

Report on the FCC and IC Testing of the IEE S.A.

Model: VitaSense1.5

In accordance with FCC 47 CFR Part 15 C and ISSED RSS-210 and ISSED RSS-Gen

Prepared for: IEE S.A
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Product Service

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IC: 3019A-VITA015

Date: 2026-02-04
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RESPONSIBLE FOR	NAME	DATE	SIGNATURE
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Authorised Signatory	Alex Fink	2026-02-04	 SIGN-ID 1106340

Signatures in this approval box have checked this document in line with the requirements of TUV SUD Product Service document control rules.

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures described on test pages.
All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15 C and ISSED RSS-210 and RSS-Gen.

The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Alexander Deese	2026-02-04	 SIGN-ID 1106326

Laboratory Accreditation

DAkkS Reg. No. D-PL-11321-11-03

DAkkS Reg. No. D-PL-11321-11-04

Laboratory recognition

Registration No. BNetzA-CAB-16/21-15

Industry Canada test site registration

3050A-2

Executive Statement:

A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15 C:2024 and ISSED RSS-210 : 2024 and ISSED RSS-Gen : 2018 + Amd.1 : 2019 + Amd.2 : 2021



DAkkS
Deutsche
Akkreditierungsstelle
D-PL-11321-11-03

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1 Report Summary

1.1 Modification Report

Alternations and additions to this report will be issued to the holders of each copy in the form of a complete document. Current version replaces all previous versions.

Revision	Description of changes	Date of Issue
0	First Issue	2025-11-04
1	C63.10 version updated. Limit line derivation added, section 2.3.5. Rule part corrected, sections 2.1.1 and 2.3.1.	2026-02-04

Table 1: Report of Modifications

1.2 Introduction

Applicant	IEE S.A.
Manufacturer	IEE S.A.
Model Number(s)	VitaSense1.5
Serial Number(s)	01-008538-02-10 01-008538-03-10 (Production version)
Hardware Version(s)	25/30.00
Software Version(s)	25/30.00 25/36.00 (Production version)
Number of Samples Tested	2
Test Specification(s) / Issue / Date	FCC 47 CFR Part 15 C : 2024 and ISED RSS-210, Issue 11 : 2024 ISED RSS-Gen, Issue 5 : 2018 + Amd. 1 : 2019, Amd. 2 : 2021
Test Plan/Issue/Date	---
Order Number	2508211600
Date	2025-08-21
Date of Receipt of EUT	2025-09-15 2025-11-03 (Production version)
Start of Test	2025-10-13
Finish of Test	2025-11-03
Name of Engineer(s)	Alexander Deese
Related Document(s)	ANSI C63.10:2020 KDB 364244 D01 Meas 15.255 Radars v01



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15 C and ISED RSS-210 is shown below.

<i>Section</i>	<i>Specification Clause</i>	<i>Test Description</i>	<i>Result</i>
2.1	15.255 (c)	Radiated Power	Pass
2.2	2.202 (a); 2.1049	Occupied Bandwidth	Pass
2.3	15.255 (d)	Spurious Radiated Emissions	Pass
2.4	15.255 (f)	Frequency Stability	Pass
2.5	15.255 (c)(2)(iii)(A)	Duty Cycle	Pass

Table 2: Results according to FCC 47 CFR Part 15 C

<i>Section</i>	<i>Specification Clause</i>	<i>Test Description</i>	<i>Result</i>
2.1	J.2 J.4	Radiated Power	Pass
2.2	RSS-Gen 6.6	Occupied Bandwidth	Pass
2.3	J.3	Spurious Radiated Emissions	Pass
2.4	J.6	Frequency Stability	Pass
2.5	J3.2 b (iii)	Duty Cycle	Pass

Table 3: Results according to ISED RSS-210 and ISED RSS-GEN

1.4 Product Information

1.4.1 Technical Description

Frequency Band: 57 GHz – 64 GHz

Supply Voltage: 12 V

Supply Frequency: DC

*Highest clock frequency
(radio part):* 64 GHz

*Highest clock frequency
(non-radio part):* ---



1.5 Test Configuration

The EUT was 12 V / DC supplied.

1.6 Modes of Operation

The EUT was programmed to transmit continuously via test software provided by the applicant.



1.7 Deviations from Standard

1.8 EUT Modifications Record

The table below details modifications made to the EUT during the test program.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
0	As supplied by the customer	Not Applicable	Not Applicable

Table 4

1.9 Test Location

TÜV SÜD Product Service conducted the following tests at our Straubing test laboratory:

Test Name	Name of Engineer(s)
Configuration according to 1.5 and 1.6	
Radiated Power	Alexander Deese
Occupied Bandwidth	Alexander Deese
Spurious Radiated Emissions	Alexander Deese
Frequency Stability	Alexander Deese
Duty Cycle	Alexander Deese

Office Address:

Äußere Frühlingstraße 45
94315 Straubing
Germany



2 Test Details

2.1 Radiated Power

2.1.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.255 (c)(2)(iii)(A)
RSS-210, Annex J, Section J.3.2(b)(III)(1)

2.1.2 Equipment under Test and Modification State

VitaSense1.5, S/N: 01-008538-02-10 - Modification State 0

2.1.3 Date of Test

2025-10-13

2.1.4 Environmental Conditions

Ambient Temperature	21 °C
Relative Humidity	50 %

2.1.5 Specification Limits

The peak EIRP shall not exceed 14 dBm

2.1.6 Test Method

Test was performed as radiated test. The test distance was 0.5 m. A correction factor and mixer conversion loss table were used to account for the test antenna gain, free-space loss and external mixer loss.



2.2 Bandwidth of Signal

2.2.1 Specification Reference

FCC 47 CFR Part 15 C, Clauses 2.1049 and 2.202(a)
RSS-GEN, Section 6.7

2.2.2 Equipment under Test and Modification State

VitaSense1.5, S/N: 01-008538-02-10 - Modification State 0

2.2.3 Date of Test

2025-10-13

2.2.4 Environmental Conditions

Ambient Temperature	21 °C
Relative Humidity	50 %

2.2.5 Specification Limits

The occupied bandwidth is noted

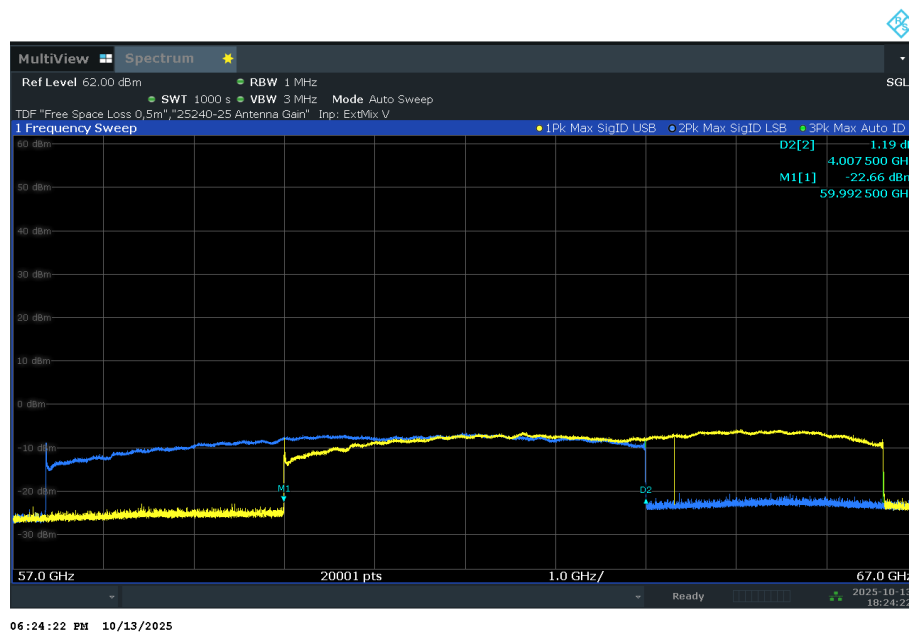
2.2.6 Test Method

Test was performed as radiated test. The test distance was 0.5 m. A correction factor and mixer conversion loss table were used to account for the test antenna gain, free-space loss and external mixer loss.

