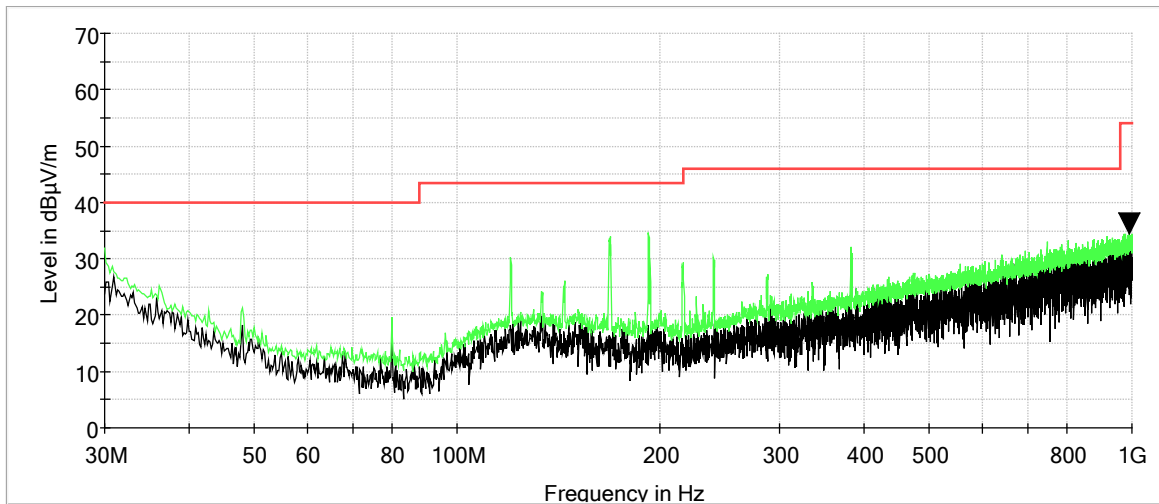




Low Channel, 30 MHz to 1000 MHz, Horizontal

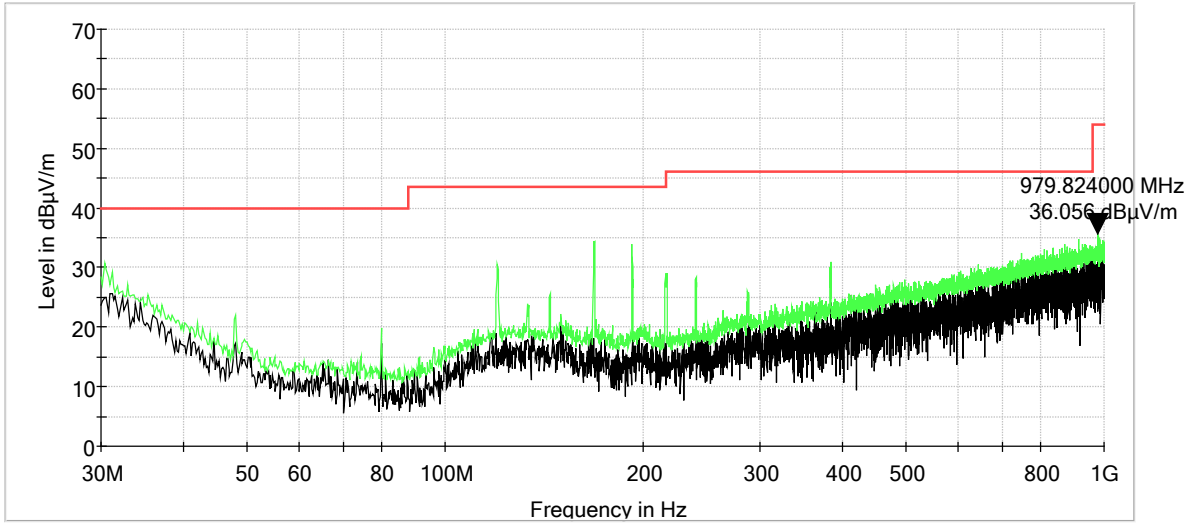


Mid Channel, 30 MHz to 1000 MHz, Horizontal



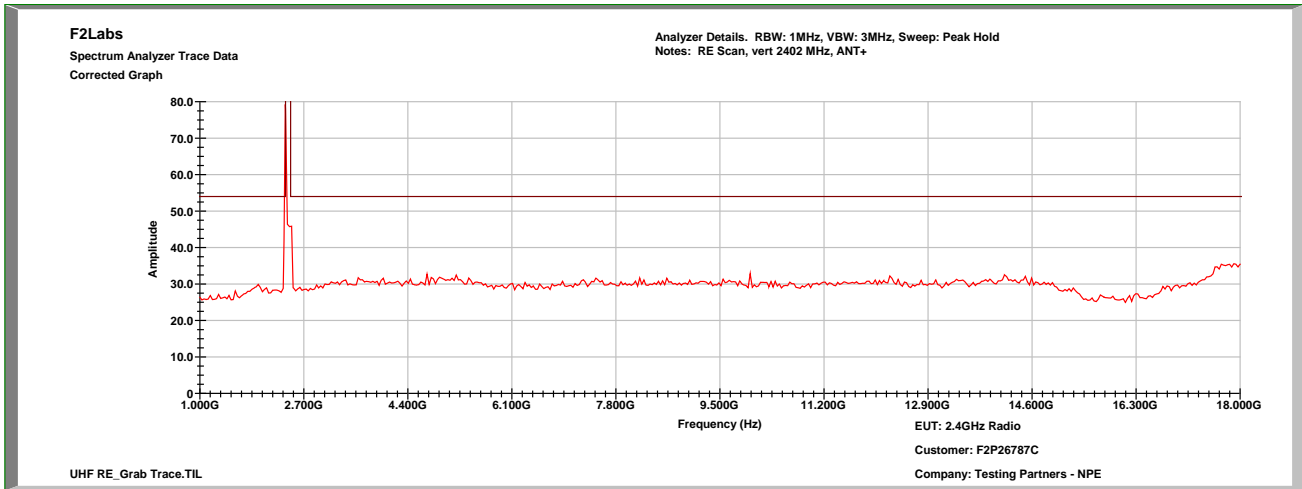


High Channel, 30 MHz to 1000 MHz, Horizontal

