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United States of America
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CERTIFICATION TEST REPORT

Manufacturer:	**Zehnder America** **6 Merrill Industrial Drive, Suite 7** **Hampton, New Hampshire 03842** **United States of America**
Applicant:	**Same as Above**
Product Name:	**ZEHNDER COMFOAIR Q VENTILATION UNIT**
Product Description:	Heat recovery ventilation unit
Operating Voltage/Freq. of EUT During Testing:	220V/60 Hz
Model(s):	**CAQ600 HRV*** **Denotes actual model tested as worst-case representative of product family that includes models CAQ350 HRV, CAQ350 ERV, ComfoAir Q350 SI TR, ComfoAir Q350 SI TR ERV; CAQ450 HRV, CAQ450 ERV, ComfoAir Q450 SI TR, ComfoAir Q450 SI TR ERV; CAQ600 HRV, CAQ600 ERV, ComfoAir Q600 SI ST, ComfoAir Q600 SI TR ERV.* *(CA=ComfoAir; SI=System International; ST=Straight Top; TR=Trapezoidal Top)*
FCC ID:	**2A8X810019160**
Testing Commenced:	2023-08-14
Testing Ended:	2023-10-25
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**
- **FCC15.207 - Conducted Limits**
- **FCC Part 15 Subpart A, Section 15.31(e) – Measurement Standards**

Evaluation Conducted by:

Julius Chiller, Senior Wireless Project Engineer

Report Reviewed by:

Ken Littell, Vice President of Operations

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

1.4 Document History:

Document Number	Description	Issue Date	Approved By
F2P27814A-C1-01E	First Issue	2023-10-25	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 Power Setting: -2dBm	CFR 47 Part 15.249(a)(d)	Complies
Variation of the Input Power	CFR 47 Part 15.31(e)	Complies
Conducted Emissions	CFR 47 Part 15.207(a)	Complies

Note: Product was operated using an AC to DC power supply, so Voltage Variation testing in 15.31(3)(e) was performed at the nominal voltage, and then the 85% and 115% of that voltage was tested also. The output power was measured to verify how much the power and frequency were affected by the variation of the input power. No shift in frequency or power was measured at either of the varied voltages on any of the channels.

Modifications Made to the Equipment
None

3 TABLE OF MEASURED RESULTS

Test		925 MHz
Quasi-Peak Field Strength of Fundamental Power Setting: -2dBm		86.4dBµV/m, 20.8mV/m
Average Limit for Fundamental		93.97dBµV/m. 50 millivolts/meter
-20dB Occupied Bandwidth		0.208 MHz
99% Occupied Bandwidth (MHz)		0.195 MHz
Voltage Variations	-15%	85.2dBuV/m, 18.1mV/m
	Nominal	86.4dBuV/m, 20.8 mV/m
	+15%	85.5dBuV/m, 18.8 mV/m

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

4 ENGINEERING STATEMENT

This report has been prepared on behalf of Zehnder America 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 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: **ZEHNDER COMFOAIR Q VENTILATION UNIT**
Model(s): **CAQ600 HRV***
**Denotes actual model tested as worst-case representative of product family that includes models CAQ350 HRV, CAQ350 ERV, ComfoAir Q350 SI TR, ComfoAir Q350 SI TR ERV; CAQ450 HRV, CAQ450 ERV, ComfoAir Q450 SI TR, ComfoAir Q450 SI TR ERV; CAQ600 HRV, CAQ600 ERV, ComfoAir Q600 SI ST, ComfoAir Q600 SI TR ERV.*

(CA=ComfoAir; SI=System International; ST=Straight Top; TR=Trapezoidal Top)

Serial No.: 1207004653
Firmware: RFModuleUS_US_fcc_v0.03.hex
Hardware: V0.1
FCC ID: 2A8X810019160
Wireless Device: Systec 925 MHz Radio, Model RF PCB CAQ, s/n W5505IASC120

Radiated spurious emissions measurements performed on model CAQ350 HRV, s/n 1207005536 and model CAQ450 HRV, s/n 004056772504.

5.2 Trade Name:

Zehnder America

5.3 Power Supply:

220V/60 Hz

5.4 Applicable Rules:

CFR 47, Part 15.249, subpart C

5.5 Antenna:

WE-MCA Multilayer Chip Antenna Peak Gain -0.7dBi

5.6 Accessories: None

5.7 Cables:

Cable Function	Length	Shielded (Yes/No)
AC Mains	>3m	No

5.8 Test Item Condition:

The equipment to be tested was received in good condition.

5.8 Testing Algorithm:

EUT was set up to transmit a continuously modulated signal at 925 MHz using QFSK modulation at 100mbps.

6 LIST OF MEASUREMENT INSTRUMENTATION

Equipment Type	Asset Number	Manufacturer	Model	Serial Number	Calibration Due Date
Shielded Chamber 2014	CL166-E	AlbatrossProjects	B83117-DF435-T261	US140023	2023-08-22
Shielded Chamber 2018	CL251-E-3m	AlbatrossProjects	US170028	B83117-FG639-T261	2023-08-22
Receiver	CL151	Rohde & Schwarz	ESU40	100319	2024-04-10
Receiver	CL204	Rohde & Schwarz	ESR7	101714	2023-04-12
Antenna, Bilog	CL211	Sunol Sciences, Inc.	JB1	A021017	2023-10-11
Antenna, JB3 Combination	CL175	Sunol Sciences	JB3	A030315	2023-09-22
Horn Antenna	CL098	Emco	3115	9809-5580	2024-01-19
Active 18” Loop Antenna	CL163-Mono	A.H. Systems, Inc.	EHA-52B	100	2023-12-31
Pre-Amplifier	CL153	Agilent	83006-69007	MY57280115	2023-12-16
Preamplifier	CL282	Com-Power	PAM-103	18020111	2023-11-07
Spectrum Analyzer	0141	Hewlett Packard	8591E	3520A04145	2024-04-11
Transient Limiter	0202	Hewlett Packard	11947A	3107A00729	2024-04-11
LISN	CL181	Com-Power	LI-125A	191226	2023-12-01
LISN	CL182	Com-Power	LI-125A	191225	2023-12-01
Low Loss Cable	CL315	Fairview Microwave	FMC0202914-240	None Specified	2024-04-14
Low Loss Cable	CL319	Fairview Microwave	FMC0202914-12	None Specified	2024-04-14
Temp/Hum. Recorder	CL295	Thermpro	TP50	3	2024-04-27
Software:	Tile Version 3.4.B.3.		Software Verified: 2023-08-14 to 2023-08-21		
Software:	EMC 32, Version 8.53.0		Software Verified: 2023-08-14 to 2023-08-21		
Software:	EMC 32, Version 10.60.20		Software Verified: 2023-08-14 to 2023-08-21		

7 FCC PART 15.215(e), OCCUPIED BANDWIDTH

7.1 Requirements:

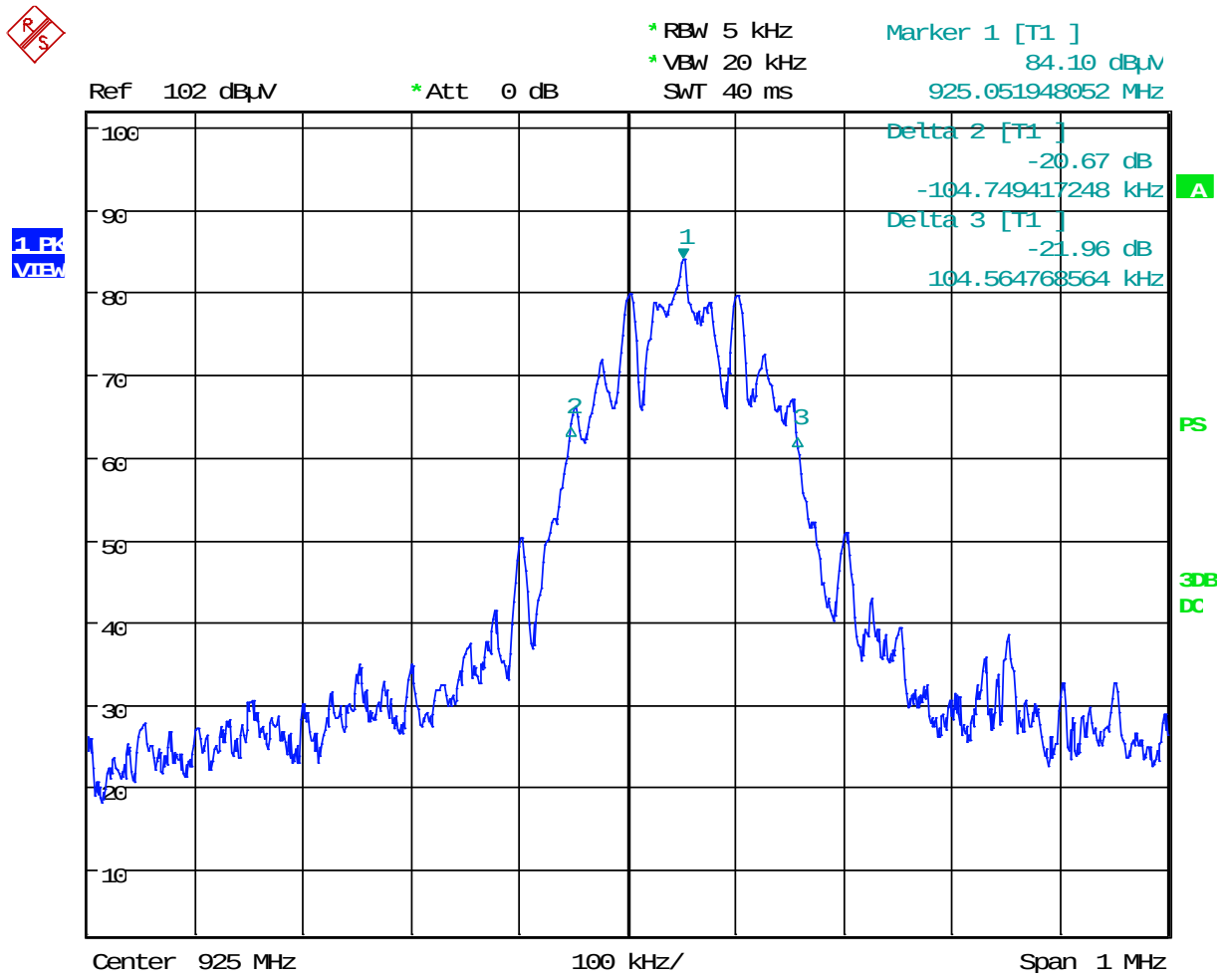
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the -20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific 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 925 MHz. The bandwidth was measured using the analyzer’s marker function.