2.2.7 Test Results

Frequency Low f_L (GHz)	Frequency High f_H (GHz)	Occupied Bandwidth (GHz)
59.992500	64.000000	4.007500

Table 7: Occupied Bandwidth



2.2.8 Test Location and Test Equipment

The test was carried out in fully anechoic room no. 2.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Signal and Spectrum Analyser	Rohde & Schwarz	FSW43	53496	12	2026-04-30
Waveguide mixer	Rohde & Schwarz	FS-Z75	51464	36	2026-05-31
Horn antenna	Flann Microwave	25240-25	20040	N/A	N/A
Fully anechoic room	Albatross	Cabin no. 2	19312	N/A	N/A

Table 8



2.3 Spurious Radiated Emissions

2.3.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.255 (d)
ISED RSS-210, Annex J, Section J.4

2.3.2 Equipment under Test and Modification State

VitaSense1.5, S/N: 01-008538-02-10 - Modification State 0
VitaSense1.5, S/N: 01-008538-03-10 - Modification State 0 (for range 18 GHz – 40 GHz)

2.3.3 Date of Test

2025-10-14 to 2025-11-03

2.3.4 Environmental Conditions

Ambient Temperature	22 °C
Relative Humidity	43 %

2.3.5 Specification Limits

- (1) The power density of any emissions outside the 57-71 GHz band shall consist solely of spurious emissions.
- (2) Radiated emissions below 40 GHz shall not exceed the general limits in §15.209.
- (3) Between 40 GHz and 200 GHz, the level of these emissions shall not exceed 90 pW/cm² at a distance of 3 meters.
- (4) The levels of the spurious emissions shall not exceed the level of the fundamental emission.

Note: The power density of 90 pW/cm² measured at a distance of 3 m corresponds to an equivalent power level of -10 dBm, derived from the following equation:

$$P = S \times 4 \times \pi \times d^2$$

with: P : Radiated power level [W]
 S : Power density [W/m²]
 d : Distance of power density limit [m]

2.3.6 Test Method

The test was performed according to ANSI C63.10, sections 11.11 and 11.12

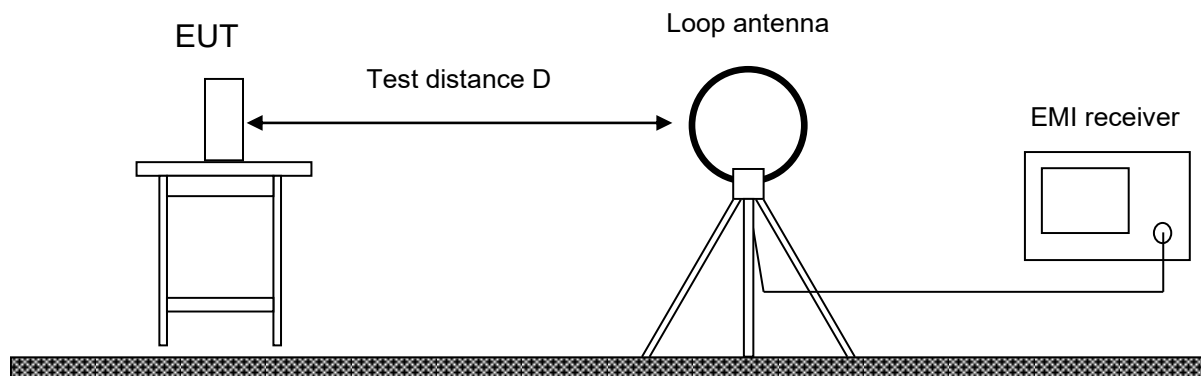
Prescans are performed in six positions of the EUT to get the full spectrum of emission caused by the EUT with the measuring antenna raised and lowered from 1 m to 4 m with vertical and horizontal polarisation to find the combination of table position, antenna height and antenna polarisation for the maximum emission levels.

Data reduction is applied to these results to select those levels having less margin than 10 dB or exceeding the limit using subranges and limited number of maximums.

Further maximisation for adjusting the maximum position is following.

Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

2.3.6.1 Frequency range 9 kHz – 30 MHz

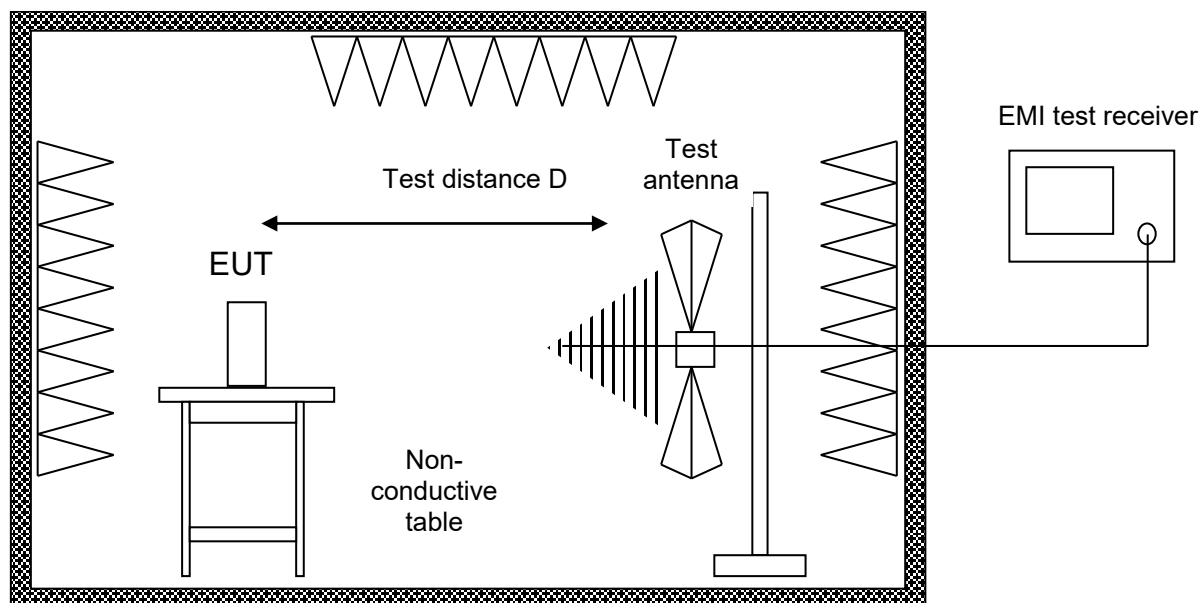


The EUT was placed on a non-conductive table, 0.8 m above the ground.

Radiated emissions in the frequency 9 kHz – 30 MHz is measured within a semi-anechoic room with an active loop antenna with the measurement detector set to peak. In addition, in the frequency range 9 kHz to 490 kHz also an average detector was used. The measurement bandwidth of the receiver was set to 300 Hz in the frequency range 9 kHz to 150 kHz and 10 kHz in the frequency range 150 kHz to 30 MHz. Prescans were performed in six positions of the EUT.

For final measurements the detector was set to CISPR quasi-peak and in addition to CISPR average in the frequency range 9 kHz to 490 kHz with a resolution bandwidth 200 Hz in the frequency range 9 kHz to 150 kHz and 9 kHz in the frequency range 150 kHz to 30 MHz. Final tests were performed immediately after a final frequency and zoom (for drifting disturbances) and maximum adjustment.

