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Report No.:
KES-RF-23T0055
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TEST REPORT

Part 15 Subpart C 15.225

Equipment under test FACEPASS

Model name FE-500

Derivative Model FE-500L, FE-500S, FE-600, FE-600LE

FCC ID PVRFE-500

Applicant KJ TECH

Manufacturer KJ TECH

Date of test(s) 2023.02.01 ~ 2023.02.15

Date of issue 2023.04.12

Issued to

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| Test and report completed by : | Report approval by : |
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This test report is not related to KS Q ISO/IEC 17025 and KOLAS

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Revision history

| Revision | Date of issue | Test report No. | Description |
|----------|---------------|-----------------|-------------|
| - | 2023.04.12 | KES-RF-23T0055 | Initial |
| | | | |

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1. General information

Applicant KJ TECH
Applicant address 703ho, 3rd Dongyung Venturestel, 45 Deokchon-ro Manangu
Anyang-si Gyeonggi-do South Korea
Test site KES Co., Ltd.
Test site address 3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si,
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Test Facility FCC Accreditation Designation No.: KR0100, Registration No.: 444148
Standard(s) Part 15.225
FCC ID PVRFE-500
Test device serial No. Production Pre-production Engineering

1.1. EUT description

Equipment under test FACEPASS
Frequency range 13.560 MHz
Model: FE-500
Derivative Model: FE-500L, FE-500S, FE-600, FE-600LE
Modulation technique ASK
Number of channels 13.560 MHz (NFC) : 1ch
Antenna specification Antenna type(NFC) : Loop antenna
Power source AC 120 V (AC/DC Adapter output 12 V)
H/W version REV1_3
F/W version GD-V30.7808

1.2. Test configuration

The **KJTECH CO.,LTD // FACEPASS // FE-500 // FCC ID: PVRFE-500** was tested according to the specification of EUT, the EUT must comply with following standards

FCC Part 15
FCC Part 2
ANSI C63.10-2013

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1.3. Information about derivative model

| Model | Remark |
|----------|--|
| FE-500L | Derivative models are simply customer requests for marketing purposes and do not represent any hardware or circuitry differences in the product. |
| FE-500S | |
| FE-600 | |
| FE-600LE | |

1.4. Accessory information

| Equipment | Manufacturer | Model | Serial No. | Power source |
|------------|---|-------------|------------|---|
| AC ADAPTER | Channel Well Technology(Guangzhou) Co.,Ltd. | KPL-050F-VI | - | AC Input 120 V 1.7A, DC Output 12 V, 4.17A |

1.5 Measurement uncertainty

| Test Item | | Uncertainty |
|---|------------|----------------------------|
| Uncertainty for Conduction emission test | | 2.38 dB (SHIELD ROOM #6) |
| Uncertainty for Radiation emission test (include Fundamental emission) | Below 1GHz | 4.50 dB (SAC #6) |
| | Above 1GHz | 4.90 dB (SAC #5) |
| Note. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. | | |

1.6. Test frequency/Channel operation

| Ch. | Frequency (MHz) |
|-----|-----------------|
| 01 | 13.560 |

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2. Summary of tests

| Section in FCC Part 15 & 2 | Parameter | Test results |
|---|---|---------------------|
| 15.225(a) | The field strength of fundamental | Pass |
| 15.225(b)(c) | The field strength of spurious emission(In-band) | Pass |
| 15.225(d) 15.209 | The field strength of spurious emission(Out-band) | Pass |
| 2.1049 | 20 dB bandwidth | Pass |
| 15.225(e) | Frequency stability | Pass |
| 15.207 | AC conducted emissions | Pass |

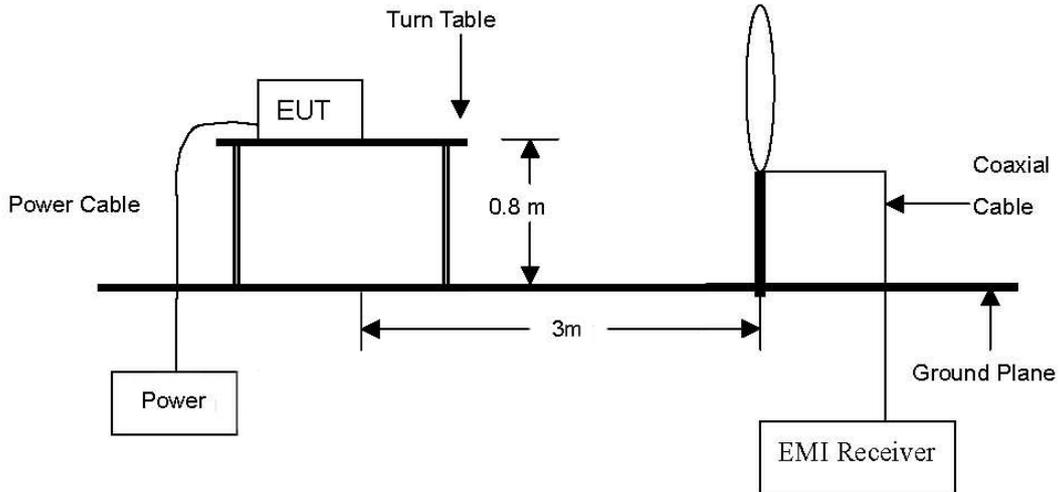
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3 Test results