7.2 Occupied Bandwidth Test Data

Test Date(s):	2023-08-18	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.215(c)	Air Temperature:	22.5ºC
		Relative Humidity:	53%

-20dB



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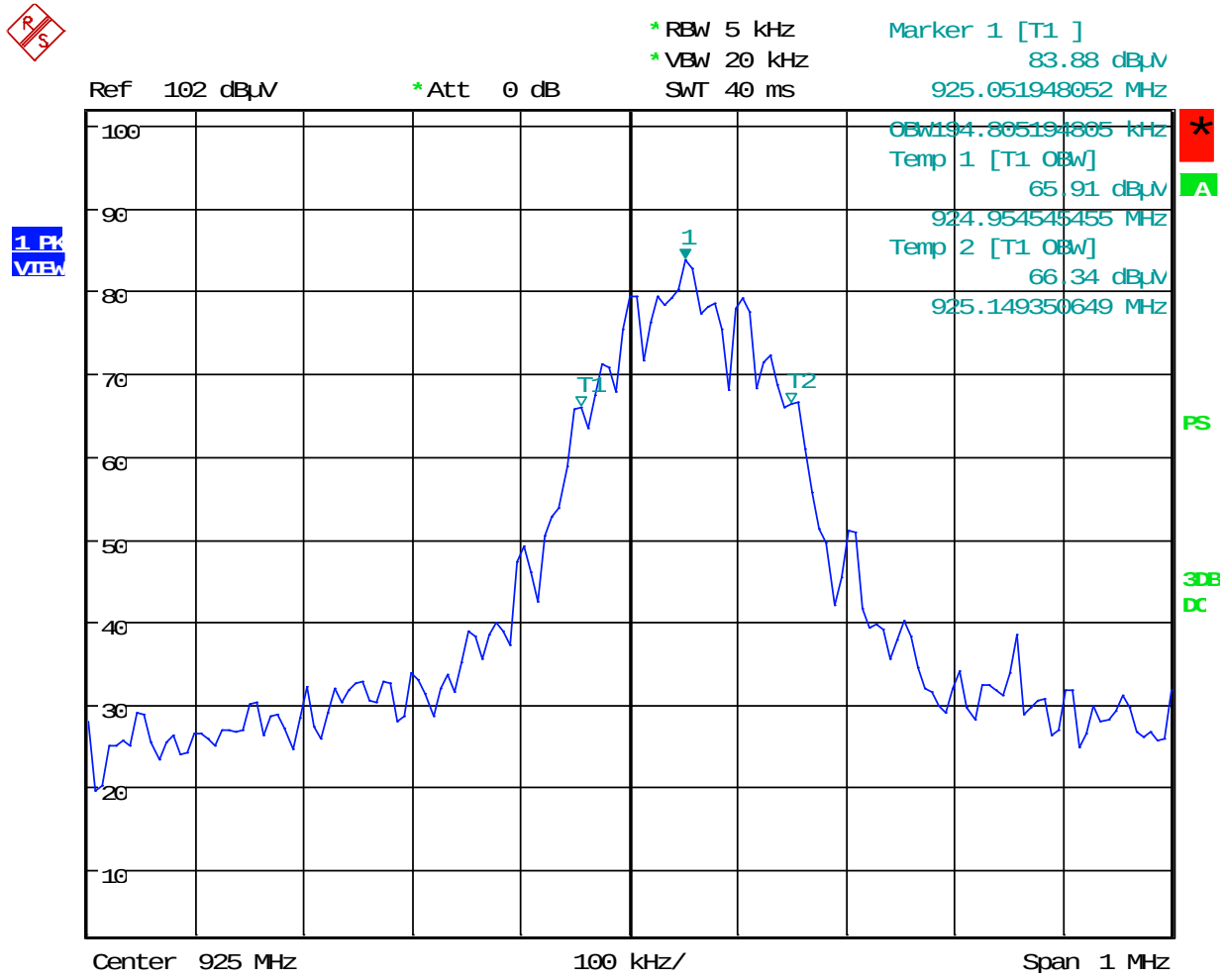
99%



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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.

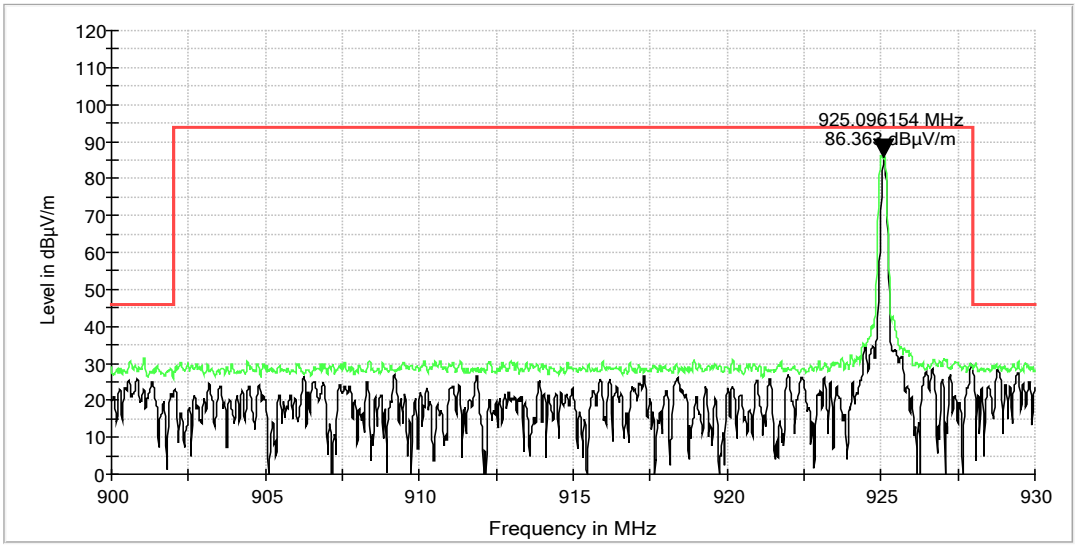
NOTE: During the pre-scan evaluation, the EUT was rotated in all possible directions to find the maximum emissions. The orthogonal position that showed the highest emissions was used. The antenna was raised between 1 and 4 meters and the EUT turntable was rotated 360 degrees to maximize the emissions.

Power setting was set at -2dBm to meet Field Strength requirements.

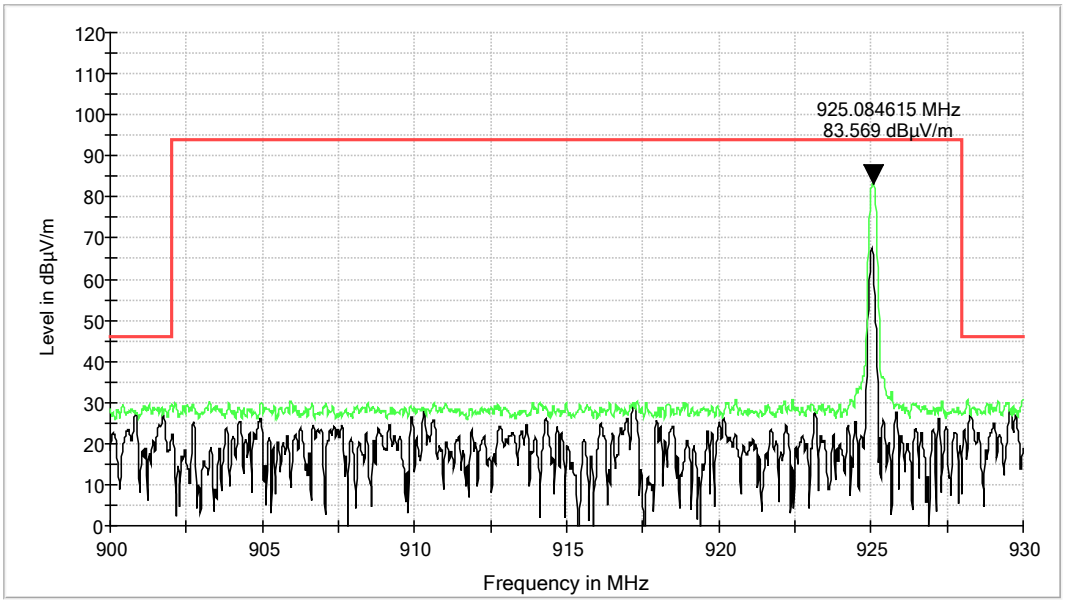
8.1 Test Data - Field Strength of Emissions from Intentional Radiators

Test Date(s):	2023-08-17	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.249(a)	Air Temperature:	22.5ºC
		Relative Humidity:	53%

Band Edges: Vertical

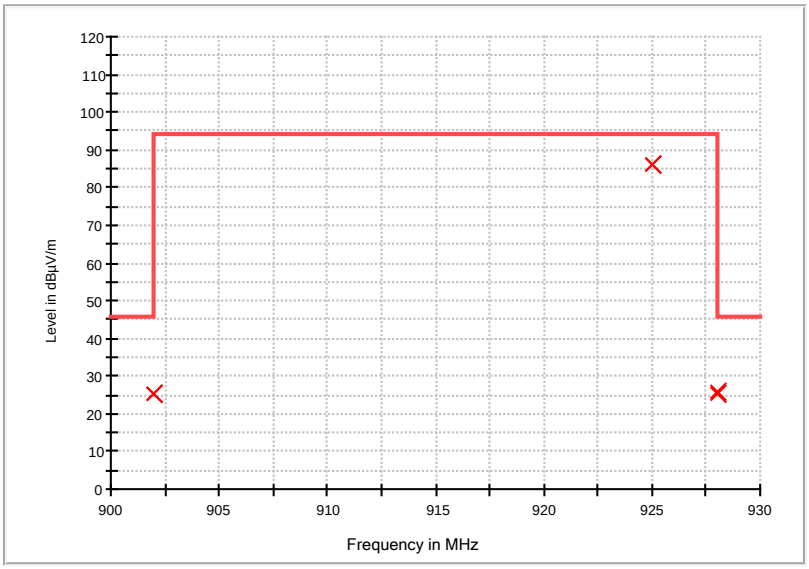


Band Edges: Horizontal



Band Edge and Field Strength of the Fundamentals

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
902.000000	25.1	120.000	100.0	V	38.0	4.8	20.9	46.0
902.000000	25.1	120.000	140.0	H	316.0	4.8	20.9	46.0
925.000000	86.1	120.000	100.0	V	38.0	5.1	7.9	94.0
925.000000	86.4	120.000	140.0	H	316.0	5.1	7.6	94.0
928.000000	25.5	120.000	100.0	V	38.0	5.2	20.5	46.0
928.000000	25.7	120.000	140.0	H	316.0	5.2	20.3	46.0