2.3.6.2 Frequency range 30 MHz – 1 GHz



Alternate test site (semi anechoic room)

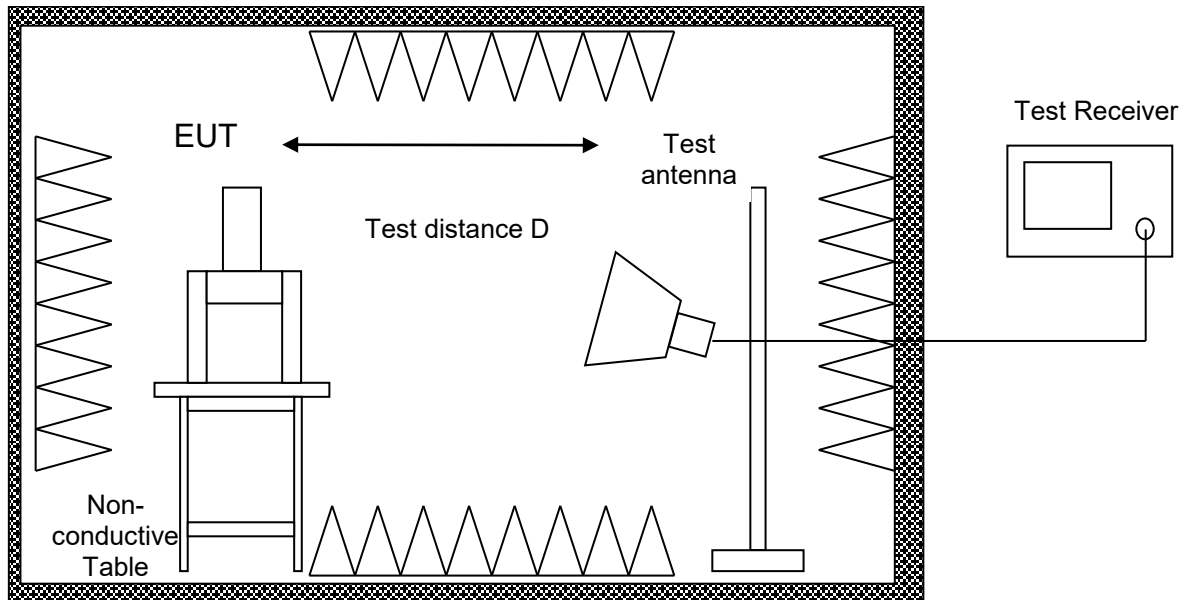
The EUT was placed on a non-conductive table, 0.8 m above the ground plane

Radiated emissions in the frequency range 30 MHz – 1 GHz is measured within a semi-anechoic room with groundplane complying with the NSA requirements of ANSI C63.4. for alternative test sites. A linear polarised logarithmic periodic antenna combined with a 4:1 broadband dipole ("Trilog broadband antenna") is used.

For prescan tests the test receiver is set to peak-detector with a bandwidth of 120 kHz.

With the measurement bandwidth of the test receiver set to 120 kHz CISPR quasi-peak detector is selected for final measurements following immediately after a final frequency zoom (for drifting disturbances) and maximum adjustment.

2.3.6.3 Frequency range above 1 GHz



Fully anechoic room

The EUT was placed on a non-conductive table, 1.5 m above the ground plane

Radiated emission tests above 1 GHz are performed in a fully anechoic room with the S_{VSWR} requirements of ANSI C63.4. Measurements are performed both in the horizontal and vertical planes of polarisation using a test receiver with the detector function set to peak and average and the resolution bandwidth set to 1 MHz. Testing above 1 GHz is performed with horn antennas with the EUT in boresight of the antenna.

For prescan tests the test receiver is set to peak- and average-detector with a bandwidth of 1 MHz. With the measurement bandwidth of the test receiver set to 1 MHz and peak- and CISPR average-detector is selected for final measurements following immediately after a final frequency zoom (for drifting disturbances) and maximum adjustment.



2.3.7 Test Results

<i>Frequency range</i>	<i>Limit applied</i>	<i>Test distance</i>
9 kHz – 30 MHz	15.209	3 m
30 MHz – 1 GHz	15.209	3 m
1 GHz – 18 GHz	15.209	1 m
18 GHz – 40 GHz	15.209	3 m
40 GHz – 50 GHz	15.255 (d)(3)	1 m
50GHz – 75 GHz	15.255 (d)(3)	1 m
75 GHz – 110 GHz	15.255 (d)(3)	0.25 m
110 GHz – 170 GHz	15.255 (d)(3)	0.1 m
170 GHz – 200 GHz	15.255 (d)(3)	0.5 m

Table 9

Sample calculation:

$$\text{Final Value (dB}\mu\text{V/m)} = \text{Reading Value (dB}\mu\text{V)} + (\text{Cable attenuation (dB)} + \text{Antenna Transducer (dB(1/m))})$$

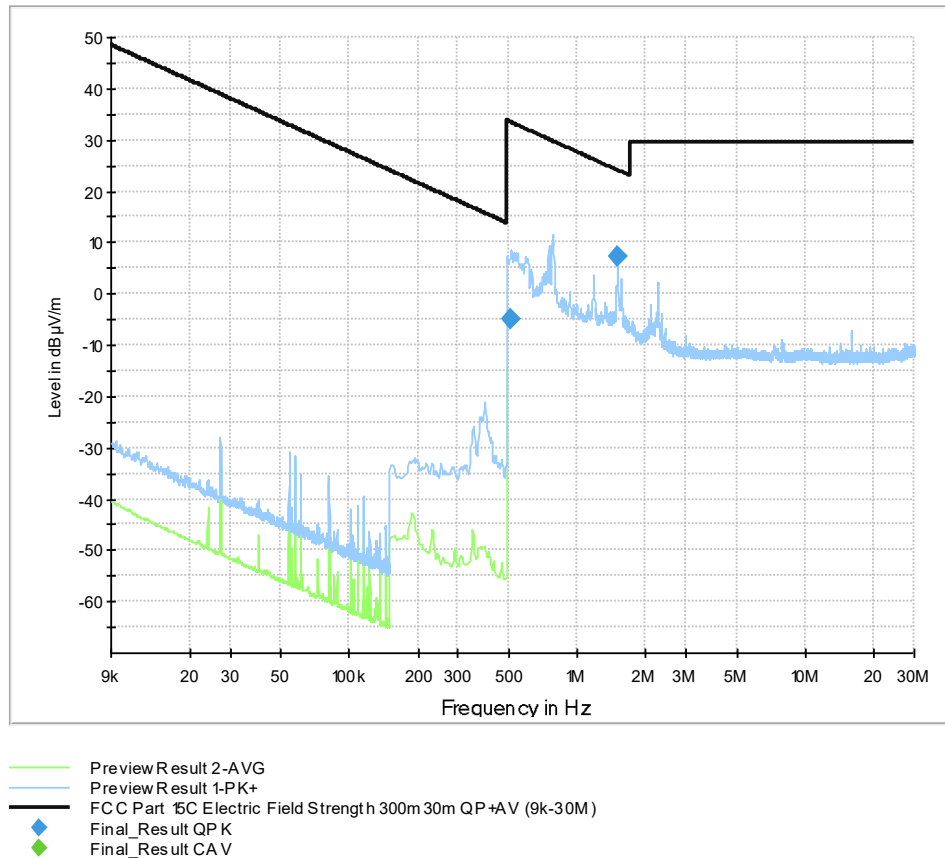
Additional correction of limit in the frequency range 9 – 490 kHz (300 m to 3 m): +80.0 dB

Additional correction of limit in the frequency range 490 kHz – 30 MHz (30 m to 3 m): +40.0 dB

Additional correction of limit in the frequency ranges above 1 GHz (3 m to 1 m): +9.54 dB