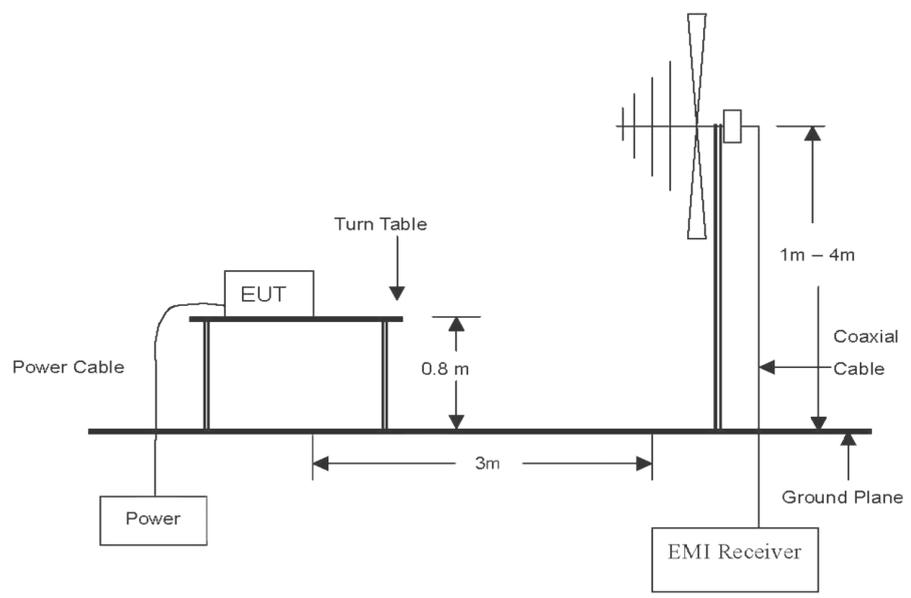
3.1. Radiated spurious emissions

Test setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz Emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz emissions.





Test procedure

[9 kHz to 30 MHz]

The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Quasi-peak function and specified bandwidth with maximum hold mode.

The spectrum analyzer is set to:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer 200 Hz for Quasi-peak detection (QP) at frequency below 9 kHz~ 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer 9 kHz for Quasi-peak detection (QP) at frequency below 150 kHz~ 30 MHz.

[30 MHz to 1 GHz]

The height of the measuring antenna was varied between 1 to 4 m and the table was rotated a full revolution in order to obtain maximum values of the electric field intensity.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

The spectrum analyzer is set to:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Peak detection (PK) or Quasi-peak detection (QP) at frequency below 1 GHz.

Note.

According to exploratory test no any obvious emission except for fundamental 13.56MHz were detected from 9 kHz to 30 MHz. Although these test were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.



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Limit

According to 15.209(a), for an intentional radiator devices, the general required of field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values :

| Frequency (MHz) | Distance (Meters) | Radiated ($\mu\text{V}/\text{m}$) |
|-----------------|-------------------|-------------------------------------|
| 0.009 ~ 0.490 | 300 | 2400/F(kHz) |
| 0.490 ~ 1.705 | 30 | 24000/F(kHz) |
| 1.705 ~ 30.0 | 30 | 30 |
| 30 ~ 88 | 3 | 100** |
| 88 ~ 216 | 3 | 150** |
| 216 ~ 960 | 3 | 200** |
| Above 960 | 3 | 500 |

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 MHz, 76 ~ 88 MHz, 174 ~ 216 MHz or 470 ~ 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

In the section 15.225:

- The field strength of any emissions within the band 13.553 ~ 13.567 MHz shall not exceed 15,848 microvolts/meter (= 84 dB $\mu\text{V}/\text{m}$) at 30 meters.
- Within the bands 13.410 ~ 13.553 MHz and 13.567 ~ 13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter (=50.5 dB $\mu\text{V}/\text{m}$) at 30 meters.
- Within the bands 13.110 ~ 13.410 MHz and 13.710 ~ 14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (=40.5 dB $\mu\text{V}/\text{m}$) at 30 meters.
- The field strength of any emissions appearing outside of the 13.110 ~ 14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

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Test results for fundamental

Operating frequency: 13.560 MHz
Distance of measurement: 3 meter

| Radiated emissions | | Ant. | Total factors | | Total | Limit | |
|--------------------|----------------------|------|--------------------------|----------------------|-----------------------|----------------------|-------------|
| Frequency (MHz) | Reading (dB μ V) | Pol. | Correction factor (dB/m) | Distance factor (dB) | Actual (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) |
| 13.560 | 44.33 | H | 20.44 | 40.00 | 24.77 | 84.00 | 59.23 |
| 13.560 | 49.07 | V | 20.44 | 40.00 | 29.51 | 84.00 | 54.49 |

Test results for in-band & out-band(9 kHz to 30 MHz)