8.2 Test Data – Spurious Emissions

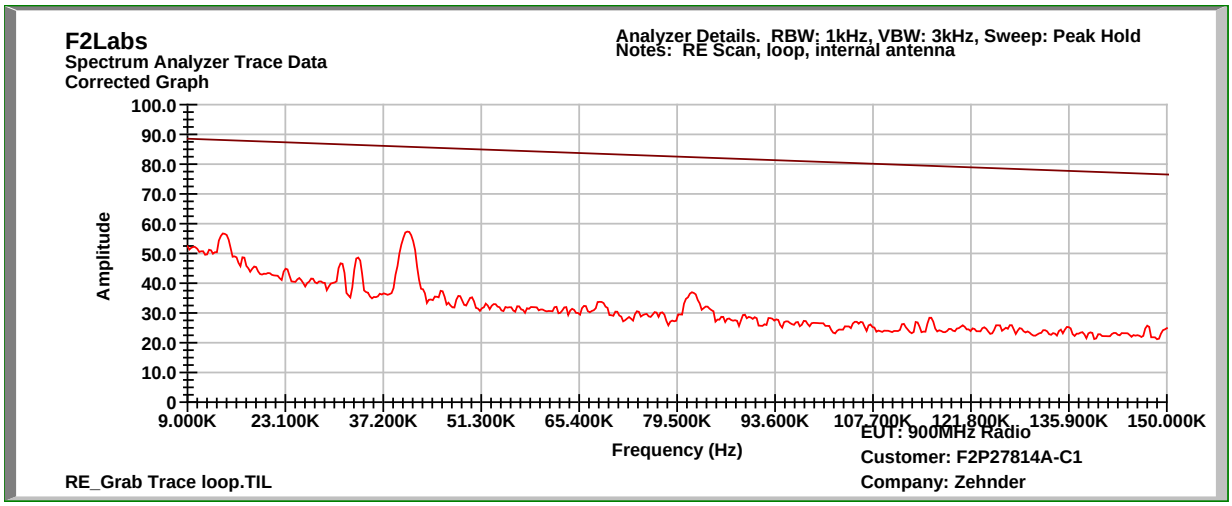
Notes: Plots are peak, max hold pre-scan data included only to determine what frequencies to investigate and measure. During the pre-scan evaluation, the EUT was rotated in all possible directions to find the maximum emissions. The orthogonal position that showed the highest emissions was used. At some 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 10 GHz and the highest emissions are listed below.

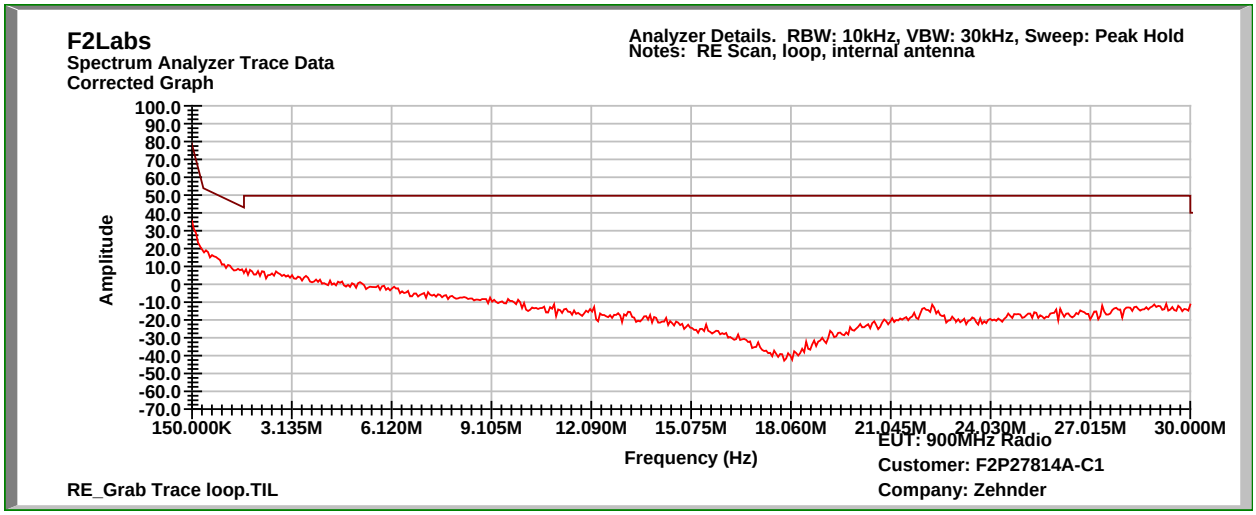
In the following plots, the black line indicates ambient noise and the red line indicates the measurement with the EUT on. Emissions to be found by the EUT were measured and listed in tables below.

Test Date(s):	2023-08-17; 2023-10-25	Test Engineer(s):	J. Chiller
Standards:	CFR 47 Part 15.249(d) / Part 15.209	Air Temperature:	22.5ºC
		Relative Humidity:	53%

Characterization Scan, 9 kHz to 150 kHz

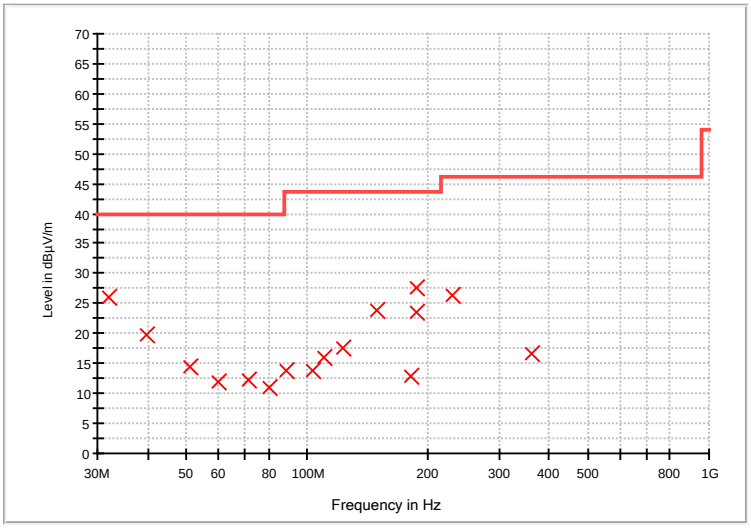


Characterization Scan, 150 kHz to 30 MHz



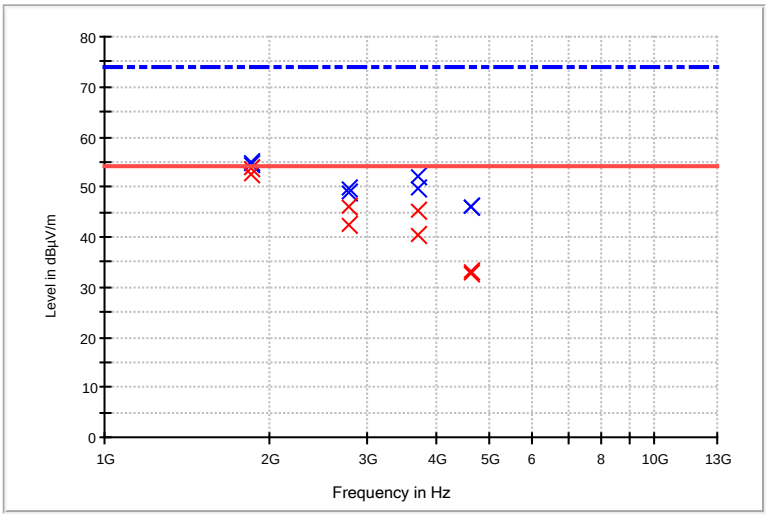
CAQ600 HRV: 30 MHz to 1000 MHz

Frequency (MHz)	Ant. Pol.	Ant. Height (cm)	Azimuth (degrees)	Reading (dBµV)	Correction Factors (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
31.880000	V	100.00	0.00	29.5	-3.5	26.00	40.0	-14.0
39.680000	H	100.00	0.00	29.0	-9.3	19.70	40.0	-20.3
50.880000	V	100.00	0.00	29.8	-15.5	14.30	40.0	-25.7
59.840000	H	100.00	0.00	27.8	-15.9	11.90	40.0	-28.1
71.400000	V	100.00	0.00	27.4	-15.3	12.10	40.0	-27.9
80.360000	H	100.00	0.00	26.7	-15.6	11.10	40.0	-28.9
88.960000	V	100.00	0.00	29.8	-15.9	13.90	43.5	-29.6
103.120000	H	100.00	0.00	26.0	-12.1	13.90	43.5	-29.6
109.840000	V	100.00	0.00	26.6	-10.5	16.10	43.5	-27.4
122.520000	H	100.00	0.00	26.6	-8.9	17.70	43.5	-25.8
148.280000	V	100.00	1.00	34.4	-10.4	24.00	43.5	-19.5
181.840000	V	100.00	317.00	24.3	-11.3	13.00	43.5	-30.5
186.320000	H	100.00	254.00	39.0	-11.2	27.80	43.5	-15.7
186.320000	V	100.00	0.00	34.9	-11.2	23.70	43.5	-19.8
228.480000	H	100.00	0.00	37.1	-10.6	26.50	46.0	-19.5
359.800000	H	100.00	0.00	22.9	-6.2	16.70	46.0	-29.3