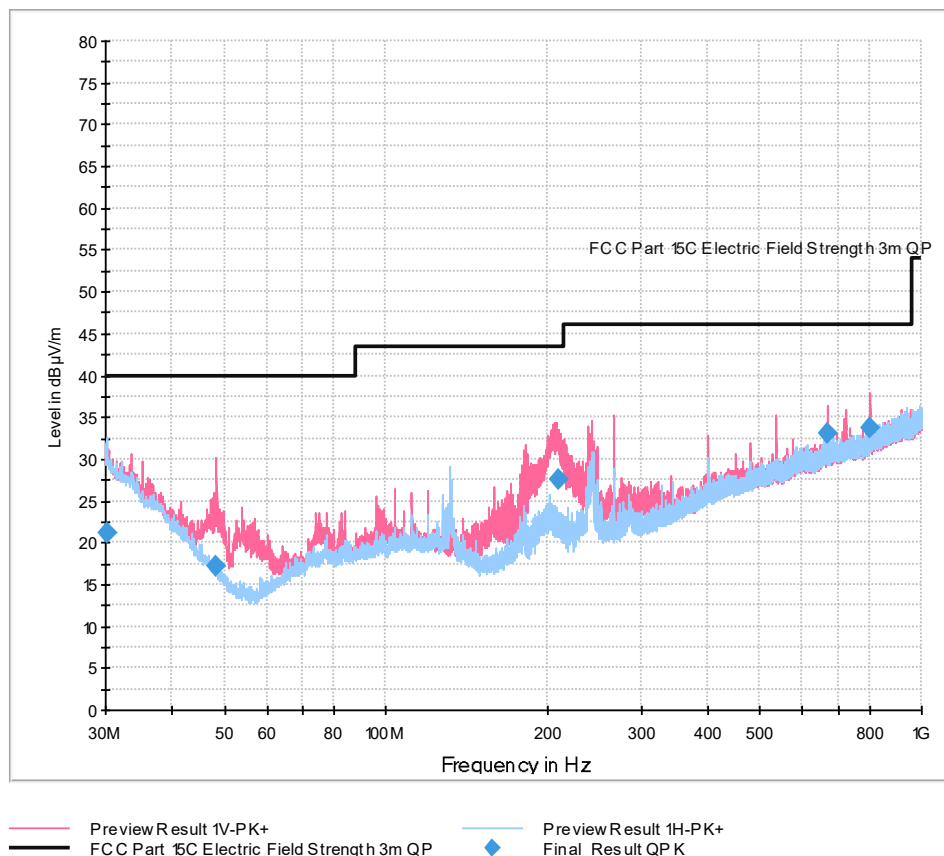


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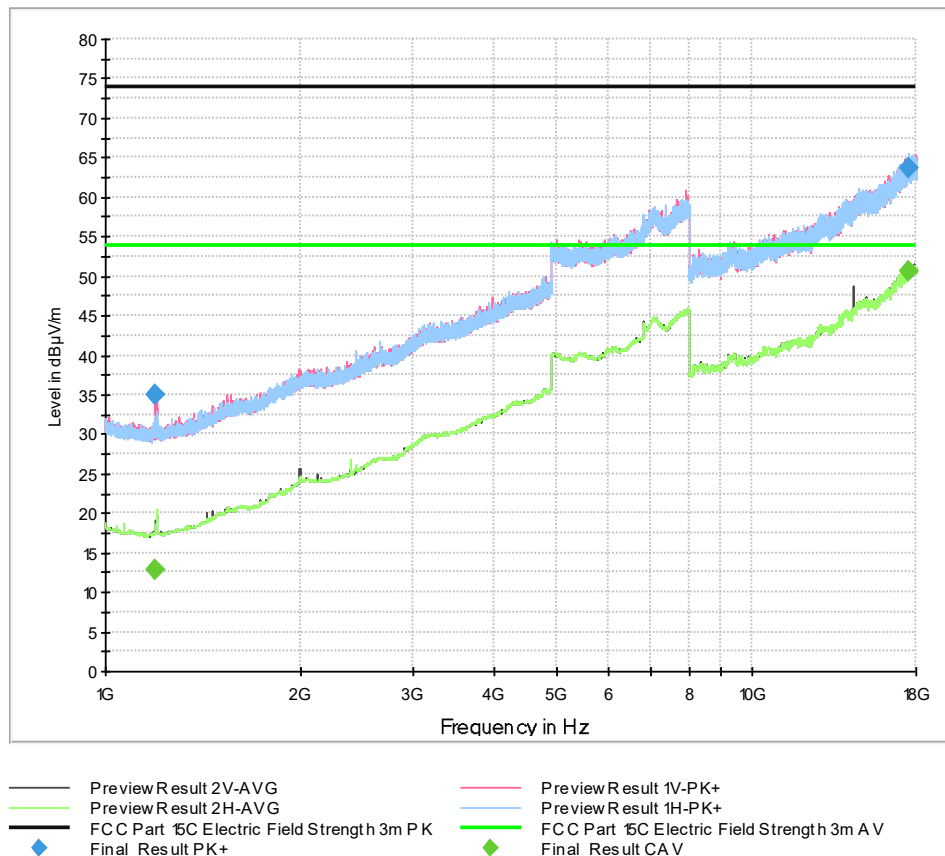
Final Results:

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Meas. Time ms	Band- width kHz	Height cm	Pol	Azi- muth deg	Corr. dB/m
0.506000	-5.04	33.52	38.56	1000.0	9.000	100.0	V	-144.0	-20.6
1.503250	7.35	24.06	16.71	1000.0	9.000	100.0	V	177.0	-20.6



Final Results:

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Meas. Time ms	Band- width kHz	Height cm	Pol	Azi- muth deg	Corr. dB/m
30.270000	21.25	40.00	18.75	1000.0	120.000	104.0	H	80.0	25.1
48.420000	17.12	40.00	22.88	1000.0	120.000	116.0	V	-118.0	13.9
209.490000	27.54	43.50	15.96	1000.0	120.000	135.0	V	59.0	16.1
666.660000	33.00	46.02	13.02	1000.0	120.000	100.0	V	-93.0	27.5
799.980000	33.80	46.02	12.22	1000.0	120.000	104.0	V	-110.0	29.1

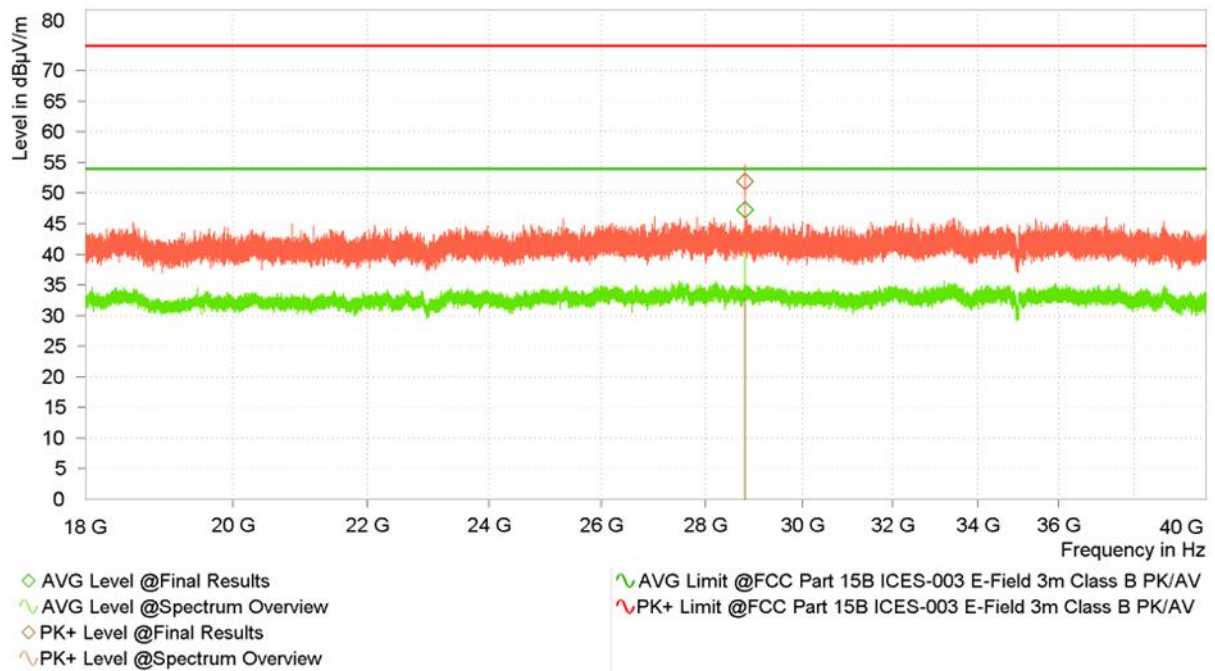


Final Results:

Frequency MHz	Max- Peak dBμV/m	CAver- age dBμV/m	Limit dBμV/m	Mar- gin dB	Meas. Time ms	Band- width kHz	Height cm	Pol	Azi- muth deg	Corr. dB/m
1196.250000	34.90	---	73.98	39.08	1000.0	1000.000	113.0	V	48.0	18.1
1196.250000	---	12.78	53.98	41.20	1000.0	1000.000	113.0	V	48.0	18.1
17513.750000	63.58	---	73.98	10.40	1000.0	1000.000	268.0	V	-114.0	48.4
17513.750000	---	50.53	53.98	3.45	1000.0	1000.000	268.0	V	-114.0	48.4