| Radiated emissions | | Ant. | Total factors | | Total | Limit | |
|--------------------|----------------------|------|--------------------------|----------------------|-----------------------|----------------------|-------------|
| Frequency (MHz) | Reading (dB μ V) | Pol. | Correction factor (dB/m) | Distance factor (dB) | Actual (dB μ V/m) | Limit (dB μ V/m) | Margin (dB) |
| 12.598 | 16.88 | H | 20.50 | 40.00 | -2.62 | 29.54 | 32.16 |
| 12.588 | 16.50 | V | 20.50 | 40.00 | -3.00 | 29.54 | 32.54 |
| 13.349 | 17.89 | H | 20.46 | 40.00 | -1.65 | 40.50 | 42.15 |
| 13.349 | 16.73 | V | 20.46 | 40.00 | -2.81 | 40.50 | 43.31 |
| 13.552 | 37.58 | H | 20.44 | 40.00 | 18.02 | 50.50 | 32.48 |
| 13.552 | 41.98 | V | 20.44 | 40.00 | 22.42 | 50.50 | 28.08 |
| 13.560 | 44.33 | H | 20.44 | 40.00 | 24.77 | 84.00 | 59.23 |
| 13.560 | 49.07 | V | 20.44 | 40.00 | 29.51 | 84.00 | 54.49 |
| 13.568 | 38.43 | H | 20.44 | 40.00 | 18.87 | 50.50 | 31.63 |
| 13.568 | 42.98 | V | 20.44 | 40.00 | 23.42 | 50.50 | 27.08 |
| 13.771 | 22.06 | H | 20.42 | 40.00 | 2.48 | 40.50 | 38.02 |
| 13.771 | 29.44 | V | 20.42 | 40.00 | 9.86 | 40.50 | 30.64 |
| 14.059 | 16.65 | V | 20.40 | 40.00 | -2.95 | 29.54 | 32.49 |
| 14.928 | 16.33 | H | 20.40 | 40.00 | -3.27 | 29.54 | 32.81 |

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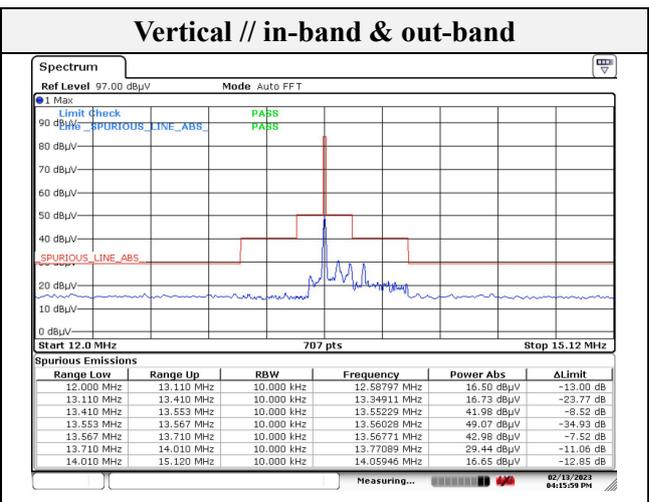
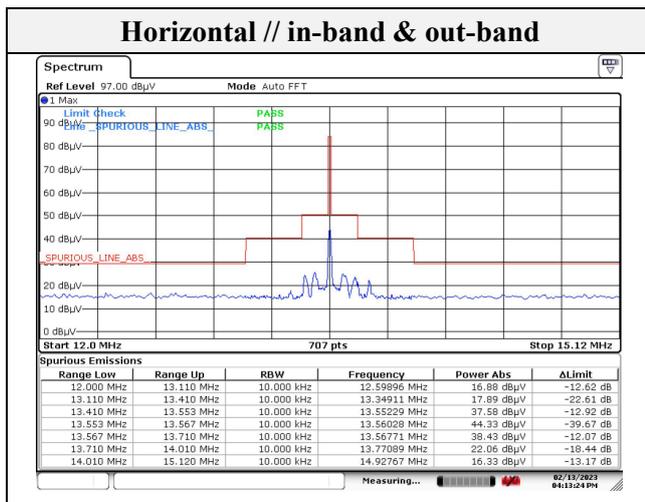
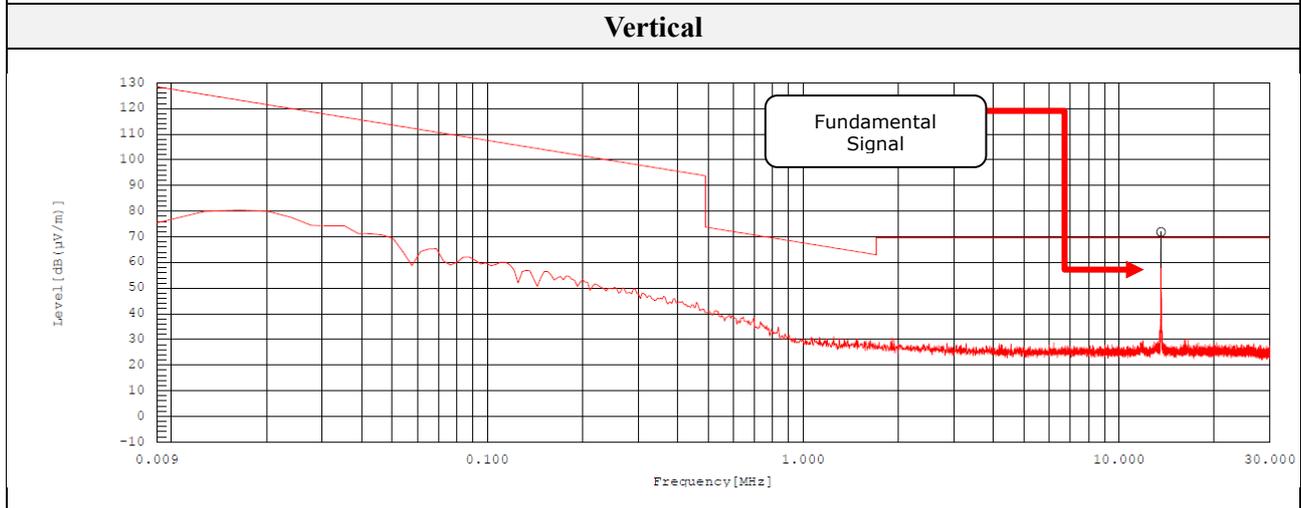
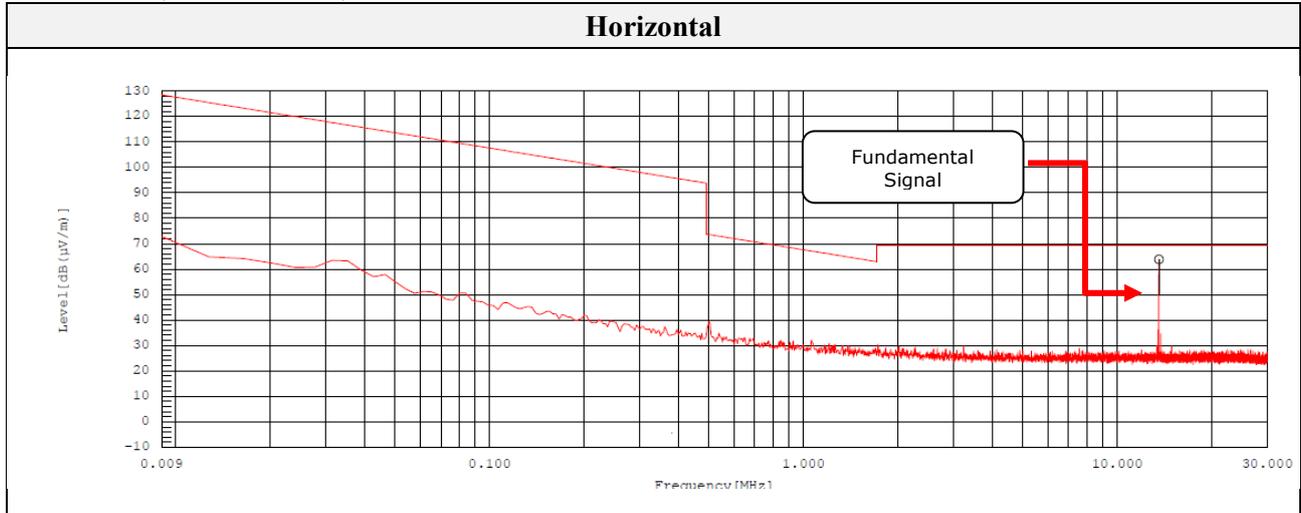
Note.