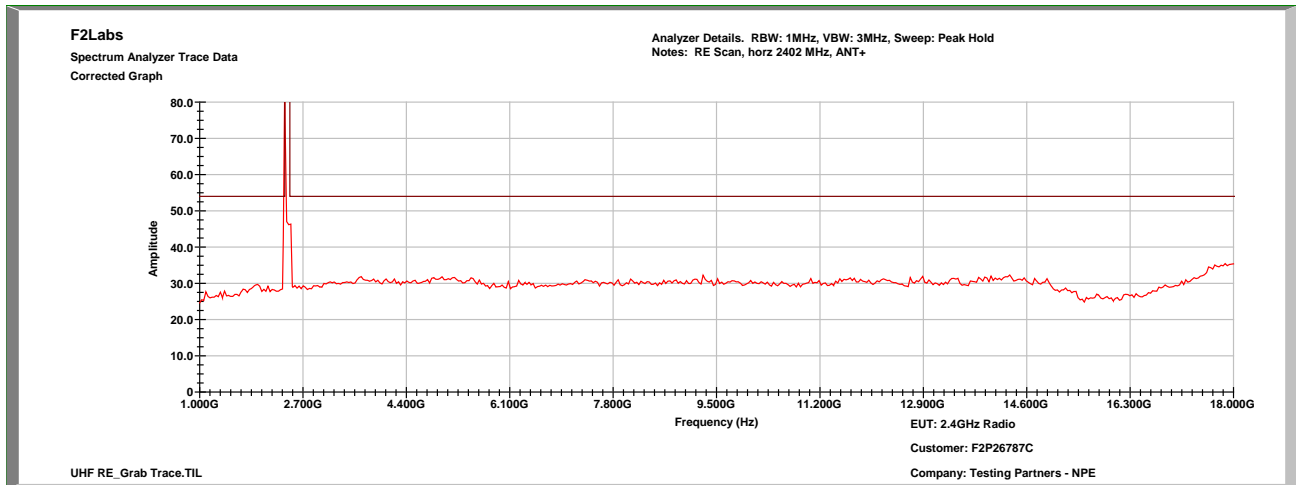




ANT+: Low Channel, 1 GHz to 18 GHz, Vertical

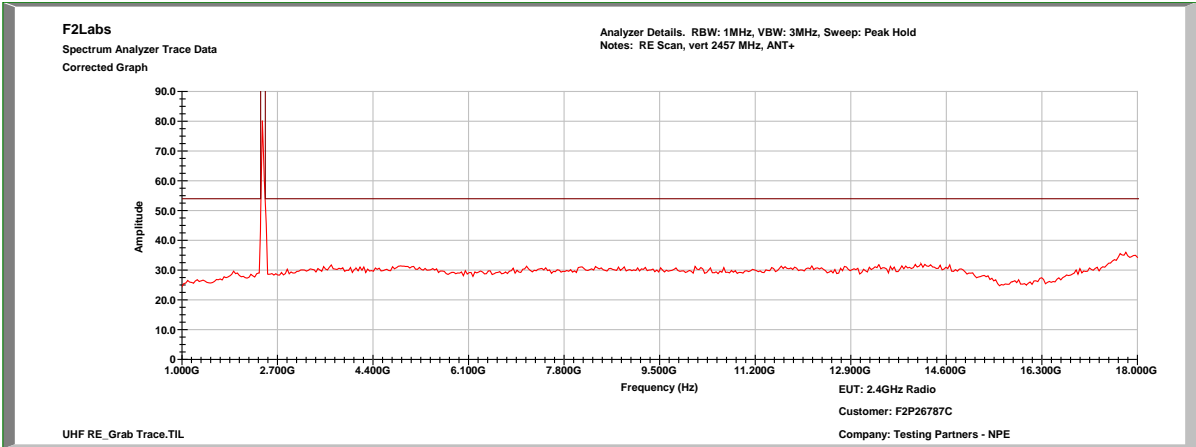


ANT+: Low Channel, 1 GHz to 18 GHz, Horizontal

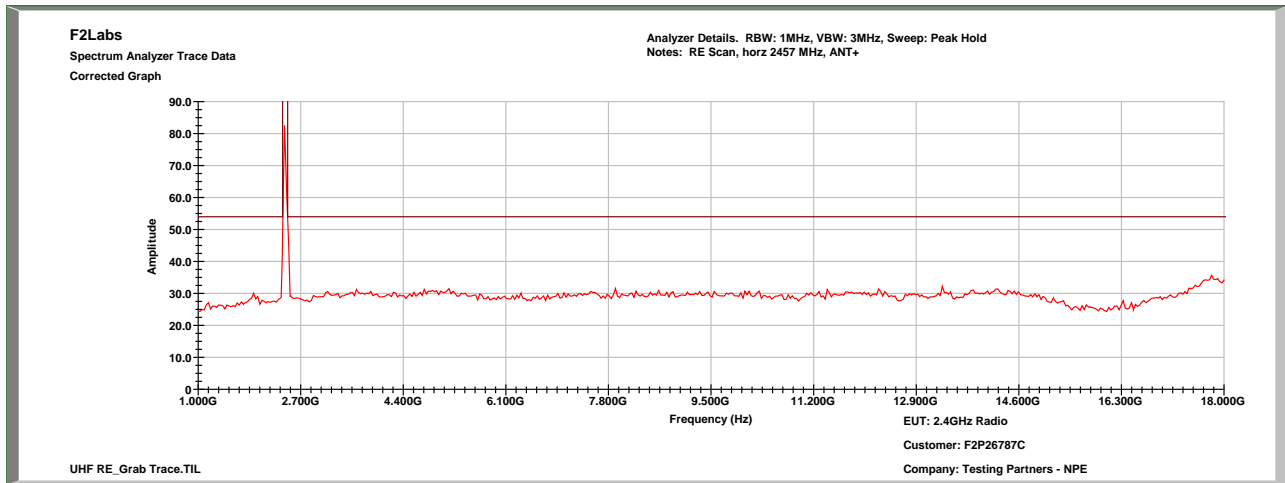




ANT+: Mid Channel, 1 GHz to 18 GHz, Vertical