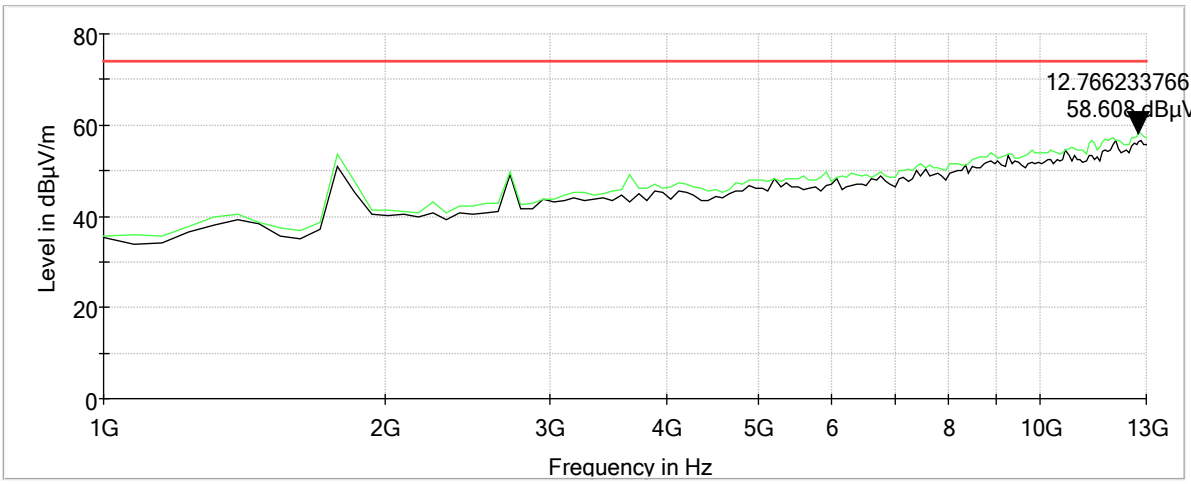


CAQ600 HRV: 1 GHz to 13 GHz

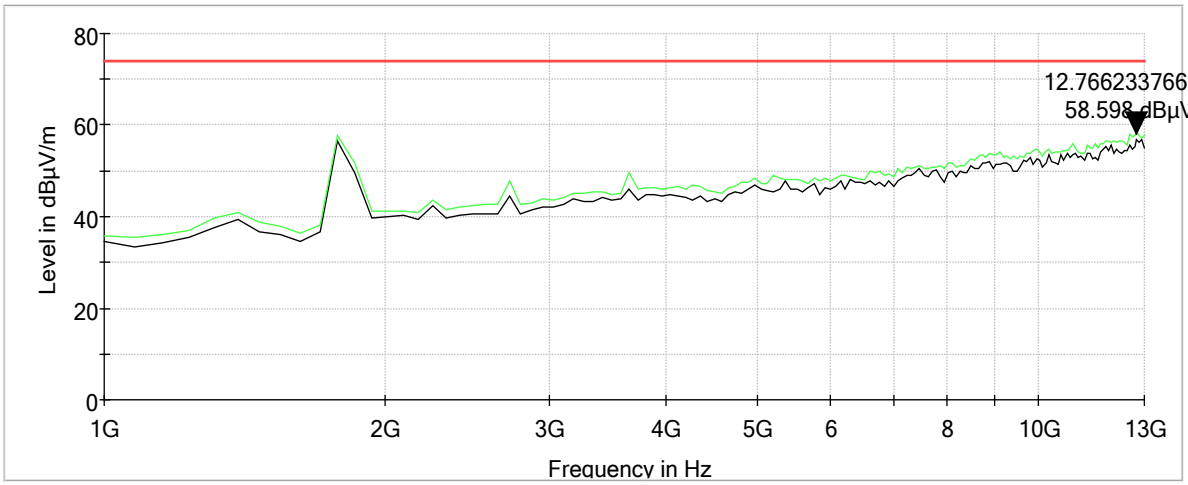
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBµV/m
1850.000000	54.9	53.4	1000.0	1000.000	150.0	H	351.0	5.2	0.6	54.0
1850.000000	54.4	52.5	1000.0	1000.000	150.0	V	27.0	5.2	1.5	54.0
2775.000000	48.9	42.5	1000.0	1000.000	150.0	H	6.0	7.1	11.5	54.0
2775.000000	49.8	46.1	1000.0	1000.000	150.0	V	357.0	7.1	7.9	54.0
3700.000000	49.7	40.5	1000.0	1000.000	150.0	V	331.0	10.4	13.5	54.0
3700.000000	52.1	45.1	1000.0	1000.000	150.0	H	357.0	10.4	8.9	54.0
4625.000000	46.2	33.0	1000.0	1000.000	150.0	H	31.0	11.5	21.0	54.0
4625.000000	46.2	32.8	1000.0	1000.000	150.0	V	285.0	11.5	21.2	54.0



CAQ600 HRV: 1 GHz to 13 GHz, Vertical

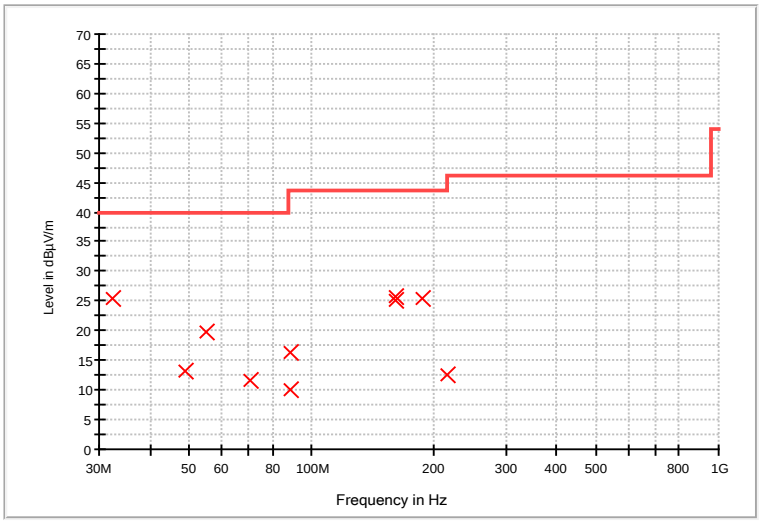


CAQ600 HRV: 1 GHz to 13 GHz, Horizontal

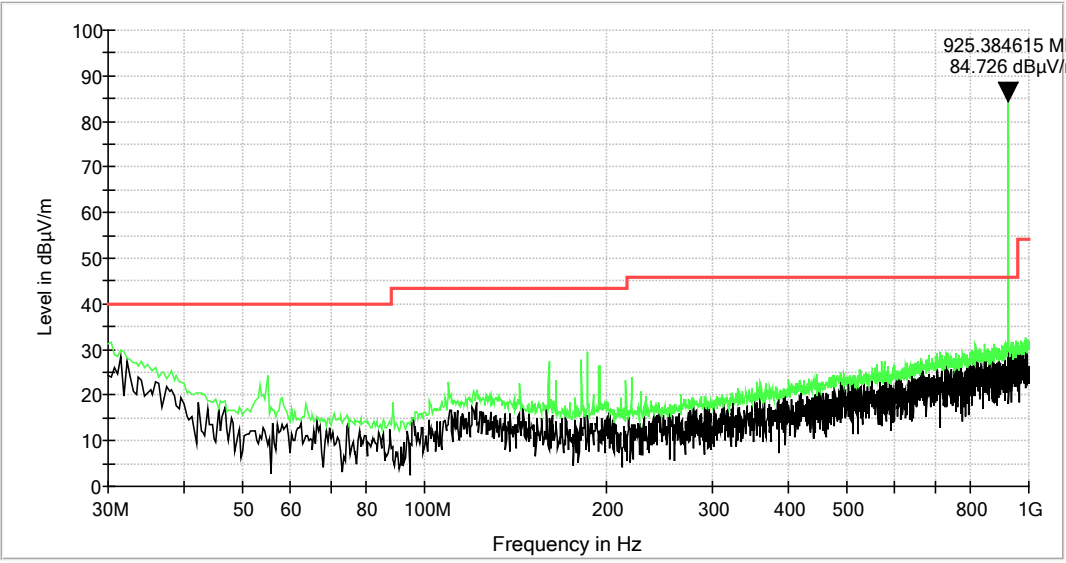


CAQ350 HRV: 30 MHz to 1000 MHz

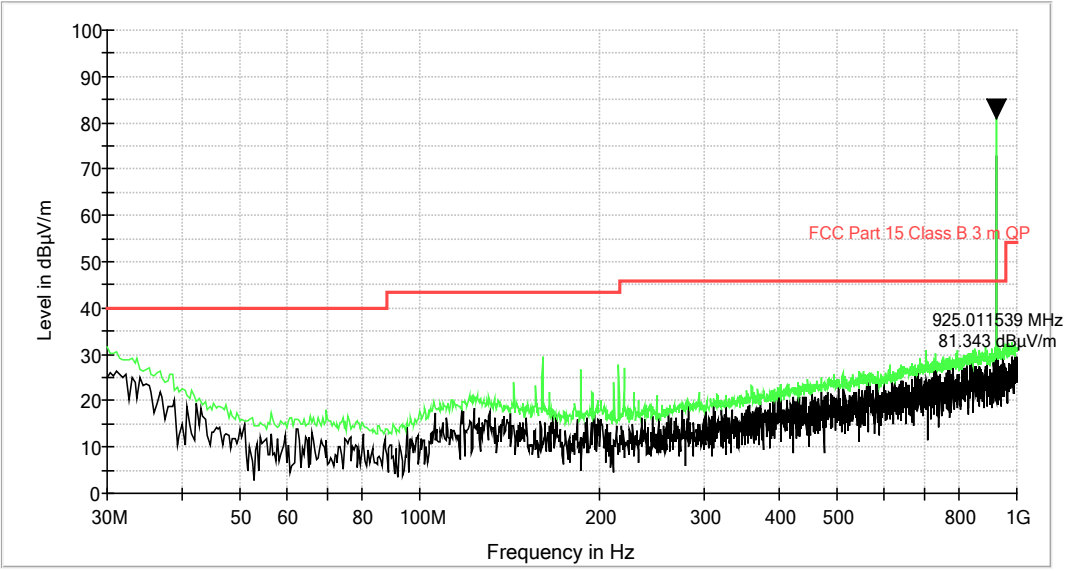
Frequency (MHz)	Ant. Pol.	Ant. Height (cm)	Azimuth (degrees)	Reading (dBµV)	Correction Factors (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
32.240000	H	100.00	0.00	29.3	-3.8	25.50	40.0	-14.5
48.640000	H	100.00	0.00	28.0	-14.8	13.20	40.0	-26.8
55.000000	V	100.00	0.00	35.7	-16.0	19.70	40.0	-20.3
70.280000	H	100.00	0.00	26.8	-15.3	11.50	40.0	-28.5
88.200000	H	100.00	0.00	26.0	-15.9	10.10	43.5	-33.4
88.960000	V	100.00	0.00	32.2	-15.9	16.30	43.5	-27.2
160.960000	V	100.00	0.00	35.7	-10.6	25.10	43.5	-18.4
160.960000	H	100.00	344.00	36.5	-10.6	25.90	43.5	-17.6
186.320000	V	100.00	0.00	36.7	-11.2	25.50	43.5	-18.0
215.800000	H	100.00	0.00	23.7	-11.2	12.50	43.5	-31.0