Product Service

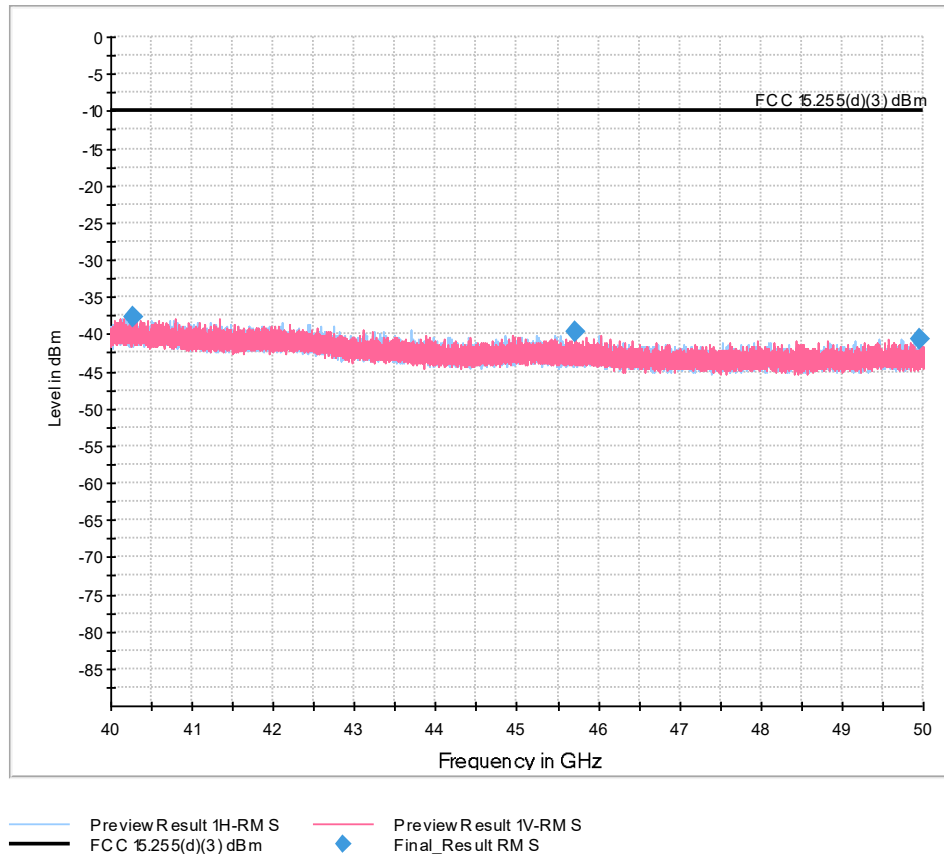


Final Results:

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Meas. Time [s]	
28.799.100	51.87	73.98	22.11	---	---	---	15.60	H	-38	2.17	1.000.000	15.000	
28.799.100	---	---	---	47.23	53.98	6.75	15.60	H	-42	2.13	1.000.000	15.000	

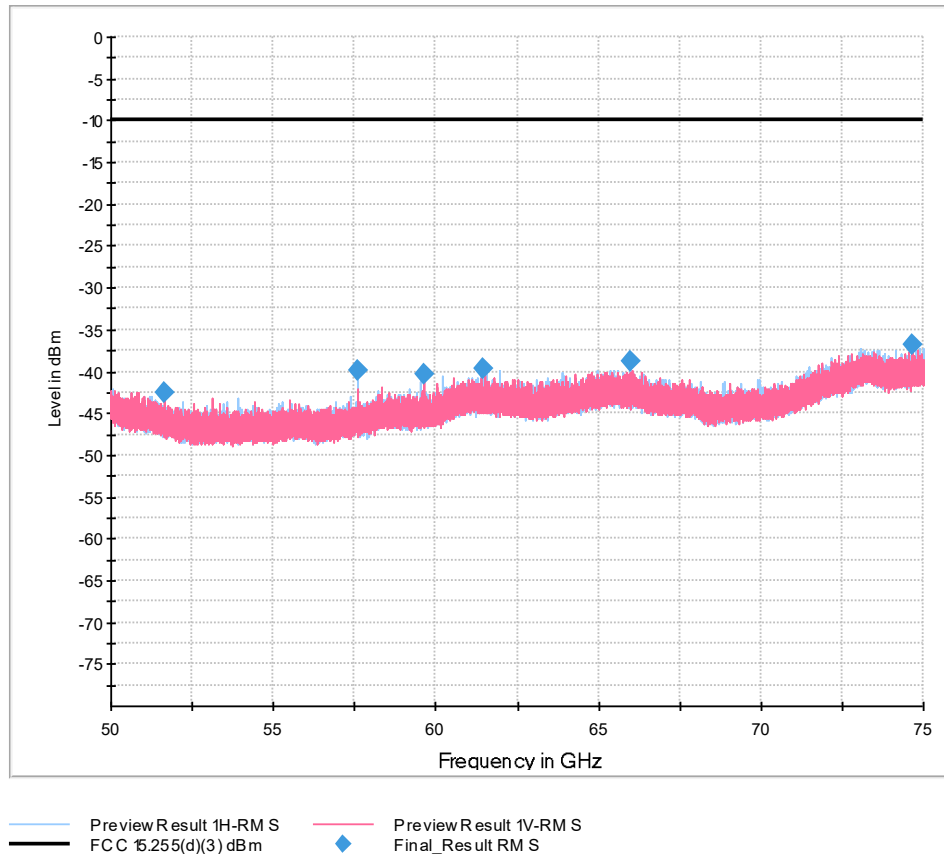


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Final Results:

Frequency	RMS	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.
MHz	dBm	dBm	dB	ms	kHz	cm		deg	dB
40263.500000	-37.62	-30.00	7.62	2.5	1000.000	150.0	V	304.0	-61
45704.500000	-39.57	-30.00	9.57	2.5	1000.000	150.0	H	318.0	-61
49953.000000	-40.60	-30.00	10.60	2.5	1000.000	150.0	H	141.0	-60

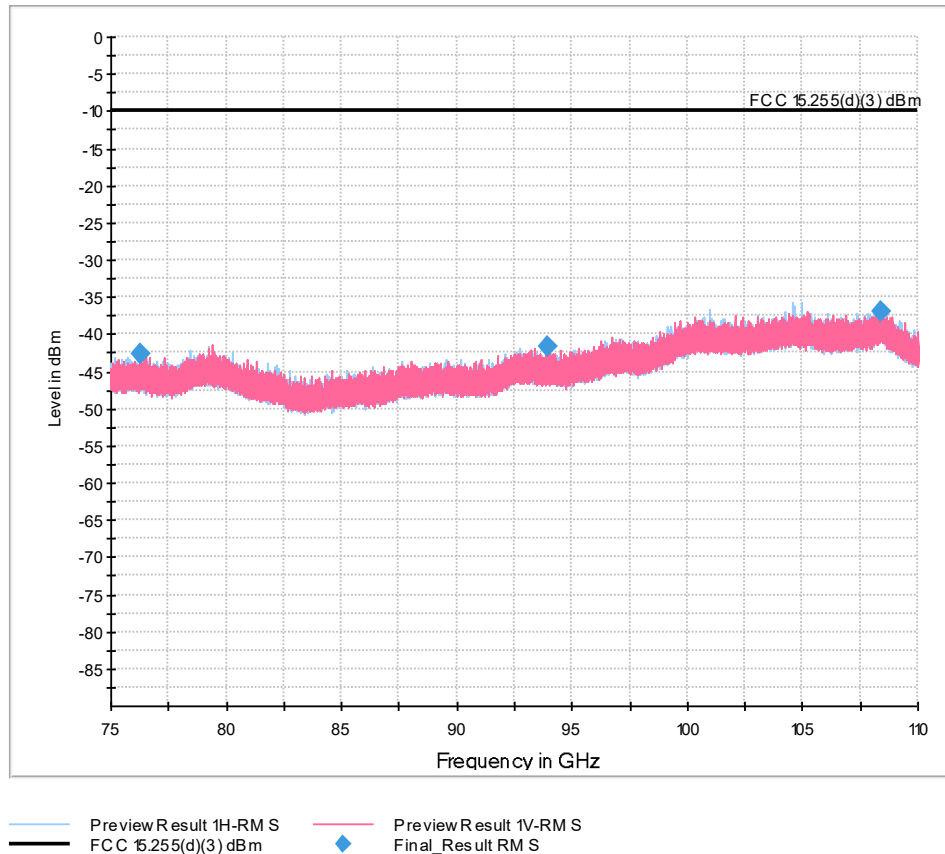


Final Results:

Frequency MHz	RMS dBm	Limit dBm	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB
51620.000000	-42.61	-30.00	12.61	2.5	1000.000	150.0	V	0.0	-64
57598.000000	-39.80	-30.00	9.80	2.5	1000.000	150.0	H	310.0	-64
59660.500000	-40.25	-30.00	10.25	2.5	1000.000	150.0	V	0.0	-64
61447.000000	-39.70	-30.00	9.70	2.5	1000.000	150.0	H	234.0	-64
65990.500000	-38.72	-30.00	8.72	2.5	1000.000	150.0	H	341.0	-64
74684.000000	-36.71	-30.00	6.71	2.5	1000.000	150.0	V	191.0	-64



Product Service

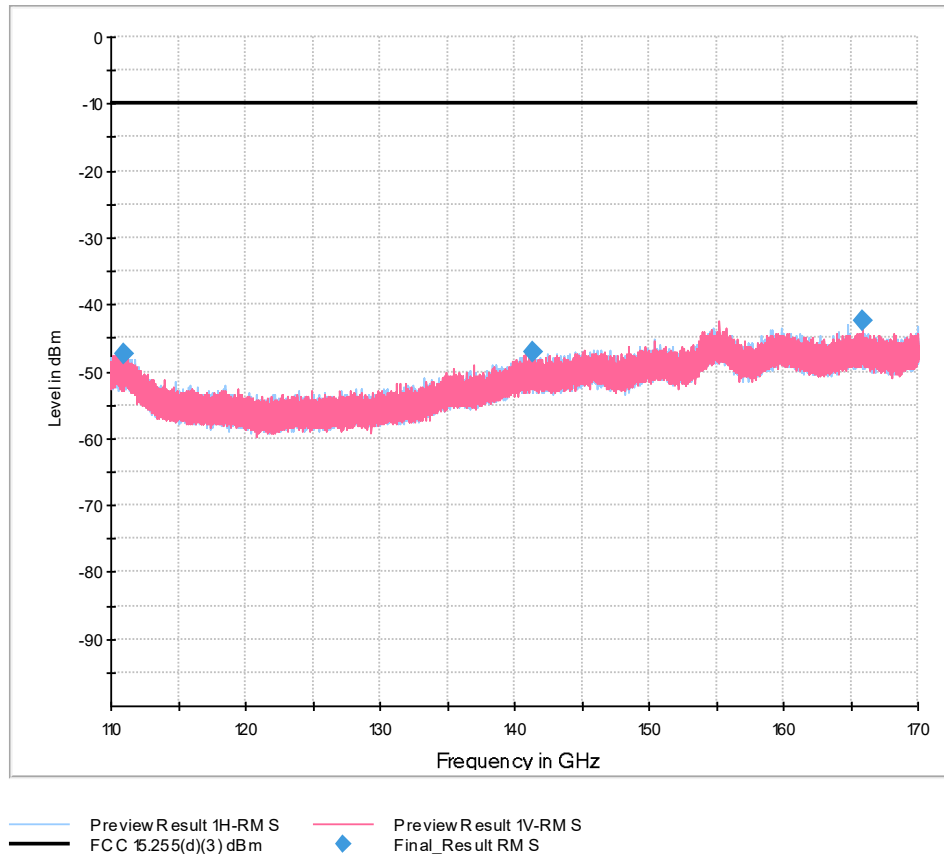


Final Results:

Frequency	RMS	Limit	Margin	Meas. Time	Bandwidth	Height	Pol	Azimuth	Corr.
MHz	dBm	dBm	dB	ms	kHz	cm		deg	dB
76312.000000	-42.70	-30.00	12.70	2.5	1000.000	150.0	V	5.0	-67
93969.500000	-41.67	-30.00	11.67	2.5	1000.000	150.0	V	344.0	-67
108434.500000	-36.87	-30.00	6.87	2.5	1000.000	150.0	V	235.0	-67



Product Service

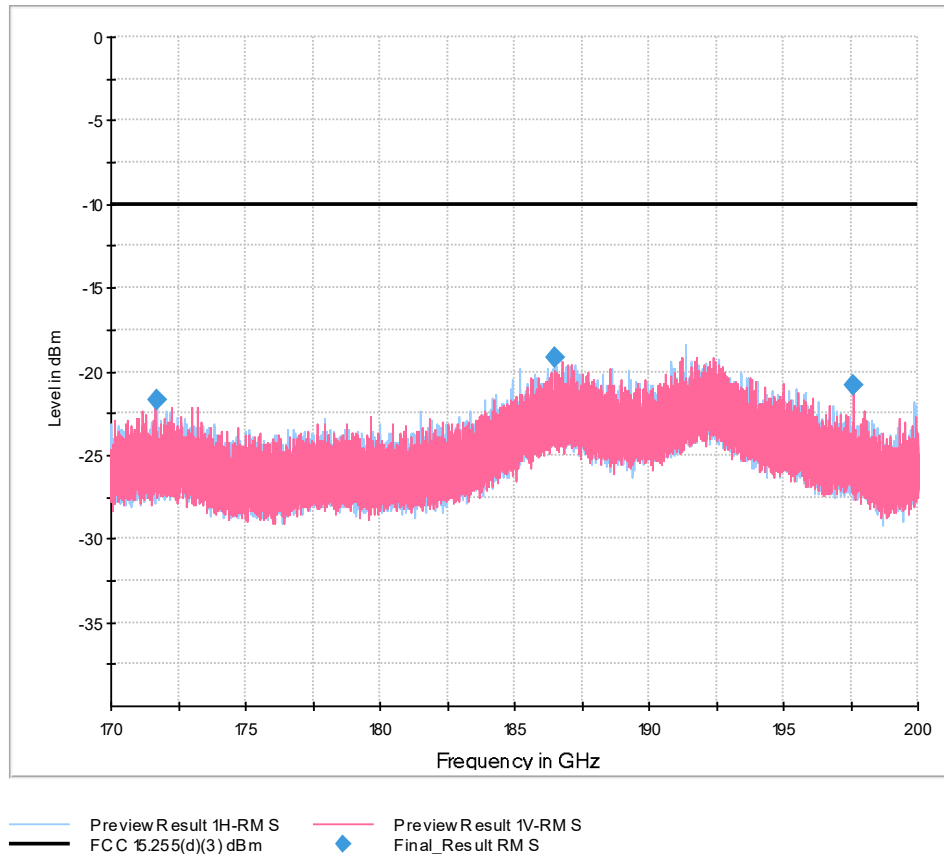


Final Results:

Frequency MHz	RMS dBm	Limit dBm	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB
110966.000000	-47.33	-30.00	17.33	20.0	1000.000	150.0	V	223.0	-78
141390.800000	-47.23	-30.00	17.23	20.0	1000.000	150.0	V	200.0	-76
165908.600000	-42.55	-30.00	12.55	20.0	1000.000	150.0	V	294.0	-74



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Final Results:

Frequency MHz	RMS dBm	Limit dBm	Margin dB	Meas. Time ms	Bandwidth kHz	Height cm	Pol	Azimuth deg	Corr. dB
171728.000000	-21.70	-10.00	11.70	2.5	1000.000	150.0	H	341.0	-56
186526.500000	-19.17	-10.00	9.17	2.5	1000.000	150.0	H	127.0	-56
197578.500000	-20.78	-10.00	10.78	2.5	1000.000	150.0	V	314.0	-56