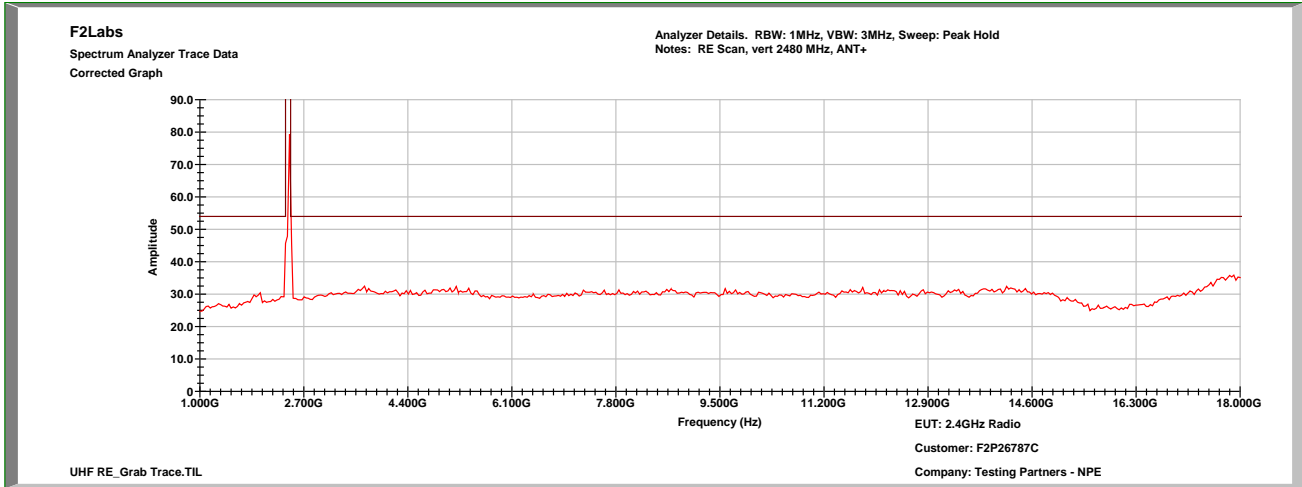


ANT+: Mid Channel, 1 GHz to 18 GHz, Horizontal

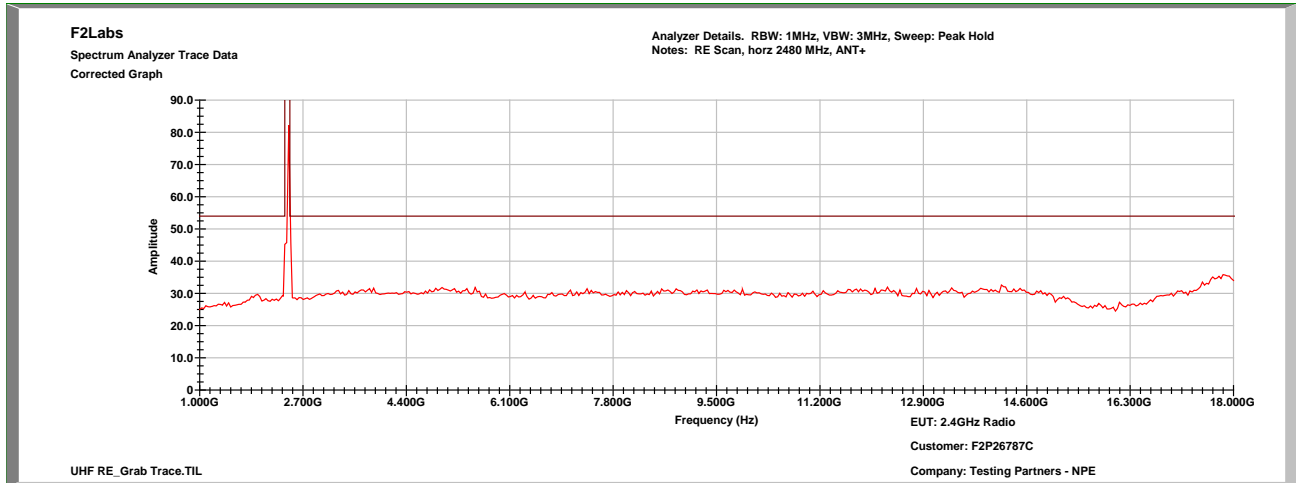




ANT+: High Channel, 1 GHz to 18 GHz, Vertical

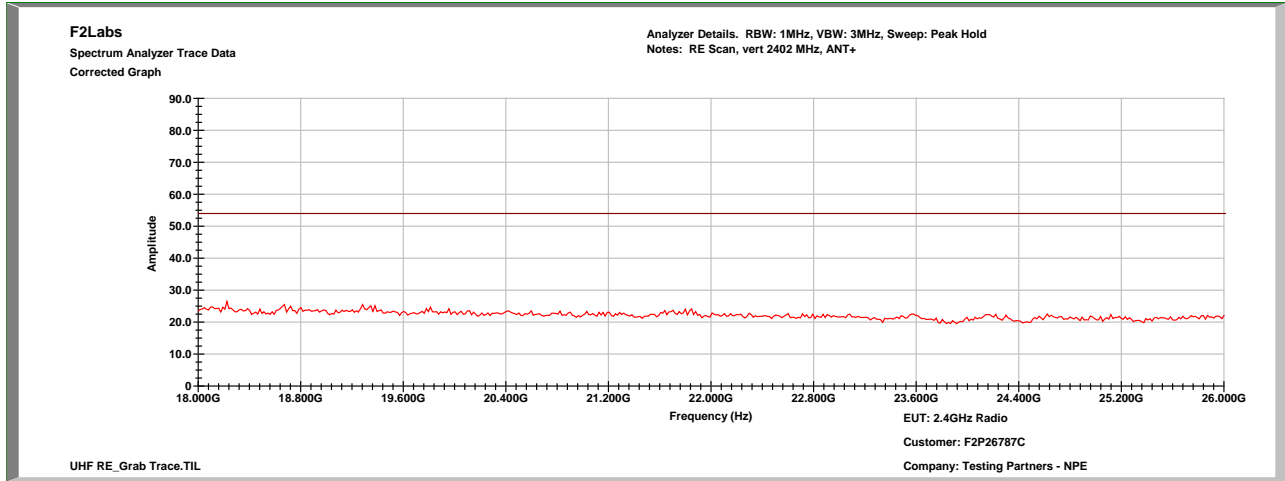


ANT+: High Channel, 1 GHz to 18 GHz, Horizontal

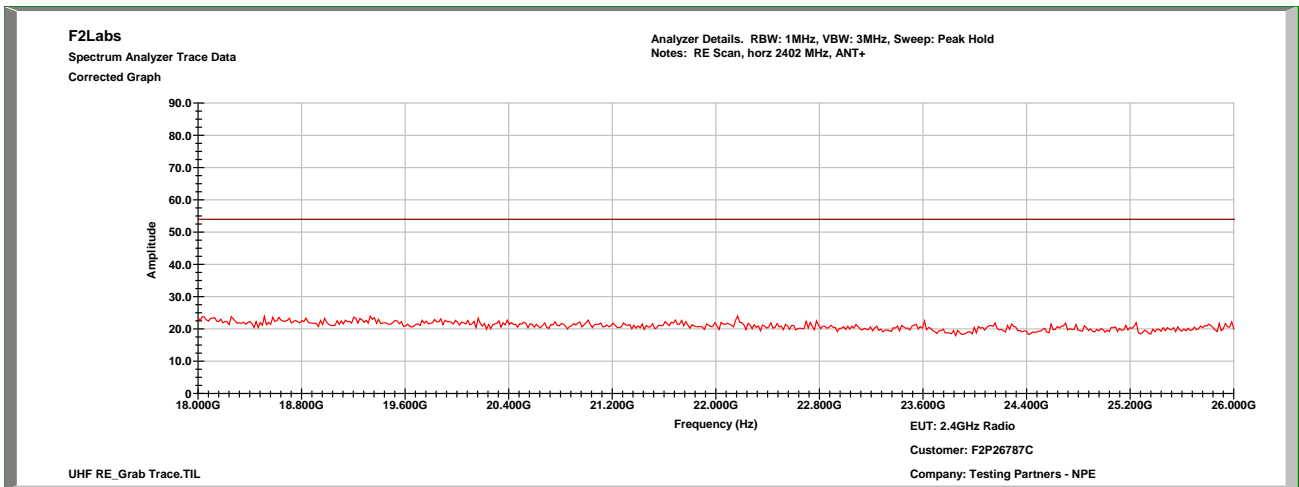