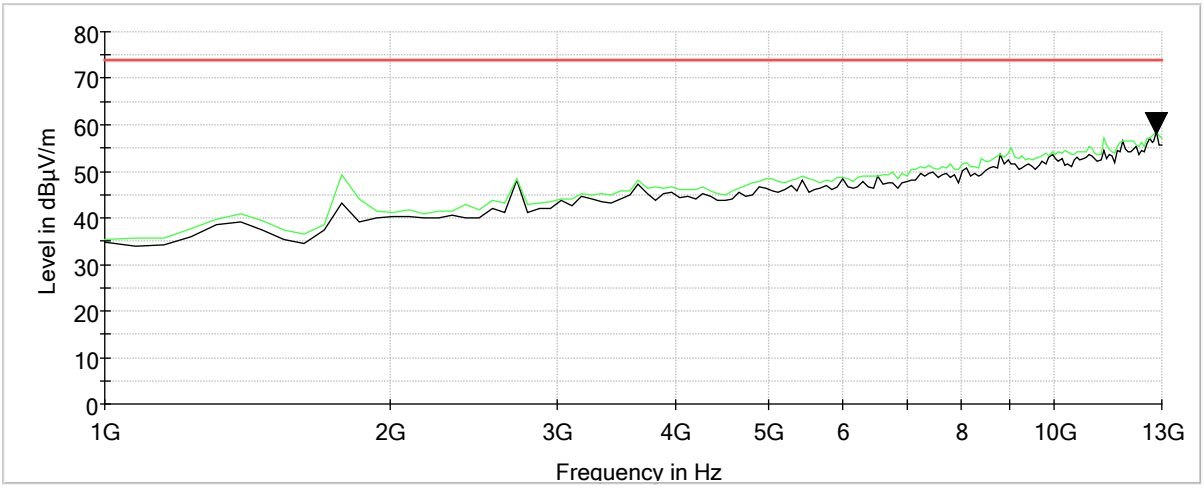
CAQ350 HRV: 30 MHz to 1000 MHz, Vertical



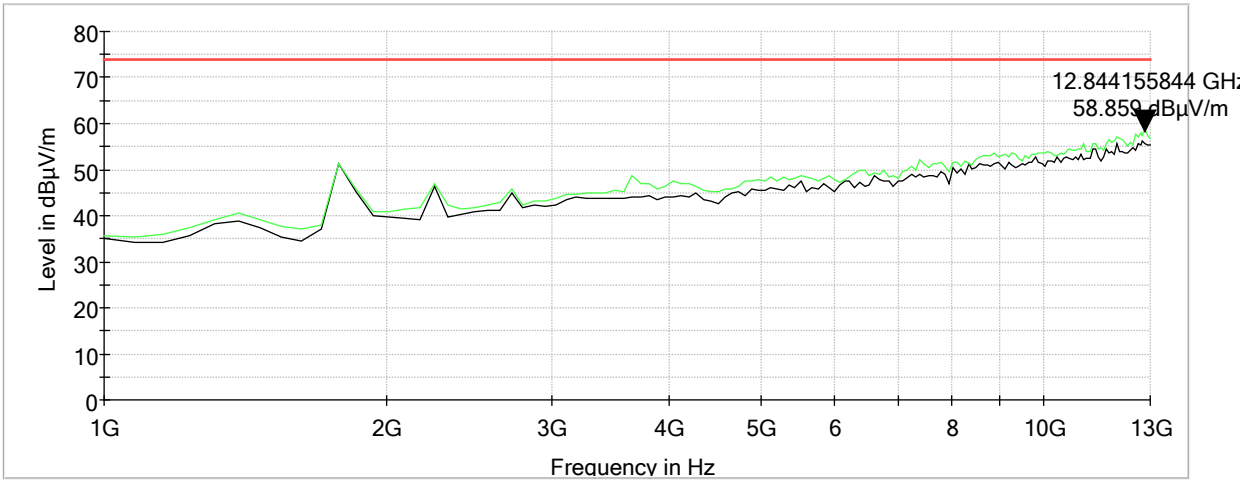
CAQ350 HRV: 30 MHz to 1000 MHz, Horizontal



CAQ350 HRV: 1 GHz to 13 GHz, Vertical

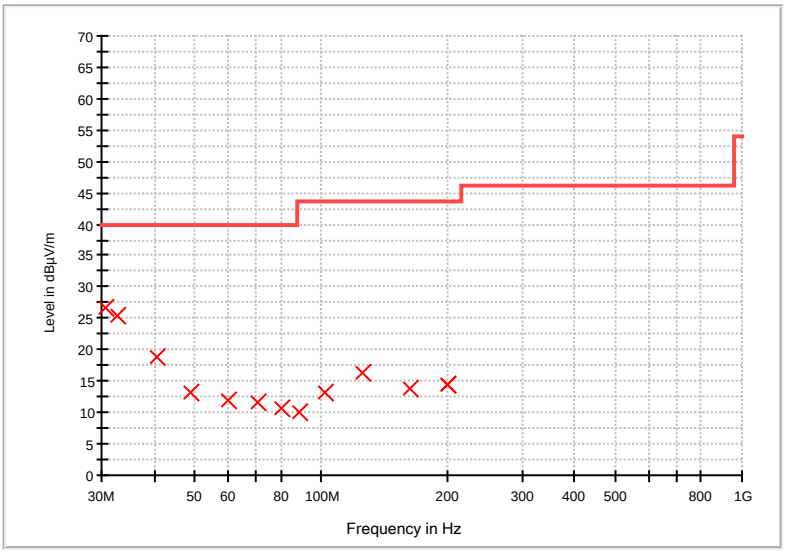


CAQ350 HRV: 1 GHz to 13 GHz, Horizontal

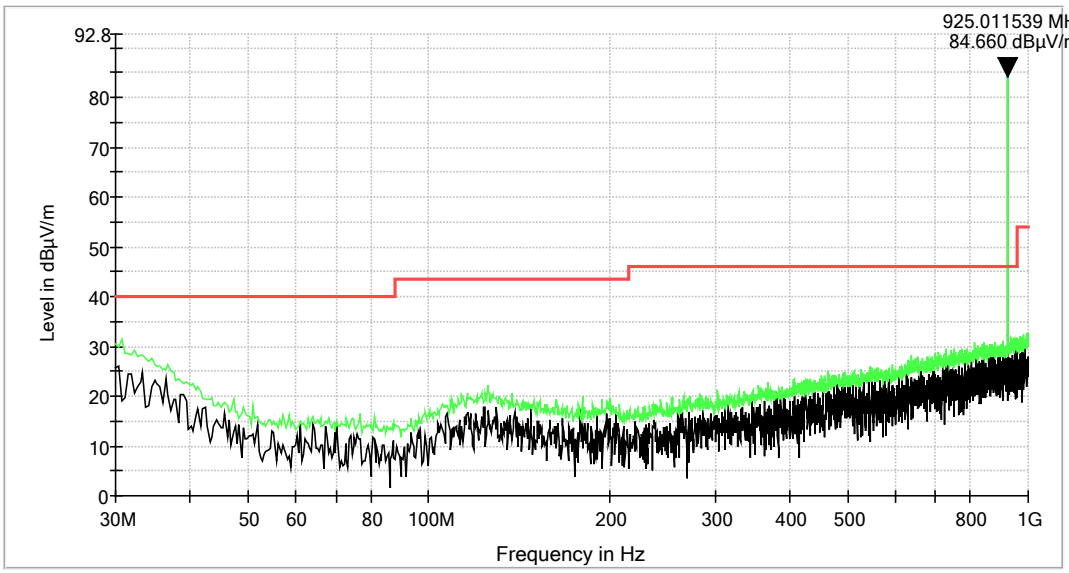


CAQ450 HRV: 30 MHz to 1000 MHz

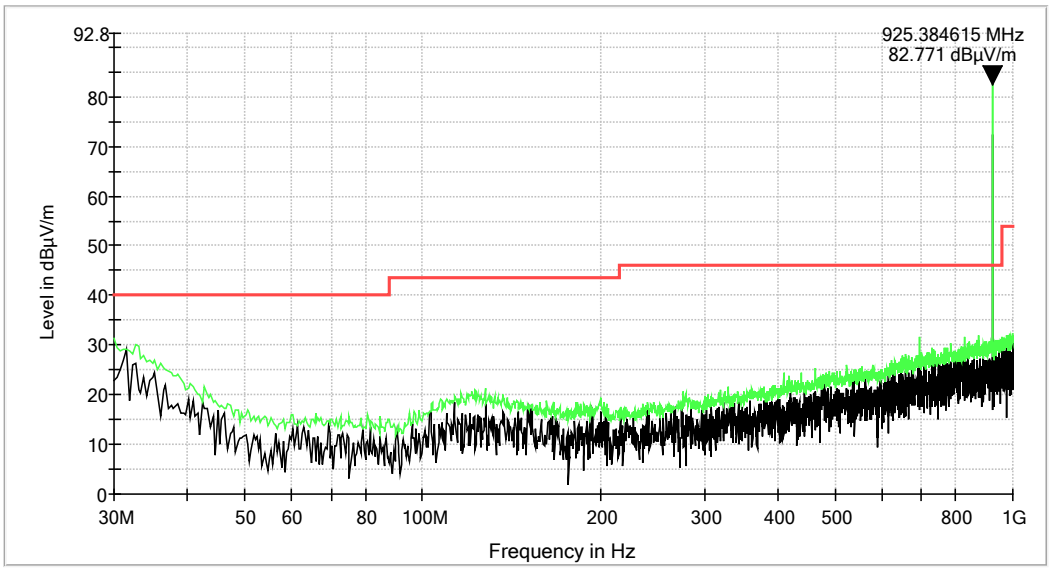
Frequency (MHz)	Ant. Pol.	Ant. Height (cm)	Azimuth (degrees)	Reading (dBµV)	Correction Factors (dB)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
30.760000	V	100.00	0.00	29.6	-2.8	26.80	40.0	-13.2
32.600000	H	100.00	0.00	29.3	-4.0	25.30	40.0	-14.7
40.440000	H	100.00	0.00	28.7	-9.9	18.80	40.0	-21.2
49.040000	V	100.00	0.00	28.3	-15.0	13.30	40.0	-26.7
59.840000	H	100.00	0.00	27.8	-15.9	11.90	40.0	-28.1
70.280000	V	100.00	0.00	26.9	-15.3	11.60	40.0	-28.4
80.720000	H	100.00	0.00	26.3	-15.6	10.70	40.0	-29.3
88.960000	V	100.00	0.00	26.1	-15.9	10.20	43.5	-33.3
101.640000	V	100.00	0.00	25.6	-12.5	13.10	43.5	-30.4
125.520000	V	100.00	0.00	25.0	-8.8	16.20	43.5	-27.3
162.440000	H	100.00	0.00	24.3	-10.6	13.70	43.5	-29.8
200.120000	H	100.00	0.00	23.8	-9.2	14.60	43.5	-28.9
200.120000	V	100.00	0.00	23.7	-9.2	14.50	43.5	-29.0



