



RF EXPOSURE EVALUATION

FCC ID:2BNYR-PB4

| | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name: | 5 in 1 Charging Station |
| Model No.: | PowerBase 4 |
| Serial No.: | N/A |
| Model Difference: | N/A |
| Operation Frequency: | ANT 1: 110kHz ~ 205kHz, 360kHz ANT 2: 110kHz ~ 205kHz |
| Modulation Type: | ASK |
| Antenna Type: | Loop Coil Antenna |
| Antenna Gain: | 0dBi |
| Power Supply: | Input: 5V==3A, 9V==3A, 12V==2.5A, 20V==3A Phone Output: 15W Max Earphone Output: 5W Max USB-C Cable Output: 5V==3A, 9V==2.22A, 12V==1.66A (20W Max) USB-C Output: 5V==1A (5W Max) |
| Transmitting Mode: | Keep the EUT in continuously wireless charging mode |
| Date of Test: | Apr. 19, 2025 to Apr. 25, 2025 |
| Date of issue: | Apr. 25, 2025 |



a. EUT mode of operation before folding:

| Test Modes: | Test Coil: | Description: |
|-------------|-------------|--------------------------------------------------------------------------|
| Mode 1 | ANT 1 | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 2 | | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 3 | | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: >98%) |
| Mode 4 | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: <1%) |
| Mode 5 | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: 50%) |
| Mode 6 | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: >98%) |
| Mode 7 | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 8 | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 9 | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: >98%) |
| Mode 10 | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 11 | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 12 | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: >98%) |
| Mode 16 | ANT 2 | AC/DC Adapter (20V/3A) + EUT + Earphone (Battery Status: <1%) |
| Mode 17 | | AC/DC Adapter (20V/3A) + EUT + Earphone (Battery Status: 50%) |
| Mode 18 | | AC/DC Adapter (20V/3A) + EUT + Earphone (Battery Status: >98%) |
| Mode 19 | | AC/DC Adapter (12V/2.5A) + EUT + Earphone (Battery Status: <1%) |
| Mode 20 | | AC/DC Adapter (12V/2.5A) + EUT + Earphone (Battery Status: 50%) |
| Mode 21 | | AC/DC Adapter (12V/2.5A) + EUT + Earphone (Battery Status: >98%) |
| Mode 22 | | AC/DC Adapter (9V/3A) + EUT + Earphone (Battery Status: <1%) |
| Mode 23 | | AC/DC Adapter (9V/3A) + EUT + Earphone (Battery Status: 50%) |
| Mode 24 | | AC/DC Adapter (9V/3A) + EUT + Earphone (Battery Status: >98%) |
| Mode 25 | | AC/DC Adapter (5V/3A) + EUT + Earphone (Battery Status: <1%) |
| Mode 26 | | AC/DC Adapter (5V/3A) + EUT + Earphone (Battery Status: 50%) |
| Mode 27 | | AC/DC Adapter (5V/3A) + EUT + Earphone (Battery Status: >98%) |
| Mode 28 | ANT1 + ANT2 | AC/DC Adapter (20V/3A) + EUT + Phone + Earphone (Battery Status: <1%) |
| Mode 29 | | AC/DC Adapter (20V/3A) + EUT + Phone + Earphone (Battery Status: 50%) |
| Mode 30 | | AC/DC Adapter (20V/3A) + EUT + Phone + Earphone (Battery Status: >98%) |
| Mode 31 | | AC/DC Adapter (12V/2.5A) + EUT + Phone + Earphone (Battery Status: <1%) |
| Mode 32 | | AC/DC Adapter (12V/2.5A) + EUT + Phone + Earphone (Battery Status: 50%) |
| Mode 33 | | AC/DC Adapter (12V/2.5A) + EUT + Phone + Earphone (Battery Status: >98%) |
| Mode 34 | | AC/DC Adapter (9V/3A) + EUT + Phone + Earphone (Battery Status: <1%) |
| Mode 35 | | AC/DC Adapter (9V/3A) + EUT + Phone + Earphone (Battery Status: 50%) |
| Mode 36 | | AC/DC Adapter (9V/3A) + EUT + Phone + Earphone (Battery Status: >98%) |
| Mode 37 | | AC/DC Adapter (5V/3A) + EUT + Phone + Earphone (Battery Status: <1%) |



Mode 38



AC/DC Adapter (5V/3A) + EUT + Phone + Earphone (Battery Status: 50%)