ANT+: Low Channel, 18 GHz to 26 GHz, Vertical

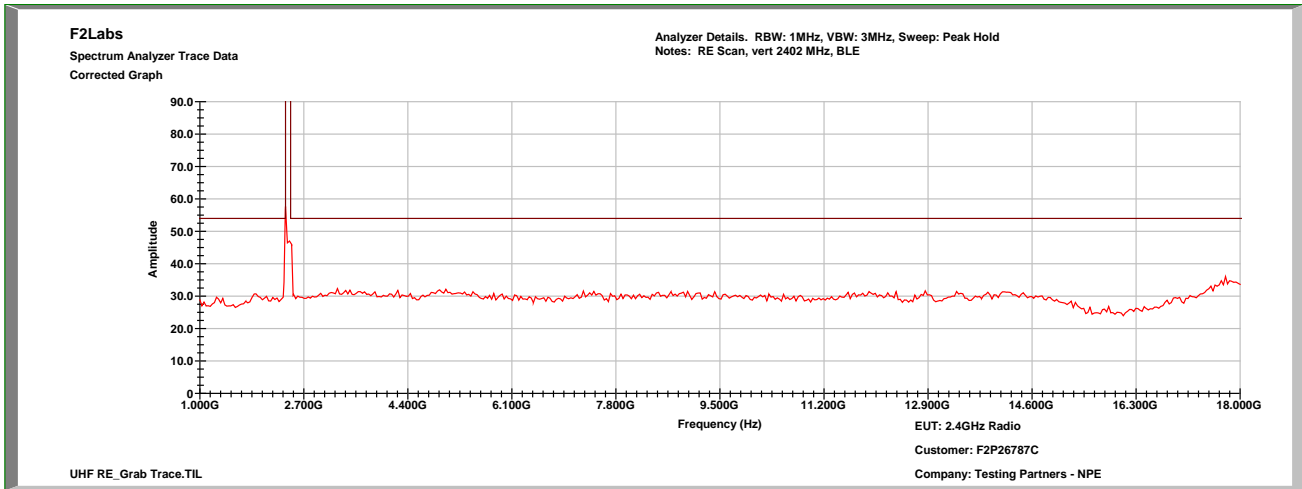


ANT+: Low Channel, 18 GHz to 26 GHz, Horizontal

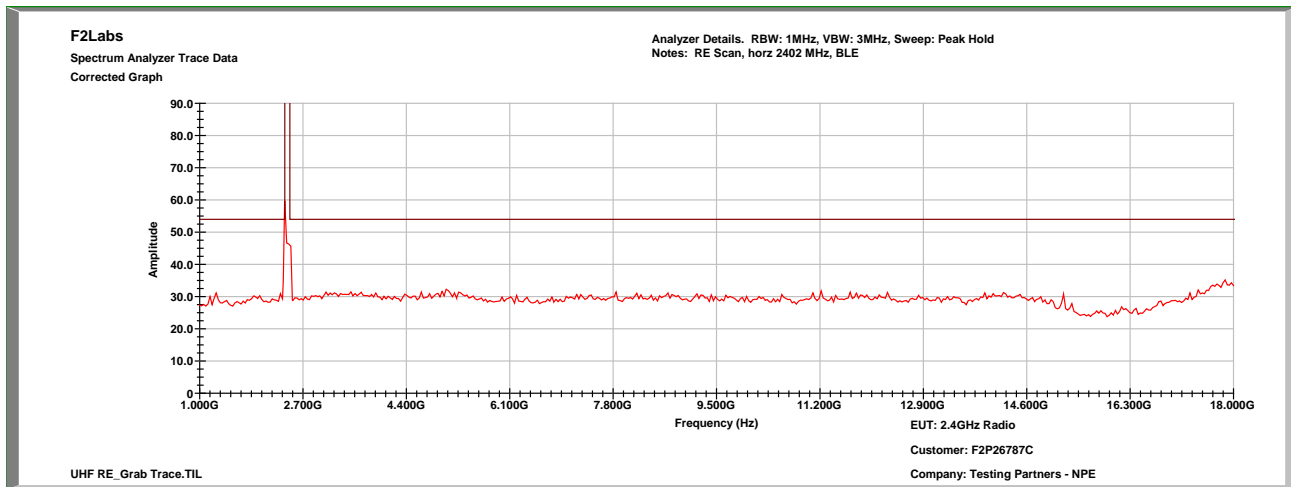




BLE: Low Channel, 1 GHz to 18 GHz, Vertical

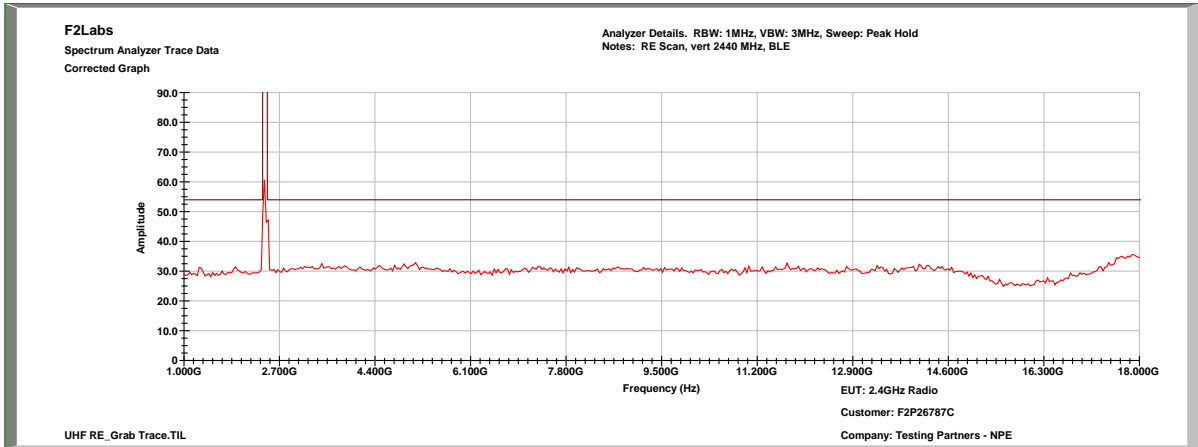