2.3.8 Test Location and Test Equipment

The test was carried out in fully anechoic room no. 2 and semi anechoic rooms no. 3 and 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Signal and Spectrum Analyser	Rohde & Schwarz	FSW43	53496	12	2026-04-30
EMI test receiver	Rohde & Schwarz	ESW44	39897	12	2026-03-31
EMI test receiver	Rohde & Schwarz	ESW26	28268	12	2026-07-31
Loop antenna	Schwarzbeck	FMZB 1519 C	72526	36	2028-01-31
ULTRALOG Antenna	Rohde & Schwarz	HL562E	61486	36	2026-04-30
Fixed attenuator	Rohde & Schwarz	HL562E-ATT 6dB	61491	36	2026-04-30
Double ridged horn antenna	Rohde & Schwarz	HF907	40089	24	2026-11-30
Horn antenna with preamplifier	Rohde & Schwarz	A-INFOMW LB-180400H-KF + TS-LNA1840	43661	24	2027-01-31
Waveguide mixer	Rohde & Schwarz	FS-Z60	25849	36	2026-05-31
Waveguide mixer	Rohde & Schwarz	FS-Z90	25850	36	2026-05-31
Waveguide mixer	Rohde & Schwarz	FS-Z110	25851	36	2026-06-30
Waveguide mixer	Rohde & Schwarz	FS-Z170	25853	36	2026-06-30
Harmonic mixer	Rohde & Schwarz	FS-Z220	36954	36	2026-05-31
Horn antenna	Flann Microwave	26240-20	27898	N/A	N/A
Horn antenna	Flann Microwave	26260-20	27899	N/A	N/A
Horn antenna	Flann Microwave	26240-20	2086	N/A	N/A
Horn antenna	Flann Microwave	30240-20 WG30	37863	N/A	N/A
Waveguide mixer	Rohde & Schwarz	FS-Z75	51464	36	2026-05-31
Horn antenna	Flann Microwave	25240-25	20040	N/A	N/A
Fully anechoic room	Albatross	Cabin no. 2	19312	N/A	N/A
Semi anechoic room	Frankonia	Cabin no. 11	42961	N/A	N/A
Semi anechoic room	Frankonia	Cabin no. 3	56331	N/A	N/A
EMC measurement software	Rohde & Schwarz	EMC32 Emission K2 – V10.60.20	44375	N/A	N/A
EMC measurement software	Rohde & Schwarz	EMC32 Emission K11 – V11.50	42986	N/A	N/A
ELEKTRA measurement software	Rohde & Schwarz	ELEKTRA K3 Emission – V5.11.1	68254	N/A	N/A

Table 10



2.4 Frequency Stability

2.4.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.255 (f)
ISED RSS-210, Annex J, Section J.6

2.4.2 Equipment under Test and Modification State

VitaSense1.5, S/N: 01-008538-02-10 - Modification State 0

2.4.3 Date of Test

2025-10-13 to 2025-10-21

2.4.4 Environmental Conditions

Ambient Temperature	22 °C
Relative Humidity	41 %

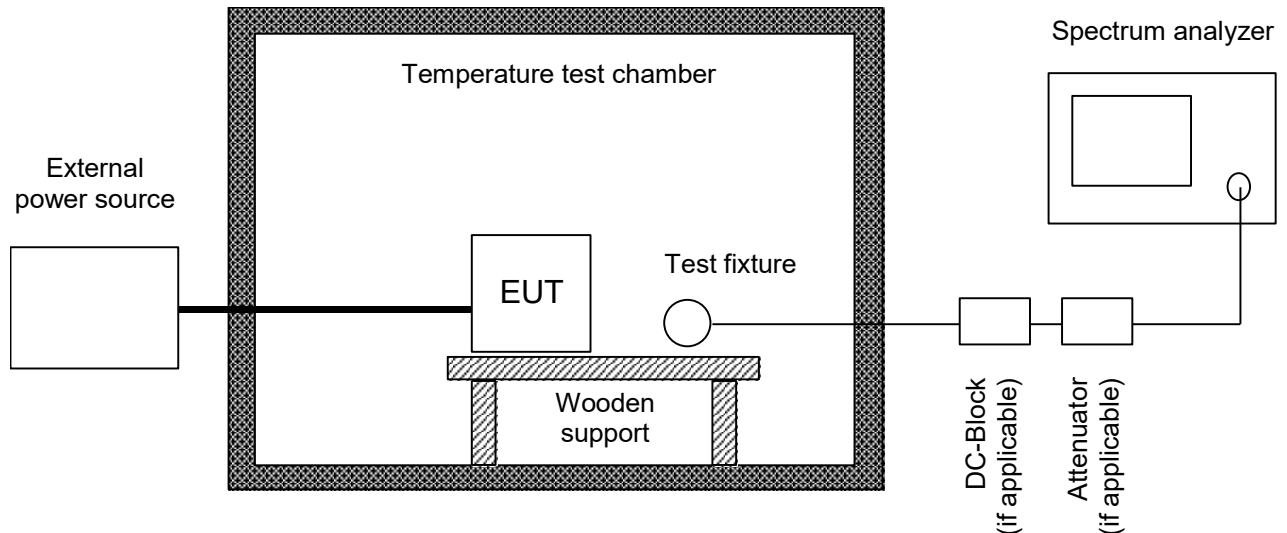
2.4.5 Specification Limits

Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range -20 °C to 50 °C with a input voltage variation of 85 % to 115 % of rated input voltage unless justification is presented to demonstrate otherwise.



2.4.6 Test Method

The test was performed according to ANSI C63.10, section 6.8.



The frequency tolerance of the carrier signal is measured over a temperature variation of -20 °C to +50 °C at normal supply voltage, and for a variation in the primary supply voltage from 85 % to 115 % of the rated supply voltage at a temperature of 20 °C. Temperature and voltage range may vary if the manufacturer states another temperature or voltage range.

If the EUT provides an antenna connector the spectrum analyzer is connected to this port. If required, a resistive matching network equal to the impedance specified or employed for the antenna is used as well as a DC block and appropriate (50 Ω) attenuators. In case where the EUT does not provide an antenna connector or a test fixture is used.

For battery operated equipment, the test is performed using a new battery. Alternatively, an external supply voltage can be used and is at least set to:

- The maximum battery voltage as delivered by a new battery or 115 % of the battery nominal voltage;
- The battery nominal voltage
- 85 % of the battery nominal voltage
- The battery operating end point voltage which shall be specified by the equipment manufacturer.

The EUT is operating providing an unmodulated carrier for frequency error tests. The peak detector of the spectrum analyzer is selected and resolution as well as video bandwidth are set to values appropriate to shape of the spectrum of the EUT. The frequency counter mode of the spectrum analyzer is used to maximize the accuracy of the measured frequency tolerance.

If an unmodulated carrier is not available a significant and stable point of the spectrum is selected and the span is reduced to a value that delivers an accuracy which shall be better than 1 % of the maximum frequency tolerance allowed for the carrier signal. This method may be performed as long as the margin to the frequency tolerance is larger than the uncertainty of the measured frequency tolerance.



2.4.7 Test Results

<i>Temperature</i>	<i>Supply Voltage</i>	<i>Frequency Low f_L (GHz)</i>	<i>Frequency High f_H (GHz)</i>	<i>Occupied Bandwidth (GHz)</i>
+20.0 °C	10.2 V DC	59.992500	64.004500	4.012000
+20.0 °C	12.0 V DC	59.992500	64.000000	4.007500
+20.0 °C	13.8 V DC	59.992500	64.004500	4.012000
-20.0 °C	12.0 V DC	59.992500	64.004500	4.012000
-10.0 °C	12.0 V DC	59.992500	64.011500	4.019000
0.0 °C	12.0 V DC	59.992500	64.013000	4.020500
+10.0 °C	12.0 V DC	59.991000	64.013000	4.022000
+30.0 °C	12.0 V DC	59.989000	64.013000	4.024000
+40.0 °C	12.0 V DC	59.989000	64.013500	4.024500
+50.0 °C	12.0 V DC	59.987500	64.014000	4.026500

Table 11

2.4.8 Test Location and Test Equipment

The test was carried out in a climatic test chamber.