1. All measurements were performed using a loop antenna. The antenna was investigated with three polarizations, and horizontal and vertical polarizations were reported as the worst case.
2. The EUT was positioned in three orthogonal planes to determine the orientation resulting in the worst case emissions.
3. Measurements were performed at 3m and the data was extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)(2). Extrapolation Factor = $20 \log_{10}(30/3)^2 = 40$ dB.
4. The spectrum was investigated from 9 kHz up to 30 MHz using the loop antenna. Only the emissions shown in the table above were found to be significant.
5. All measurements were recorded using a spectrum analyzer employing a quasi-peak detector.
6. Actual = Reading + Correction factors(Ant. factor + Cable loss) - Distance factor
7. Margin [dB] = Limit [dB μ V/m] - Field Strength Level [dB μ V/m]
8. All modes (e.g. with and without a tag) were investigated. Only the radiated emissions of the configuration (with a tag) that produced the worst case emissions are reported in this section.

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Test results (9 kHz to 30 MHz)



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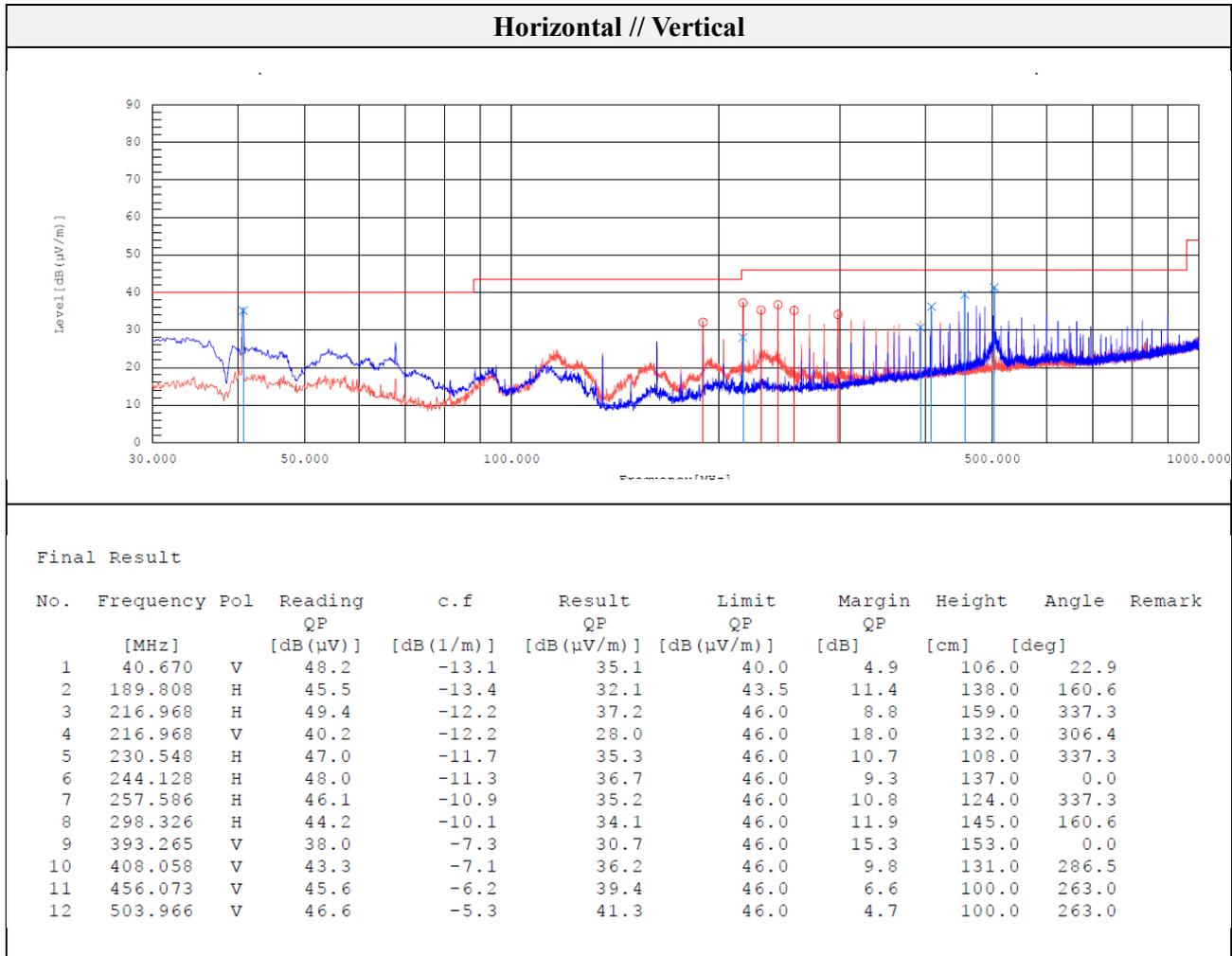