Mode 39

AC/DC Adapter (5V/3A) + EUT + Phone + Earphone (Battery Status: >98%)

b. EUT works in folded mode:

| Test Modes: | Test Coil: | Description: |
|-------------|------------|---------------------------------------------------------------|
| Mode 1a | ANT 1 | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 2a | | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 3a | | AC/DC Adapter (20V/3A) + EUT + Phone (Battery Status: >98%) |
| Mode 4a | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: <1%) |
| Mode 5a | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: 50%) |
| Mode 6a | | AC/DC Adapter (12V/2.5A) + EUT + Phone (Battery Status: >98%) |
| Mode 7a | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 8a | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 9a | | AC/DC Adapter (9V/3A) + EUT + Phone (Battery Status: >98%) |
| Mode 10a | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: <1%) |
| Mode 11a | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: 50%) |
| Mode 12a | | AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: >98%) |

Note: Since the EUT operates in the same mode before and after folding, the report only reflects the test data before folding.



1 Measuring Standard

1.1 According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1091 RF exposure is calculated. According KDB 680106 D01 Wireless Power Transfer v04.

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

| No. | Item | Uncertainty |
|-----|---------|---------------------|
| 1 | H-filed | $\pm 0.93\text{dB}$ |
| 2 | E-filed | $\pm 0.51\text{dB}$ |

2.1 Requirements

The EUT does comply with item 5.2 of KDB 680106 D01 V04:

a) The power transfer frequency is below 1 MHz.

Yes. The device operates in the frequency from ANT 1 is 110kHz to 205kHz and 360kHz, ANT 2 is 110kHz to 205kHz.

b) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

Yes, The maximum output power of the primary coil is 15watts.

c) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact).

Yes. Client device is placed directly in contact with the transmitter.

d) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).

Yes, the EUT is a Mobile Wireless Charger.

e) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a $1/d$ (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes.

The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures

Yes. The EUT coil is evaluated at maximum output power and the test results are less than 50% of the limit.

f) For systems with more than one radiating structure, the conditions specified in (e) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. .

Yes, the EUT has two coil, all test modes met the conditions specified in (e).



2.2 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Limits for Maximum Permissible Exposure (MPE):

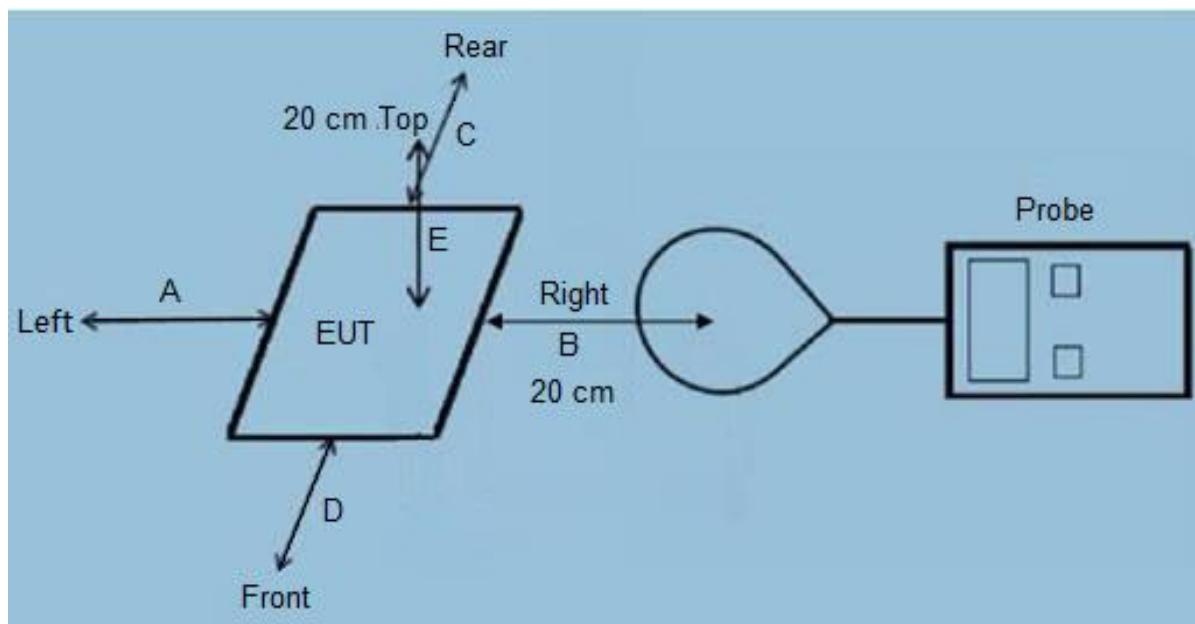
| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures | | | | |
| 0.3-3.0 | 614 | 1.63 | *(100) | 6 |
| 3.0-30 | 1842/f | 4.89/f | *(900/f ²) | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | / | / | f/300 | 6 |
| 1500-100,000 | / | / | 5 | 6 |
| (B) Limits for General Population/Uncontrolled Exposure | | | | |
| 0.3-1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34-30 | 824/f | 2.19/f | *(180/f ²) | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | / | / | f/1500 | 30 |
| 1500-100,000 | / | / | 1.0 | 30 |