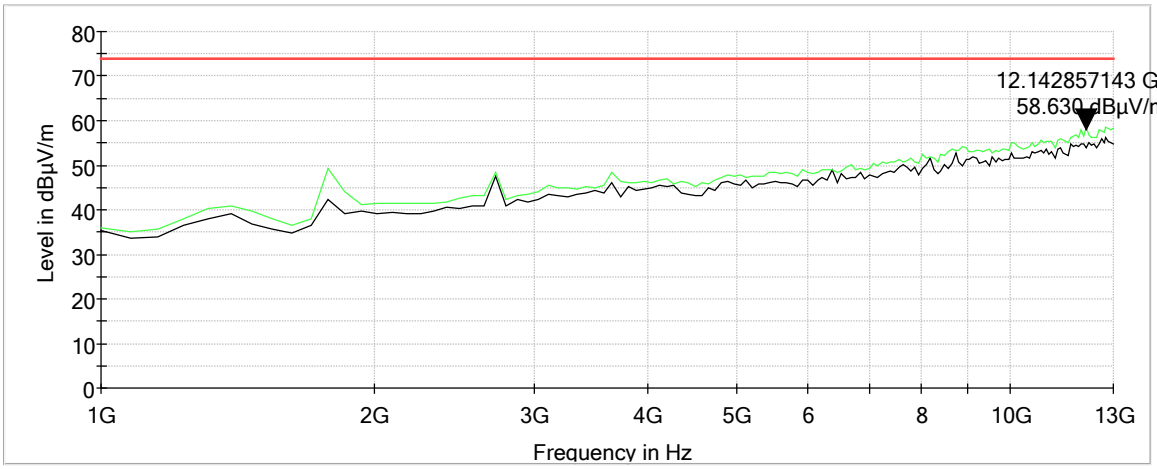
CAQ450 HRV: 30 MHz to 1000 MHz, Vertical



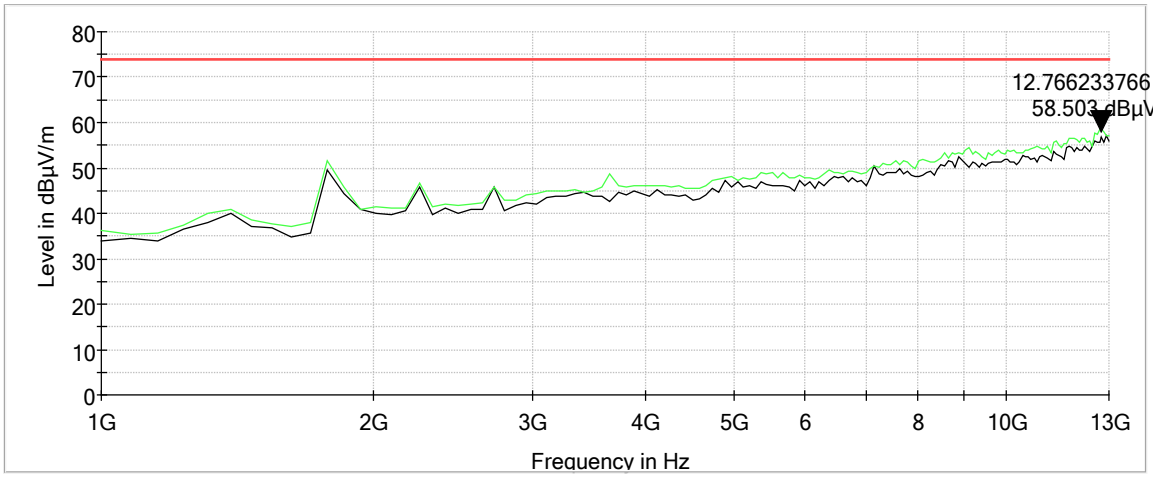
CAQ450 HRV: 30 MHz to 1000 MHz, Horizontal



CAQ450 HRV: 1 GHz to 13 GHz, Vertical



CAQ450 HRV: 1 GHz to 13 GHz, Horizontal



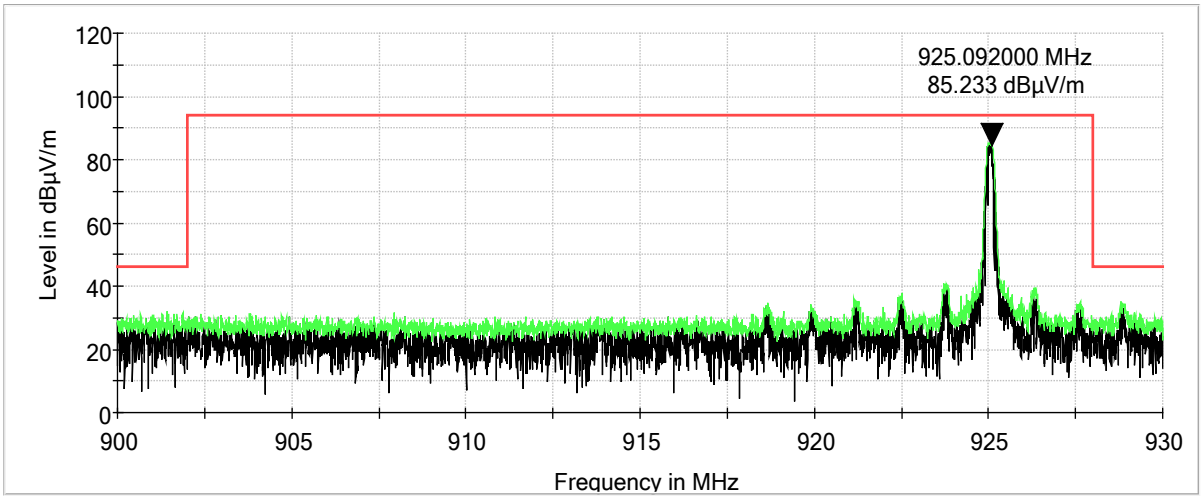
9 VOLTAGE VARIATIONS

For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery. A nominal voltage of 220VAC was used and then 187VAC and 253VAC were used as the 85% and 115% variations.

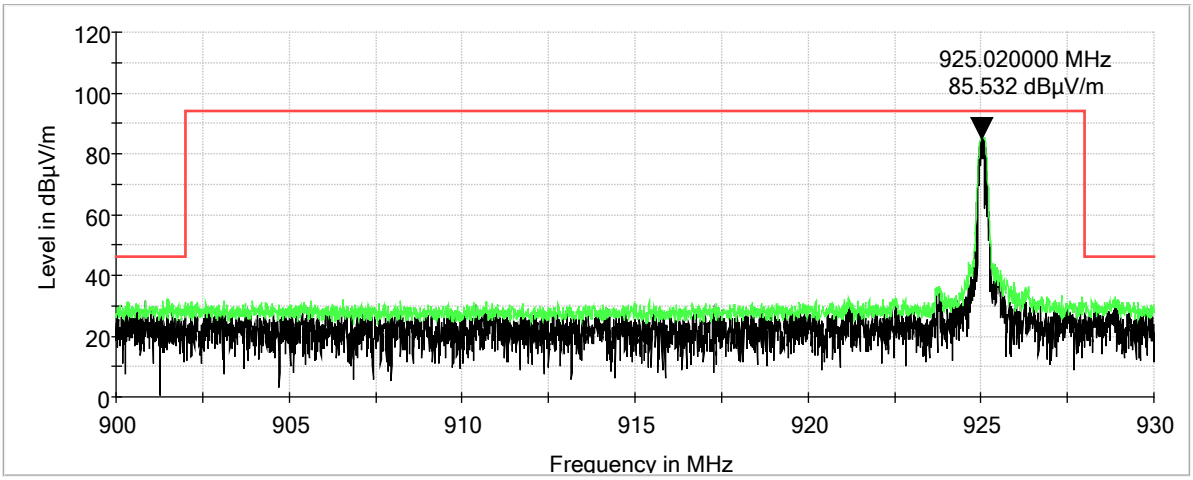
RESULTS: The results showed that the fundamental frequency did not move outside the frequency band and the field strength did not increase above the limit during the variations.

Test Date:	2023-0-8-18	Test Engineer:	J. Chiller
Rule:	RSS GEN Part 6.11	Air Temperature:	22.5º C
Test Results:	Pass	Relative Humidity:	53%

Low



High



10 CONDUCTED EMISSIONS

10.1 Requirements

In accordance with FCC CFR 47 Part 15.207(a), “Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

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

*Decreases with the logarithm of the frequency.