BLE: Low Channel, 1 GHz to 18 GHz, Horizontal

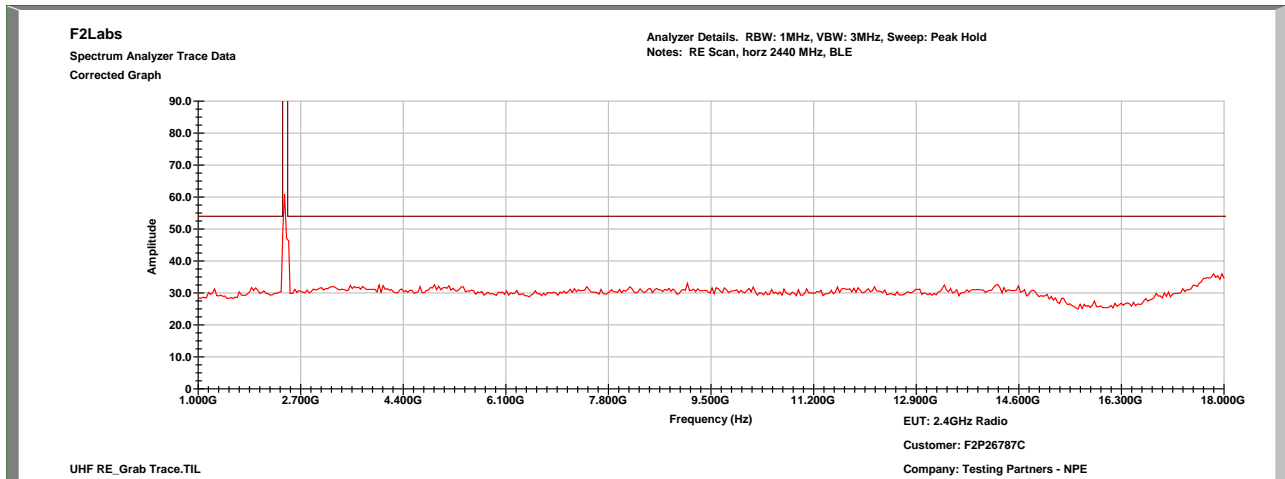




BLE: Mid Channel, 1 GHz to 18 GHz, Vertical

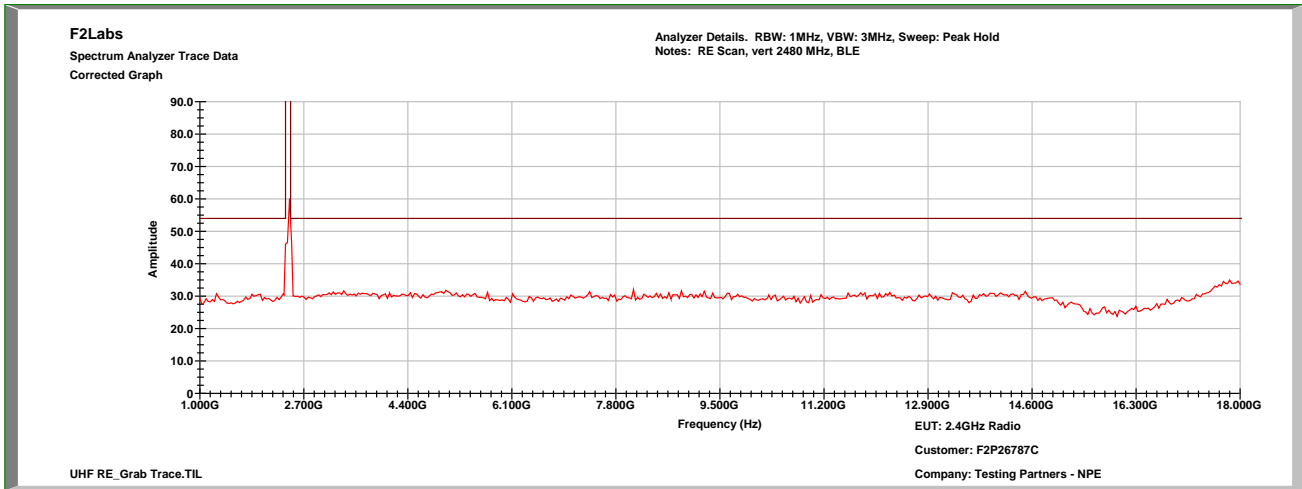


BLE: Mid Channel, 1 GHz to 18 GHz, Horizontal

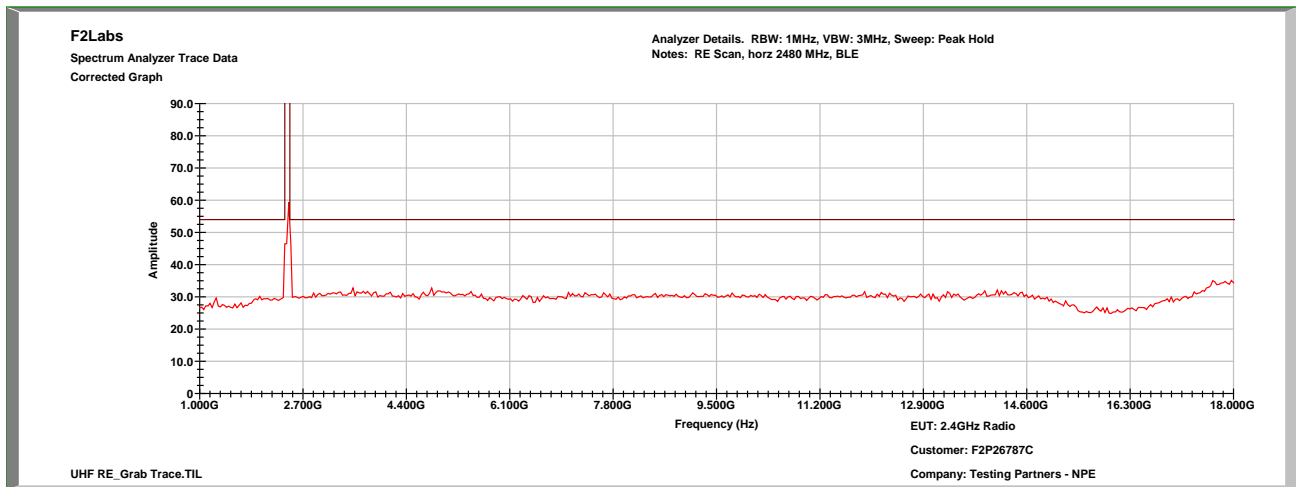