Instrument	Manufacturer	Type No	TE No	Calibra- tion Pe- riod (months)	Calibration Due
Signal and Spectrum Analyser	Rohde & Schwarz	FSV40	20219	24	2026-03-31
Waveguide mixer	Rohde & Schwarz	FS-Z75	51464	36	2026-05-31
Horn antenna	Flann Microwave	25240-25	20040	N/A	N/A
Climatic test chamber	ESPEC Corp.	PL-4J	38958	18	2026-09-06

Table 12



2.5 Duty Cycle

2.5.1 Specification Reference

FCC 47 CFR Part 15 C, Clause 15.255(c)(2)(iii)(A)
ISED RSS-210, Annex J, Section J.3.2 b (iii)

2.5.2 Equipment under Test and Modification State

VitaSense1.5, S/N: 01-008538-02-10 - Modification State 0

2.5.3 Date of Test

2025-10-13

2.5.4 Environmental Conditions

Ambient Temperature	21 °C
Relative Humidity	50 %

2.5.5 Specification Limits

The sum of continuous transmitter off-times of at least two milliseconds shall equal at least 25.5 milliseconds within any contiguous interval of 33 milliseconds

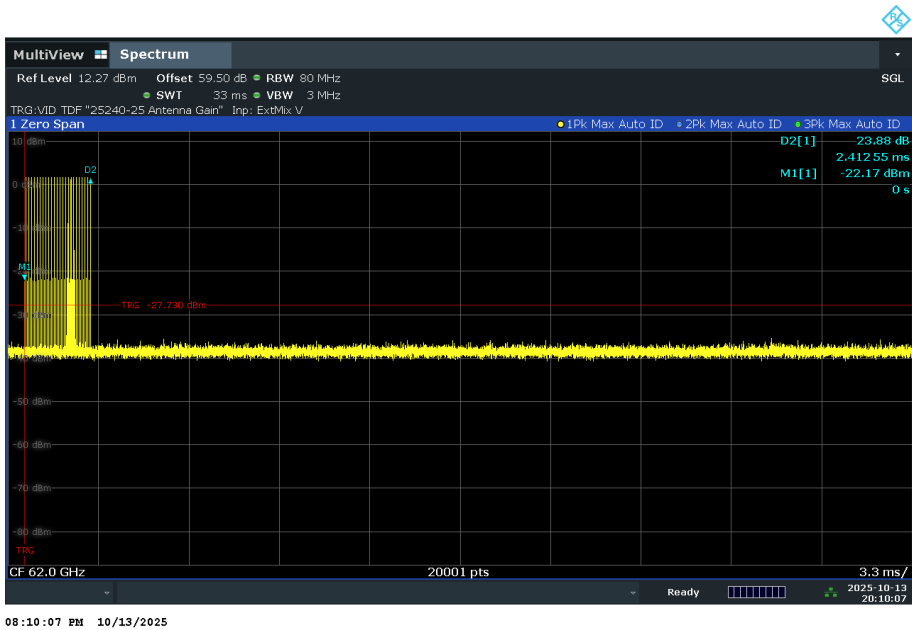
2.5.6 Test Method

Test was performed as radiated test. The test distance was 0.5 m. A correction factor and mixer conversion loss table were used to account for the test antenna gain, free-space loss and external mixer loss.

The transmit duty cycle shall not exceed 10% in any contiguous interval of 33ms.

2.5.7 Test Results

T_{ON}	T_{OFF} in any 33 ms window	Limit	Result
2.41255 ms	30.58745 ms	≥ 25.5 ms	Pass



2.5.8 Test Location and Test Equipment

The test was carried out in fully anechoic room no. 2.

Instrument	Manufacturer	Type No	TE No	Calibra-tion Pe-riod (months)	Calibration Due
Signal and Spectrum Analyser	Rohde & Schwarz	FSW43	53496	12	2026-04-30
Waveguide mixer	Rohde & Schwarz	FS-Z75	51464	36	2026-05-31
Horn antenna	Flann Microwave	25240-25	20040	N/A	N/A
Fully anechoic room	Albatross	Cabin no. 2	19312	N/A	N/A

Table 13



3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

<i>Radio Interference Emission Testing</i>		
<i>Test Name</i>	<i>kp</i>	<i>Expanded Uncertainty</i>
Conducted Voltage Emission		
9 kHz to 150 kHz (50Ω/50μH AMN)	2	± 3.8 dB
150 kHz to 30 MHz (50Ω/50μH AMN)	2	± 3.4 dB
100 kHz to 200 MHz (50Ω/5μH AMN)	2	± 3.6 dB
Discontinuous Conducted Emission		
9 kHz to 150 kHz (50Ω/50μH AMN)	2	± 3.8 dB
150 kHz to 30 MHz (50Ω/50μH AMN)	2	± 3.4 dB
Conducted Current Emission		
9 kHz to 200 MHz	2	± 3.5 dB
Magnetic Fieldstrength		
9 kHz to 30 MHz (with loop antenna)	2	± 3.9 dB
9 kHz to 30 MHz (large-loop antenna 2 m)	2	± 3.5 dB
Radiated Emission		
30 MHz to 300 MHz	2	± 4.9 dB
300 MHz to 1 GHz	2	± 5.0 dB
1 GHz to 6 GHz	2	± 4.6 dB
Test distance 10 m		
30 MHz to 300 MHz	2	± 4.9 dB
300 MHz to 1 GHz	2	± 4.9 dB
The expanded uncertainty reported according to CISPR16-4-2: 2011 + A1 + A2 + Cor1 is based on a standard uncertainty multiplied by a coverage factor of $k_p = 2$, providing a level of confidence of $p = 95.45\%$		

Table 14 Measurement uncertainty based on CISPR 16-4-2



<i>Radio Interference Emission Testing</i>		
<i>Test Name</i>	<i>kp</i>	<i>Expanded Uncertainty</i>
Occupied Bandwidth	2	± 5 %
Conducted Power		
9 kHz ≤ f < 30 MHz	2	± 1.0 dB
30 MHz ≤ f < 1 GHz	2	± 1.5 dB
1 GHz ≤ f ≤ 40 GHz	2	± 2.5 dB
1 MS/s power sensor (TS8997)	2	± 1.5 dB
Occupied Bandwidth	2	± 5 %
Power Spectral Density	2	± 3.0 dB
Radiated Power		
25 MHz – 6 GHz	1.96	±4.4 dB
1 GHz – 18 GHz	1.96	±4.7 dB
18 GHz – 40 GHz	1.96	±4.9 dB
40 GHz – 325 GHz	1.96	±6.1 dB
Conducted Spurious Emissions	2	± 3.0 dB
Radiated Spurious Emissions	2	± 6.0 dB
Voltage		
DC	2	± 1.0 %
AC	2	± 2.0 %
Time (automatic)	2	± 5 %
Frequency	2	± 10 ⁻⁷
The expanded uncertainty reported according to ETSI TR 100 028:2001 is based on a standard uncertainty multiplied by a coverage factor of kp = 2, providing a level of confidence of p = 95.45%		

Table 15 Measurement uncertainty based on ETSI TR 100 028

The measurement uncertainty in the laboratory is less than or equal to the maximum measurement uncertainty according to CISPR16-4-2: 2011 + A1 + A2 + Cor1 (U_{CISPR}) and as specified in the test report below. This normative regulation means that the measured value is also the value to be assessed in relation to the limit value.



Test Name	Expanded Uncertainty
Occupied Bandwidth	±5 %
Conducted Power	
9 kHz ≤ f < 30 MHz	±1.0 dB
30 MHz ≤ f < 1 GHz	±1.5 dB
1 GHz ≤ f ≤ 40 GHz	±2.5 dB
1 MS/s power sensor (2.4 / 5 GHz band)	±1.5 dB
Power Spectral Density	±3.0 dB
Radiated Power	
25 MHz – 26.5 GHz	±6.0 dB
26.5 GHz – 66 GHz	±8.0 dB
40 GHz – 325 GHz	±10.0 dB
Conducted Spurious Emissions	±3.0 dB
Radiated Field Strength 9 kHz – 40 GHz	±6.0 dB
Voltage	
DC	± 1.0 %
AC	± 2.0 %
Time (automatic)	± 5 %
Frequency	± 10 ⁻⁷

Table 16 Decision Rule: Maximum allowed measurement uncertainty

End of Test Report