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Test results (Below 1 000 MHz)



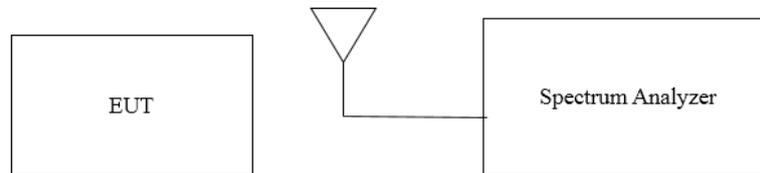
Note.

1. All measurements were recorded using a spectrum analyzer employing a quasi-peak detector for emissions below 960 MHz.
2. The spectrum is measured from 9 kHz to the 10th harmonic and the worst-case emissions are reported.
3. No spurious emissions levels were found to be greater than the level of the fundamental.

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3.2 20 dB bandwidth

Test setup



Test procedure

ANSI C63.10-2013 – Section 6.9.2

1. Spectrum analyzer frequency is set to the nominal EUT channel center frequency.
2. RBW = 1~5% OBW
3. VBW $\geq 3 \times$ RBW
4. Reference level set to keep signal from exceeding maximum input mixer for linear operation.
5. Detector = Peak
6. Trace mode = Max hold
7. Sweep = Auto couple
8. The trace was allowed to stabilize
9. Using the marker-delta function, determine the “-20 dB down amplitude” using [(highest in band spectral density) – 20 dB]
10. Set a marker at the lowest frequency of the envelope of the spectral density, such that the marker is at or slightly below the “-20 dB down amplitude” determined in Step 9.
11. Reset Marker-delta function and move the marker to other side of the emission until the delta marker amplitude is the same level as reference amplitude. The marker delta frequency reading at this point is the specified emission bandwidth.

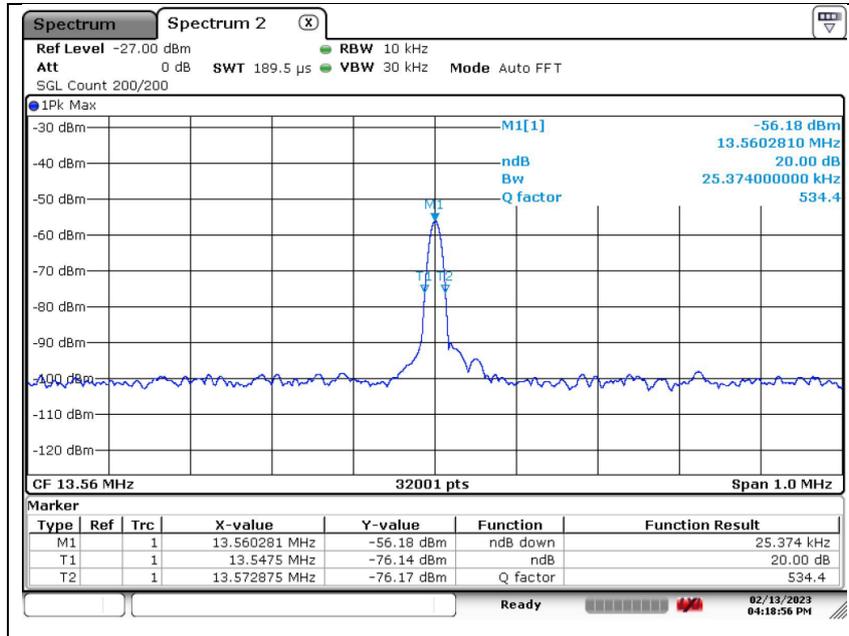


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Test results



Note.