BLE: High Channel, 1 GHz to 18 GHz, Vertical

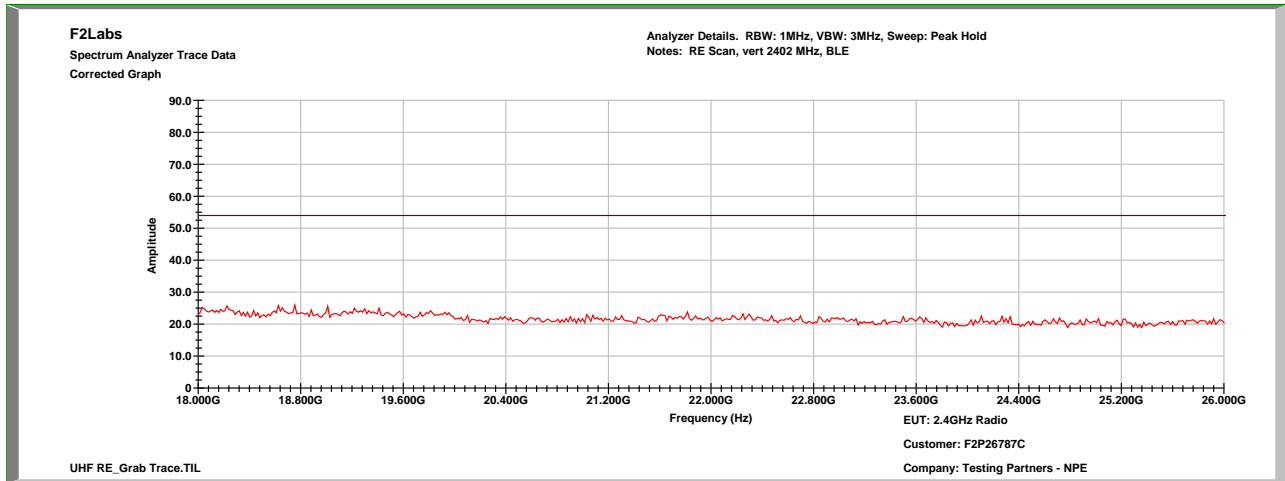


BLE: High Channel, 1 GHz to 18 GHz, Horizontal

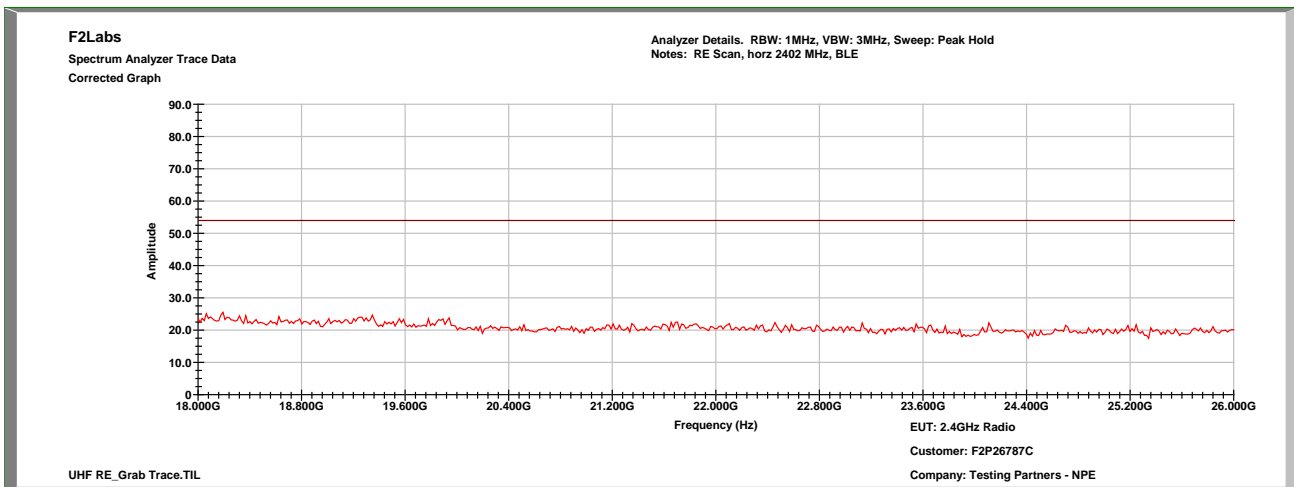




BLE: Low Channel, 18 GHz to 26 GHz, Vertical

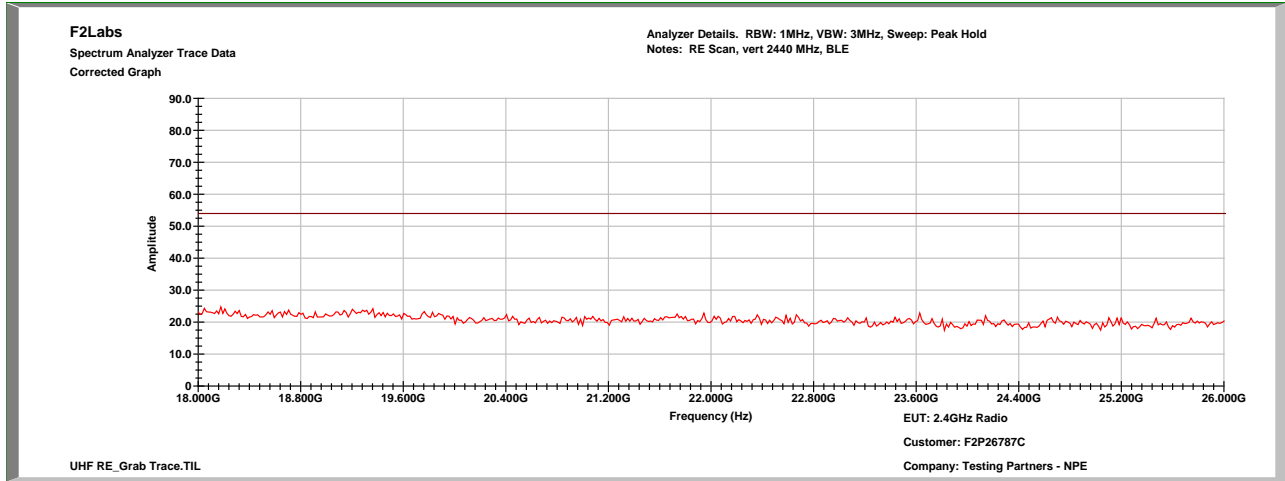