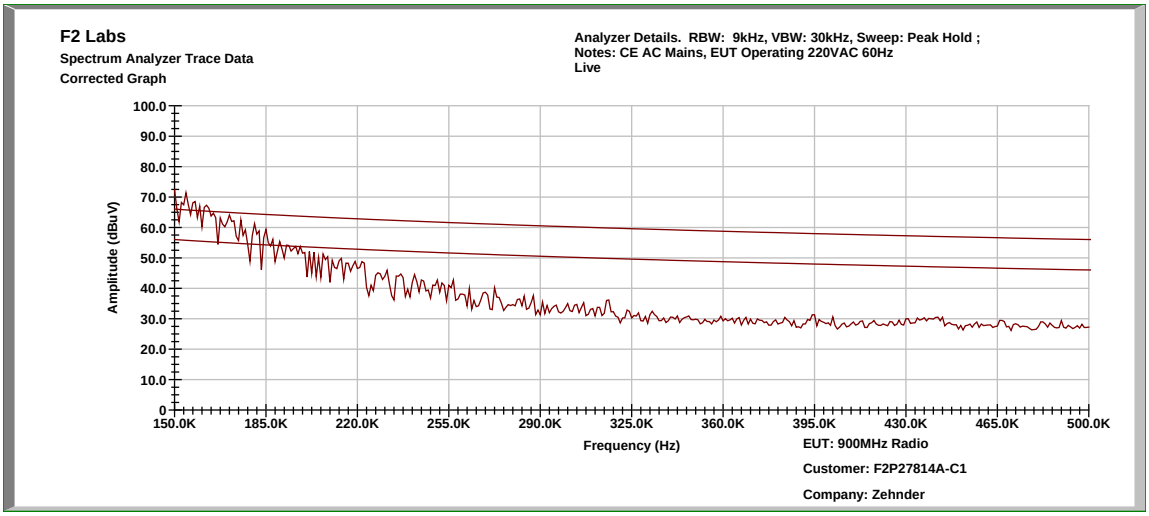
10.2 Procedure

The EUT was placed on a 1.0 x 1.5 meter non-conductive table, 0.8 meter above a horizontal ground plane and 0.4 meter from a vertical ground plane. Power was provided to the EUT through a LISN bonded to a 3 x 2 meter ground plane. The LISN and peripherals were supplied power through a filtered AC power source. The output of the LISN was connected to the input of the receiver via a transient limiter, and emissions in the range 150 kHz to 30 MHz were measured. The measurements were recorded using the quasi-peak and average detectors as directed by the standard, and the resolution bandwidth during testing was 9 kHz. The raw measurements were corrected to allow for attenuation from the LISN, transient limiter and cables.

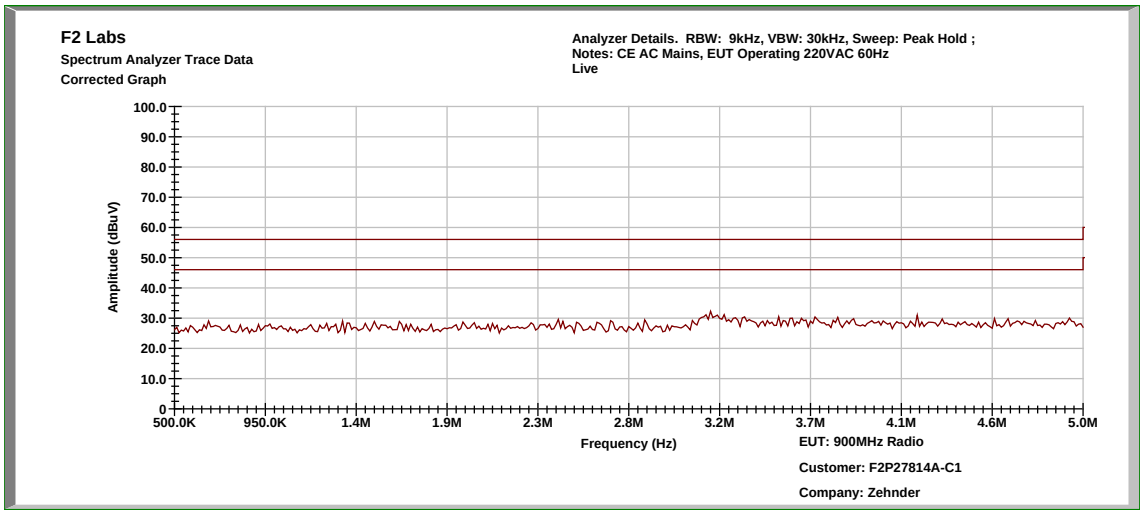
10.3 Conducted Emissions Test Data

Test Date(s):	2023-08-18	**Test Engineer:**	J. Chiller
Rule:	15.207	**Air Temperature:**	21.5º C
Test Results:	Complies	**Relative Humidity:**	41%

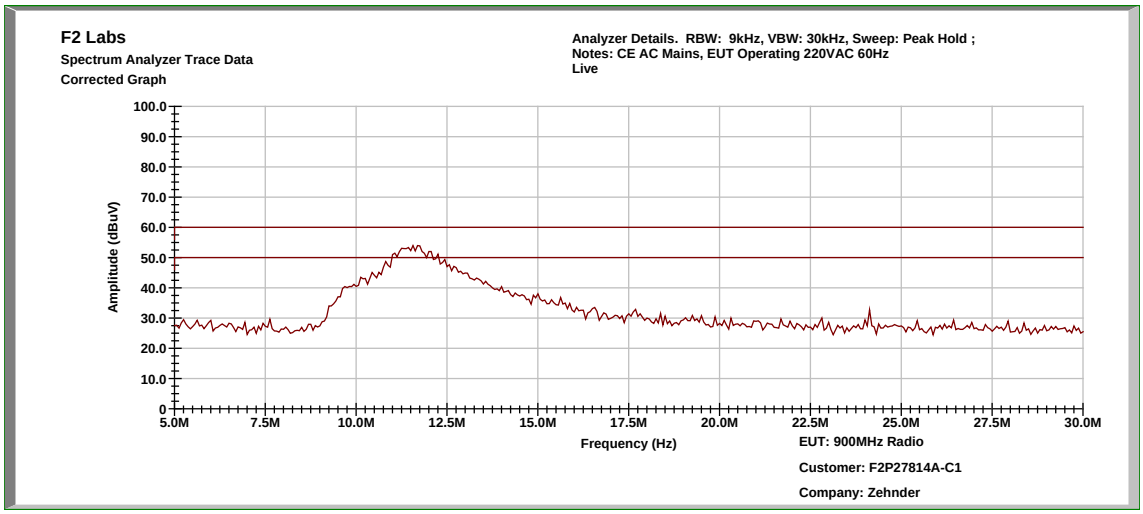
Conducted Test – Live: 0.15 MHz to 0.5 MHz