Because the measured signal is CW/CW-like, adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

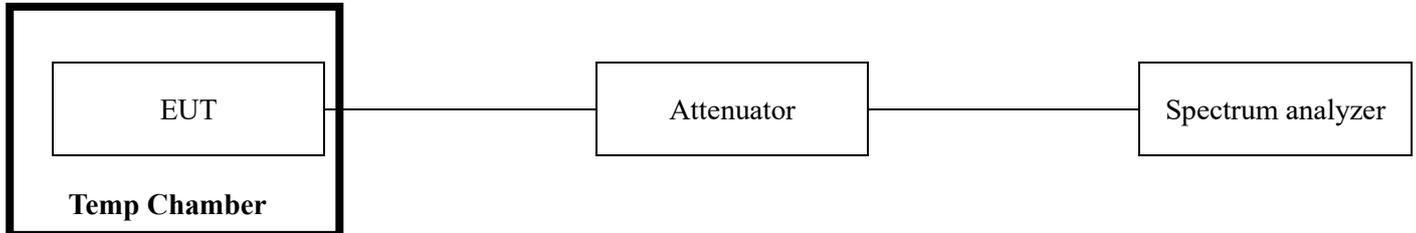
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3.3. Frequency Stability

Test procedure

ANSI C63.10-2013, clause 6.8.1

Test setup



1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
7. While maintaining a constant temperature inside the environmental chamber, turn the EUT on and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

Limit

According to §15.225 (e), the frequency tolerance of the carrier signal shall be maintained within +/-0.01 % of the operating frequency over a temperature variation of -20 degrees to +50 degrees 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 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.



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Test results

| Test voltage (%) | Test voltage (V) | Temperature (°C) | Maintaining time | Measure frequency (MHz) | Frequency deviation (Hz) | Deviation (%) | | |
|------------------|------------------|------------------|------------------|-------------------------|--------------------------|---------------|-----|----------|
| 100 % | AC 120 V | -20 | Startup | 13.560 138 | 138 | 0.001 02 | | |
| | | | 2 minutes | 13.560 146 | 146 | 0.001 08 | | |
| | | | 5 minutes | 13.560 142 | 142 | 0.001 05 | | |
| | | | 10 minutes | 13.560 158 | 158 | 0.001 17 | | |
| | | -10 | Startup | 13.560 159 | 159 | 0.001 17 | | |
| | | | 2 minutes | 13.560 154 | 154 | 0.001 14 | | |
| | | | 5 minutes | 13.560 176 | 176 | 0.001 30 | | |
| | | | 10 minutes | 13.560 185 | 185 | 0.001 36 | | |
| | | 0 | Startup | 13.560 185 | 185 | 0.001 36 | | |
| | | | 2 minutes | 13.560 204 | 204 | 0.001 50 | | |
| | | | 5 minutes | 13.560 212 | 212 | 0.001 56 | | |
| | | | 10 minutes | 13.560 225 | 225 | 0.001 66 | | |
| | | 10 | Startup | 13.560 215 | 215 | 0.001 59 | | |
| | | | 2 minutes | 13.560 238 | 238 | 0.001 76 | | |
| | | | 5 minutes | 13.560 221 | 221 | 0.001 63 | | |
| | | | 10 minutes | 13.560 240 | 240 | 0.001 77 | | |
| | | 20 | Startup | 13.560 208 | 208 | 0.001 53 | | |
| | | | 2 minutes | 13.560 196 | 196 | 0.001 45 | | |
| | | | 5 minutes | 13.560 225 | 225 | 0.001 66 | | |
| | | | 10 minutes | 13.560 232 | 232 | 0.001 71 | | |
| | | 30 | Startup | 13.560 228 | 228 | 0.001 68 | | |
| | | | 2 minutes | 13.560 246 | 246 | 0.001 81 | | |
| | | | 5 minutes | 13.560 237 | 237 | 0.001 75 | | |
| | | | 10 minutes | 13.560 245 | 245 | 0.001 81 | | |
| | | 40 | Startup | 13.560 248 | 248 | 0.001 83 | | |
| | | | 2 minutes | 13.560 242 | 242 | 0.001 78 | | |
| | | | 5 minutes | 13.560 260 | 260 | 0.001 92 | | |
| | | | 10 minutes | 13.560 266 | 266 | 0.001 96 | | |
| | | 50 | Startup | 13.560 258 | 258 | 0.001 90 | | |
| | | | 2 minutes | 13.560 274 | 274 | 0.002 02 | | |
| | | | 5 minutes | 13.560 275 | 275 | 0.002 03 | | |
| | | | 10 minutes | 13.560 283 | 283 | 0.002 09 | | |
| | | 85 % | AC 102 V | 24.5 | Startup | 13.560 211 | 188 | 0.001 39 |
| | | | | | 2 minutes | 13.560 196 | 196 | 0.001 45 |
| | | | | | 5 minutes | 13.560 225 | 225 | 0.001 66 |
| | | | | | 10 minutes | 13.560 244 | 244 | 0.001 80 |
| 115 % | AC 138 V | 24.5 | Startup | 13.560 187 | 187 | 0.001 38 | | |
| | | | 2 minutes | 13.560 192 | 192 | 0.001 42 | | |
| | | | 5 minutes | 13.560 206 | 206 | 0.001 52 | | |
| | | | 10 minutes | 13.560 246 | 246 | 0.001 81 | | |