BLE+: Low Channel, 18 GHz to 26 GHz, Horizontal

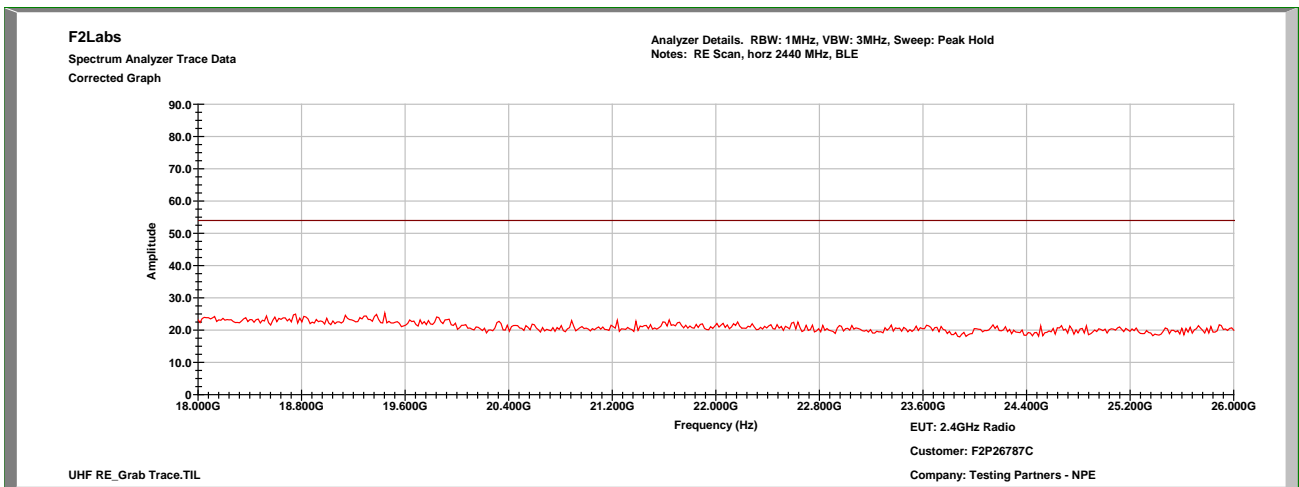




BLE: Mid Channel, 18 GHz to 26 GHz, Vertical

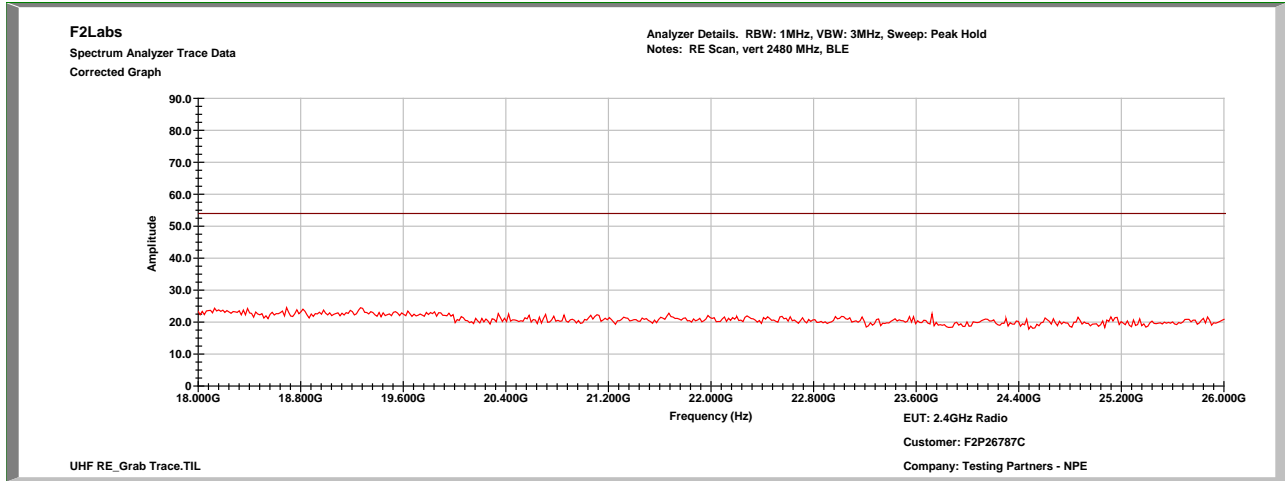


BLE+: Mid Channel, 18 GHz to 26 GHz, Horizontal

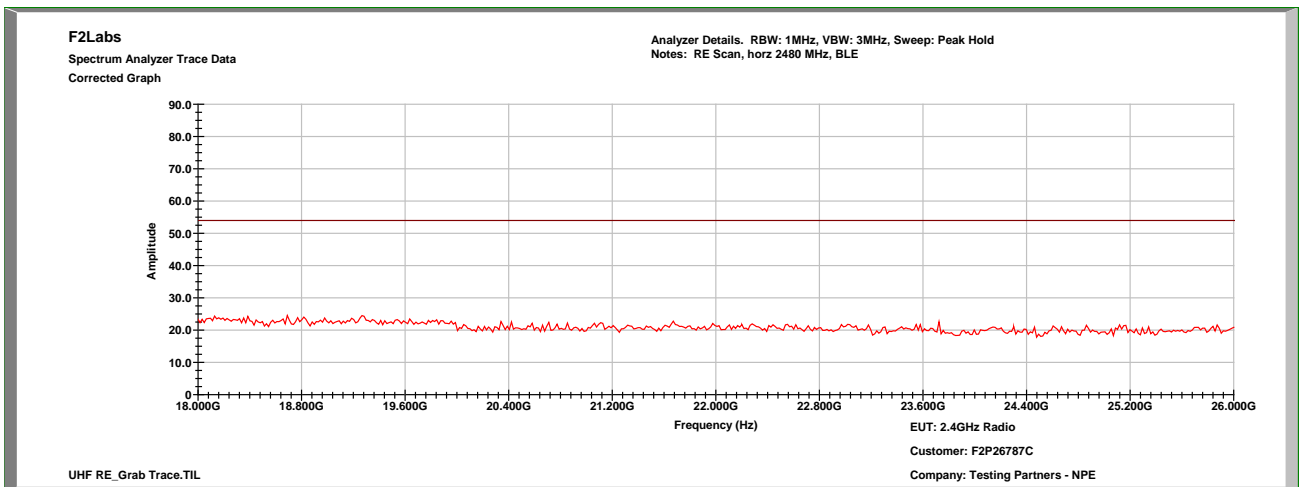




BLE: High Channel, 18 GHz to 26 GHz, Vertical



BLE+: High Channel, 18 GHz to 26 GHz, Horizontal





9 PHOTOGRAPHS - TEST SETUPS

Field Strength, Band Edge, Occupied Bandwidth, Spurious Emissions Above 1 GHz





Spurious Emissions, 9kHz to 30 MHz





Spurious Emissions, 30 MHz to 1000 MHz