Conducted Test – Live: 0.5 MHz to 5.0 MHz

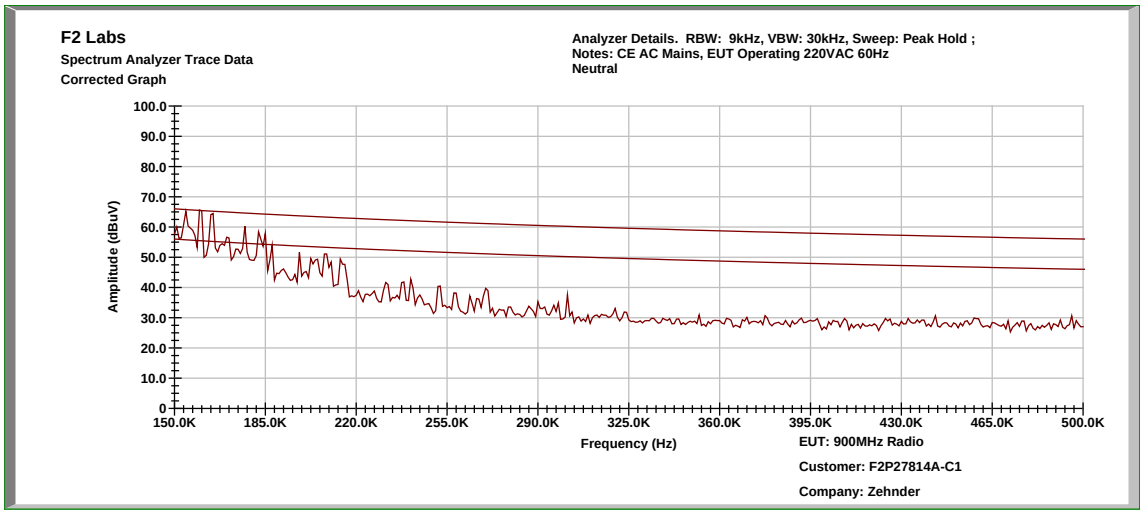


Conducted Test – Live: 5.0 MHz to 30.0 MHz

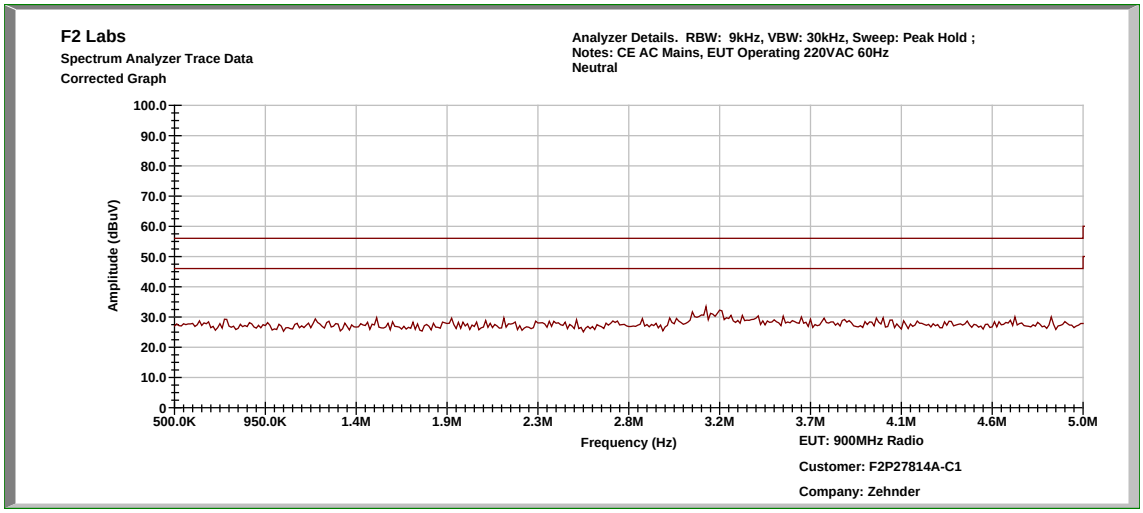


Top Discrete Measurements								
No.	**Conductor**	**Frequency (MHz)**	**Detector**	**Level (dBµV)**	**Adjustment (dB)**	**Results (dBµV)**	**Limit (dBµV)**	**Margin (dB)**
1	Live	0.154	Quasi-Peak	50.23	11.105	61.34	65.762	-4.4
			Average	29.84	11.105	40.95	55.762	-14.8
2	Live	0.162	Quasi-Peak	45.33	11.005	56.34	65.349	-9.0
			Average	30.51	11.005	41.52	55.349	-13.8
3	Live	0.171	Quasi-Peak	41.14	10.926	52.07	64.913	-12.8
			Average	28.07	10.926	39.00	54.913	-15.9
4	Live	0.180	Quasi-Peak	40.59	10.861	51.45	64.486	-13.0
			Average	26.60	10.861	37.46	54.486	-17.0
5	Live	0.190	Quasi-Peak	35.07	10.794	45.86	64.037	-18.2
			Average	22.60	10.794	33.39	54.037	-20.6
6	Live	0.200	Quasi-Peak	30.87	10.728	41.60	63.611	-22.0
			Average	21.85	10.728	32.58	53.611	-21.0
7	Live	11.00	Quasi-Peak	40.38	10.27	50.65	60.0	-9.3
			Average	35.47	10.27	45.74	50.0	-4.3
8	Live	11.687	Quasi-Peak	39.94	10.339	50.28	60.0	-9.7
			Average	35.62	10.339	45.96	50.0	-4.0
9	Live	12.25	Quasi-Peak	38.57	10.38	48.95	60.0	-11.1
			Average	33.42	10.38	43.80	50.0	-6.2

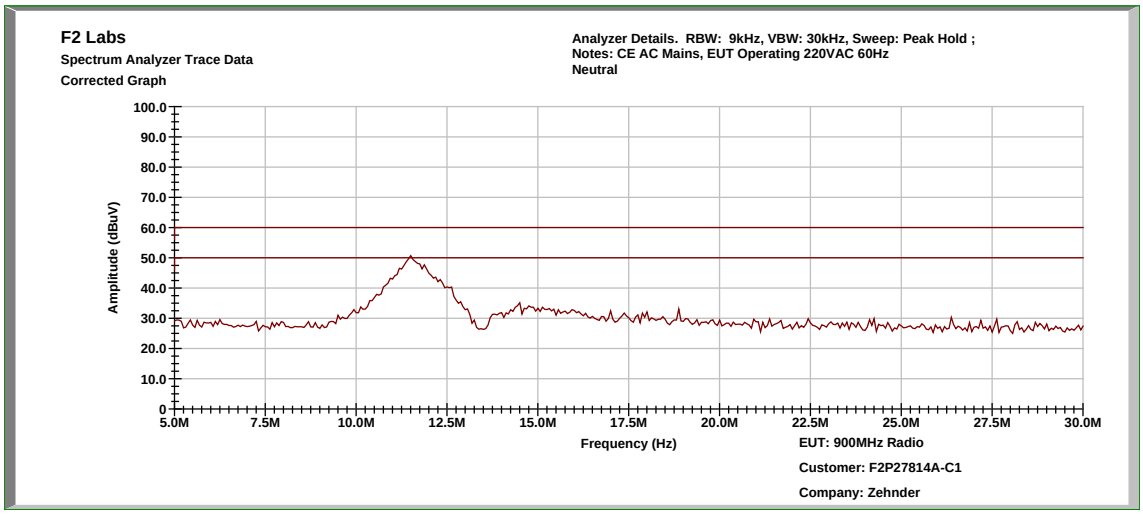
Conducted Test – Neutral: 0.15 MHz to 0.5 MHz



Conducted Test – Neutral: 0.5 MHz to 5.0 MHz



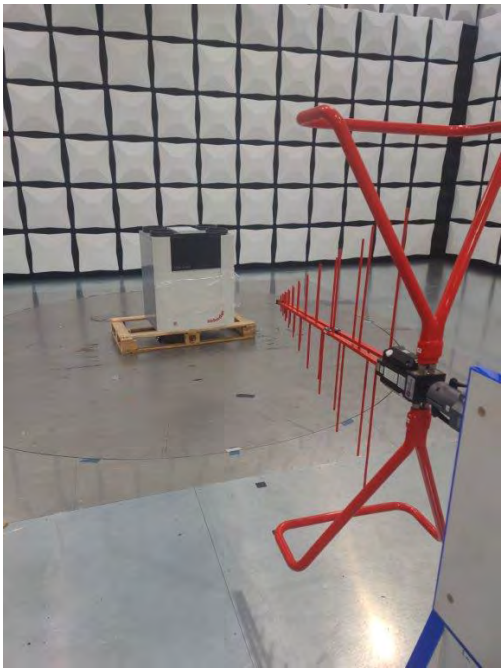
Conducted Test – Neutral: 5.0 MHz to 30.0 MHz



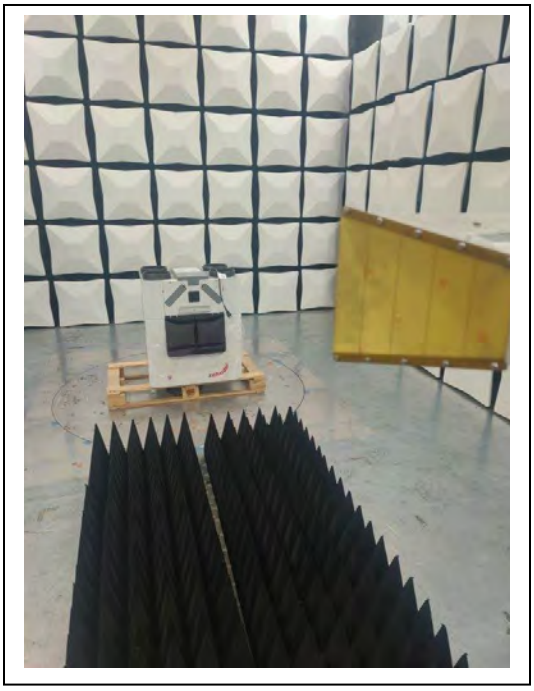
Top Discrete Measurements								
No.	**Conductor**	**Frequency (MHz)**	**Detector**	**Level (dBµV)**	**Adjustment (dB)**	**Results (dBµV)**	**Limit (dBµV)**	**Margin (dB)**
1	Neutral	0.154	Quasi-Peak	49.12	11.818	60.94	65.762	-4.8
			Average	27.84	11.818	39.66	55.762	-16.1
2	Neutral	0.160	Quasi-Peak	47.33	11.75	59.08	65.464	-6.4
			Average	28.12	11.75	39.87	55.464	-15.6
3	Neutral	0.165	Quasi-Peak	41.8	11.69	53.49	65.208	-11.7
			Average	28.09	11.69	39.78	55.208	-15.4
4	Neutral	0.177	Quasi-Peak	41.08	11.55	52.63	64.621	-12.0
			Average	27.78	11.55	39.33	54.621	-15.3
5	Neutral	0.185	Quasi-Peak	32.61	11.479	44.09	64.258	-20.2
			Average	23.36	11.479	34.84	54.258	-19.4
6	Neutral	11.562	Quasi-Peak	35.94	10.724	46.66	60.0	-13.3
			Average	29.33	10.724	40.05	50.0	-9.9

11 TEST SETUP PHOTOGRAPHS

CAQ600 HRV: OBW, Field Strength, Band Edge
Radiated Spurious Emissions Less Than 1 GHz



CAQ600 HRV: Radiated Spurious Emissions Greater than 1 GHz

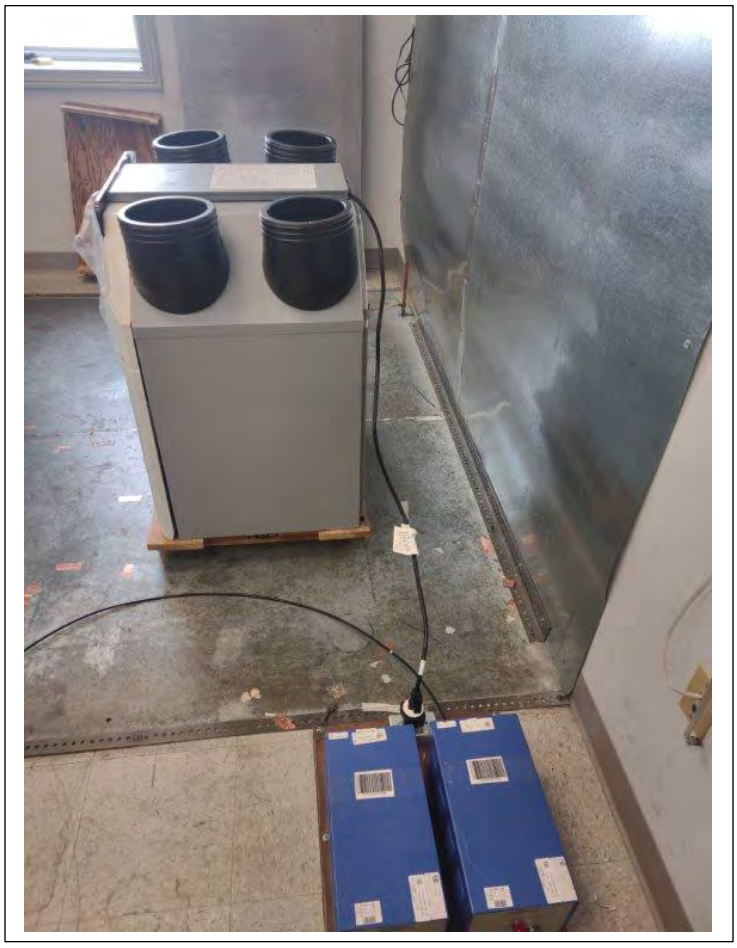


CAQ600 HRV: Loop Antenna

CAQ600 HRV, Voltage Variations: Low

CAQ600 HRV, Voltage Variations: High

CAQ600 HRV: Conducted Emissions



CAQ350 HRV: Radiated Spurious Emissions Less Than 1 GHz

CAQ350 HRV: Radiated Spurious Emissions Greater than 1 GHz

CAQ450 HRV: Radiated Spurious Emissions Less Than 1 GHz

CAQ450 HRV: Radiated Spurious Emissions Greater than 1 GHz