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3.4. AC conducted emissions

Limit

According to 15.207(a), 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 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

| Frequency of Emission (MHz) | Conducted limit (dB μ V/m) | |
|-----------------------------|--------------------------------|----------|
| | Quasi-peak | Average |
| 0.15 – 0.50 | 66 - 56* | 56 - 46* |
| 0.50 – 5.00 | 56 | 46 |
| 5.00 – 30.0 | 60 | 50 |

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Test results

Hot Line

| Final Result | | | | | | | | |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| Frequency (MHz) | QuasiPeak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
| 0.186000 | 45.76 | --- | 64.21 | 18.45 | 1000.0 | 9.000 | L1 | 19.6 |
| 0.186000 | --- | 24.75 | 54.21 | 29.46 | 1000.0 | 9.000 | L1 | 19.6 |
| 0.530000 | 39.91 | --- | 56.00 | 16.09 | 1000.0 | 9.000 | L1 | 19.9 |
| 0.530000 | --- | 33.12 | 46.00 | 12.88 | 1000.0 | 9.000 | L1 | 19.9 |
| 1.158000 | --- | 16.68 | 46.00 | 29.32 | 1000.0 | 9.000 | L1 | 20.3 |
| 1.158000 | 31.15 | --- | 56.00 | 24.85 | 1000.0 | 9.000 | L1 | 20.3 |
| 1.382000 | --- | 18.88 | 46.00 | 27.12 | 1000.0 | 9.000 | L1 | 20.3 |
| 1.382000 | 30.90 | --- | 56.00 | 25.10 | 1000.0 | 9.000 | L1 | 20.3 |
| 2.150000 | 29.50 | --- | 56.00 | 26.50 | 1000.0 | 9.000 | L1 | 20.4 |
| 2.150000 | --- | 16.97 | 46.00 | 29.03 | 1000.0 | 9.000 | L1 | 20.4 |
| 12.706000 | --- | 17.83 | 50.00 | 32.17 | 1000.0 | 9.000 | L1 | 20.5 |
| 12.706000 | 30.56 | --- | 60.00 | 29.44 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.134000 | --- | 18.08 | 50.00 | 31.92 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.134000 | 32.47 | --- | 60.00 | 27.53 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.346000 | --- | 19.66 | 50.00 | 30.34 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.346000 | 36.95 | --- | 60.00 | 23.05 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.562000 | --- | 74.60 | 50.00 | -24.60 | 1000.0 | 9.000 | L1 | 20.5 |
| 13.562000 | 74.61 | --- | 60.00 | -14.61 | 1000.0 | 9.000 | L1 | 20.5 |
| 27.118000 | --- | 38.73 | 50.00 | 11.27 | 1000.0 | 9.000 | L1 | 21.2 |
| 27.118000 | 40.79 | --- | 60.00 | 19.21 | 1000.0 | 9.000 | L1 | 21.2 |

Neutral Line

| Final Result | | | | | | | | |
|-----------------|------------------|-----------------|--------------|-------------|-----------------|-----------------|------|------------|
| Frequency (MHz) | QuasiPeak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | Corr. (dB) |
| 0.182000 | 45.61 | --- | 64.39 | 18.78 | 1000.0 | 9.000 | N | 19.5 |
| 0.182000 | --- | 23.93 | 54.39 | 30.46 | 1000.0 | 9.000 | N | 19.5 |
| 0.534000 | 38.73 | --- | 56.00 | 17.27 | 1000.0 | 9.000 | N | 19.8 |
| 0.534000 | --- | 32.00 | 46.00 | 14.00 | 1000.0 | 9.000 | N | 19.8 |
| 1.418000 | 28.17 | --- | 56.00 | 27.83 | 1000.0 | 9.000 | N | 20.3 |
| 1.418000 | --- | 18.85 | 46.00 | 27.15 | 1000.0 | 9.000 | N | 20.3 |
| 1.878000 | 29.39 | --- | 56.00 | 26.61 | 1000.0 | 9.000 | N | 20.4 |
| 1.878000 | --- | 15.95 | 46.00 | 30.05 | 1000.0 | 9.000 | N | 20.4 |
| 12.790000 | 28.85 | --- | 60.00 | 31.15 | 1000.0 | 9.000 | N | 20.5 |
| 12.790000 | --- | 17.60 | 50.00 | 32.40 | 1000.0 | 9.000 | N | 20.5 |
| 13.006000 | 31.10 | --- | 60.00 | 28.90 | 1000.0 | 9.000 | N | 20.5 |
| 13.006000 | --- | 17.70 | 50.00 | 32.30 | 1000.0 | 9.000 | N | 20.5 |
| 13.434000 | 33.79 | --- | 60.00 | 26.21 | 1000.0 | 9.000 | N | 20.5 |
| 13.434000 | --- | 18.36 | 50.00 | 31.64 | 1000.0 | 9.000 | N | 20.5 |
| 13.562000 | --- | 74.08 | 50.00 | -24.08 | 1000.0 | 9.000 | N | 20.5 |
| 13.562000 | 74.09 | --- | 60.00 | -14.09 | 1000.0 | 9.000 | N | 20.5 |
| 27.122000 | --- | 39.75 | 50.00 | 10.25 | 1000.0 | 9.000 | N | 21.2 |
| 27.122000 | 41.63 | --- | 60.00 | 18.47 | 1000.0 | 9.000 | N | 21.2 |

Note.

Values which is marked in red in the graph above are fundamental signal values.

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Appendix A. Measurement equipment

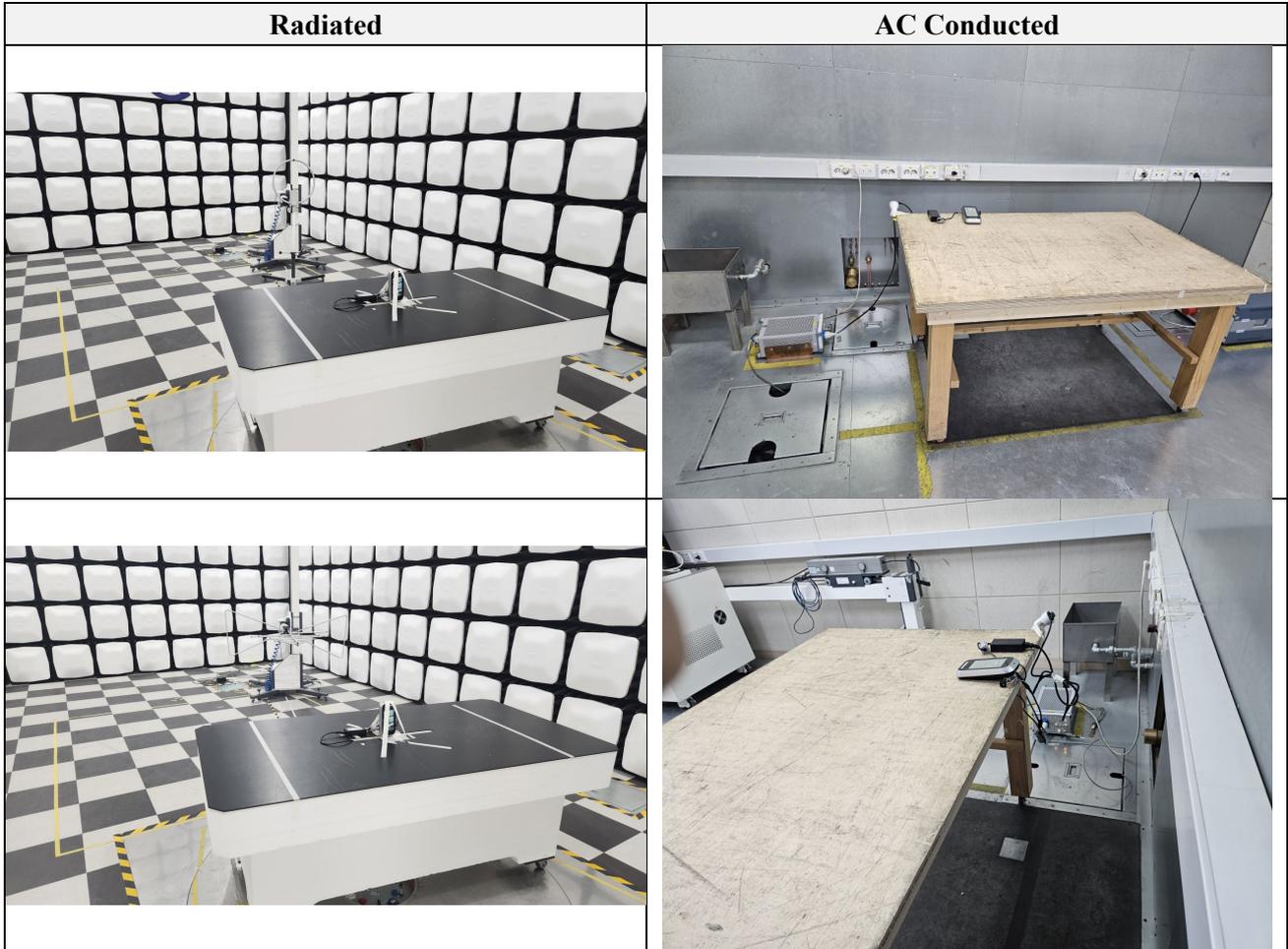
| Equipment | Manufacturer | Model | Serial No. | Calibration interval | Calibration due. |
|--------------------------------|-------------------|-----------|------------|----------------------|--------------------------|
| Spectrum analyzer | R&S | FSV40 | 101725 | 1 year | 2023.06.16 |
| Spectrum analyzer | R&S | FSV3044 | 101272 | 1 year | 2023.03.14 2024.03.16 |
| SIGNAL GENERATOR | KEYSIGHT | N5182B | MY59100115 | 1 year | 2023.04.27 2024.04.19 |
| Loop Antenna | Schwarzbeck | FMZB1513 | 225 | 2 years | 2023.03.18 2024.03.21 |
| TRILOG-BROADBAND ANTENNA | Schwarzbeck | VULB 9163 | 714 | 2 years | 2024.04.19 |
| Amplifier | SONOMA INSTRUMENT | 310N | 401123 | 1 year | 2023.06.02 |
| Attenuator | HUBER+SUHNER | 6806.17.A | - | 1 year | 2023.04.01 2024.03.21 |
| EMI Test Receiver | R&S | ESU26 | 100517 | 1 year | 2023.08.01 |
| Temperature & Humidity Chamber | ESPEC | SH-642 | 93012658 | 1 year | 2023.06.16 |
| AC POWER SOURCE/ ANALYZER | HP | 6813A | 3729A00754 | 1 year | 2024.01.12 |

Peripheral device

| Device | Manufacturer | Model No. | Serial No. |
|--------|--------------|-----------|------------|
| - | - | - | - |

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Appendix B. Test setup photos



The end of test report.

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