F=frequency in MHz

*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

2.3 Test Setup





3 Test Procedure

- 1) The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- 2) The measurement probe was placed at test distance (20 cm and above from all sides and Top) which is between the edge of the charger and the geometric centre of probe.
- 3) The turn table was rotated 360d degree to search of highest strength.
- 4) The highest emission level was recorded and compared with limit as soon as measurement of each points were completed.
- 5) The EUT were measured according to the dictates of KDB 680106 D01 V04.

4. Test instrument and equipment list

4.1 Test Instruments list

| Test Equipment | Manufacturer | Model No. | SN. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
|-----------------------------------------|--------------|------------------------------|------------|---------------------|-------------------------|
| Exposure Level Tester | Narda | ELT-400 | 180ZX10220 | Sep. 29, 2024 | Sep. 28, 2025 |
| Magnetic field probe 100cm ² | Narda | ELT probe 100cm ² | M0675 | Sep. 29, 2024 | Sep. 28, 2025 |

4.2 Test auxiliary equipment list

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. | Note |
|------|-------------------------|-----------|----------------|------------|-----------|
| E-1 | 5 in 1 Charging Station | N/A | PowerBase 4 | N/A | EUT |
| E-2 | AC/DC Adapter | SAMSUNG | EP-T4510 | N/A | Auxiliary |
| E-3 | Phone | Apple | iPhone 13 Pro | N/A | Auxiliary |
| E-4 | Earbuds | Apple | AirPods 2 | N/A | Auxiliary |



5 Test Result

Test Mode 1~3:

H-Field Strength at (distance from 20cm) surrounding the EUT (A/m):

| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (uT) | Position Right (uT) | Position Rear (uT) | Position Front (uT) | Position Top (uT) |
|------------------|-------------------|--------------------|-----------------------|------------------------|-----------------------|------------------------|----------------------|
| 20 | <1% | 110~205 | 0.36 | 0.34 | 0.33 | 0.40 | 0.34 |
| 20 | 50% | 110~205 | 0.30 | 0.30 | 0.27 | 0.24 | 0.27 |
| 20 | >98% | 110~205 | 0.25 | 0.24 | 0.23 | 0.22 | 0.26 |

| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (A/m) | Position Right (A/m) | Position Rear (A/m) | Position Front (A/m) | Position Top (A/m) | 50% Limits (A/m) | Limits (A/m) |
|------------------|-------------------|--------------------|---------------------------|----------------------------|---------------------------|----------------------------|--------------------------|------------------------|-----------------|
| 20 | <1% | 110~205 | 0.27 | 0.27 | 0.32 | 0.27 | 0.27 | 0.815 | 1.63 |
| 20 | 50% | 110~205 | 0.24 | 0.22 | 0.19 | 0.21 | 0.24 | 0.815 | 1.63 |
| 20 | >98% | 110~205 | 0.19 | 0.19 | 0.18 | 0.21 | 0.19 | 0.815 | 1.63 |

Note: A/m = uT/1.25

**Test Mode 16~18:****H-Field Strength at (distance from 20cm) surrounding the EUT (A/m):**

| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (uT) | Position Right (uT) | Position Rear (uT) | Position Front (uT) | Position Top (uT) |
|------------------|-------------------|--------------------|-----------------------|------------------------|-----------------------|------------------------|----------------------|
| 20 | <1% | 110~205 | 0.32 | 0.31 | 0.34 | 0.35 | 0.34 |
| 20 | 50% | 110~205 | 0.28 | 0.28 | 0.25 | 0.23 | 0.28 |
| 20 | >98% | 110~205 | 0.24 | 0.23 | 0.23 | 0.22 | 0.25 |

| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (A/m) | Position Right (A/m) | Position Rear (A/m) | Position Front (A/m) | Position Top (A/m) | 50% Limits (A/m) | Limits (A/m) |
|------------------|-------------------|--------------------|---------------------------|----------------------------|---------------------------|----------------------------|--------------------------|------------------------|-----------------|
| 20 | <1% | 110~205 | 0.26 | 0.25 | 0.27 | 0.28 | 0.27 | 0.815 | 1.63 |
| 20 | 50% | 110~205 | 0.22 | 0.22 | 0.20 | 0.19 | 0.22 | 0.815 | 1.63 |
| 20 | >98% | 110~205 | 0.19 | 0.19 | 0.18 | 0.17 | 0.20 | 0.815 | 1.63 |

Note: A/m = uT/1.25

**Test Mode 28~30:****H-Field Strength at (distance from 20cm) surrounding the EUT (A/m):**

| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (uT) | Position Right (uT) | Position Rear (uT) | Position Front (uT) | Position Top (uT) |
|------------------|-------------------|--------------------|-----------------------|------------------------|-----------------------|------------------------|----------------------|
| 20 | <1% | 110~205 | 0.48 | 0.55 | 0.54 | 0.54 | 0.53 |
| 20 | 50% | 110~205 | 0.50 | 0.30 | 0.31 | 0.30 | 0.32 |
| 20 | >98% | 110~205 | 0.28 | 0.43 | 0.32 | 0.34 | 0.28 |

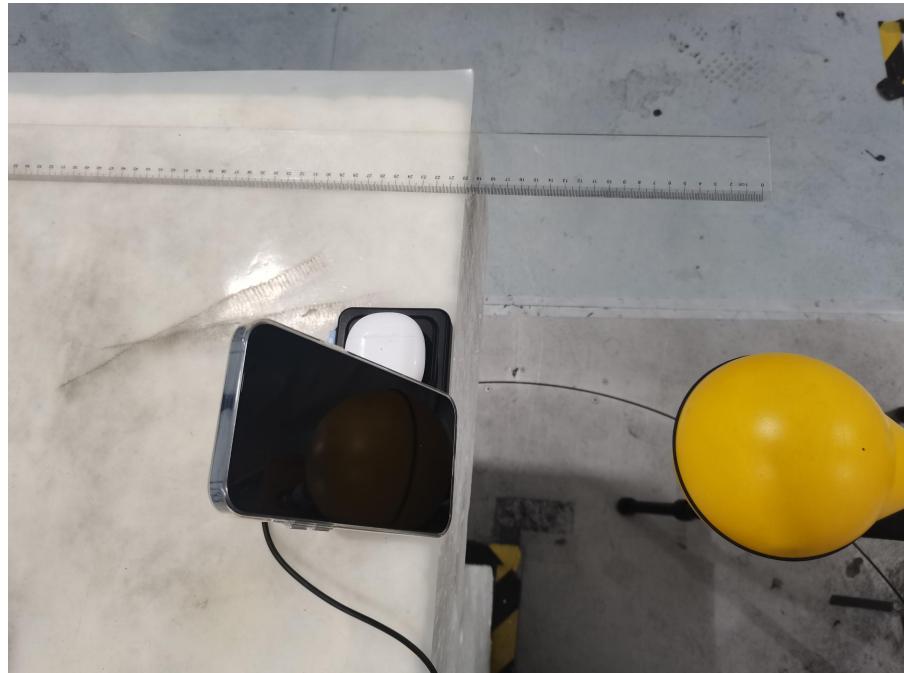
| distance (cm) | Battery Level: | Frequency (kHz) | Position Left (A/m) | Position Right (A/m) | Position Rear (A/m) | Position Front (A/m) | Position Top (A/m) | 50% Limits (A/m) | Limits (A/m) |
|------------------|-------------------|--------------------|---------------------------|----------------------------|---------------------------|----------------------------|--------------------------|------------------------|-----------------|
| 20 | <1% | 110~205 | 0.38 | 0.44 | 0.43 | 0.43 | 0.42 | 0.815 | 1.63 |
| 20 | 50% | 110~205 | 0.40 | 0.24 | 0.25 | 0.24 | 0.26 | 0.815 | 1.63 |
| 20 | >98% | 110~205 | 0.23 | 0.34 | 0.25 | 0.27 | 0.23 | 0.815 | 1.63 |

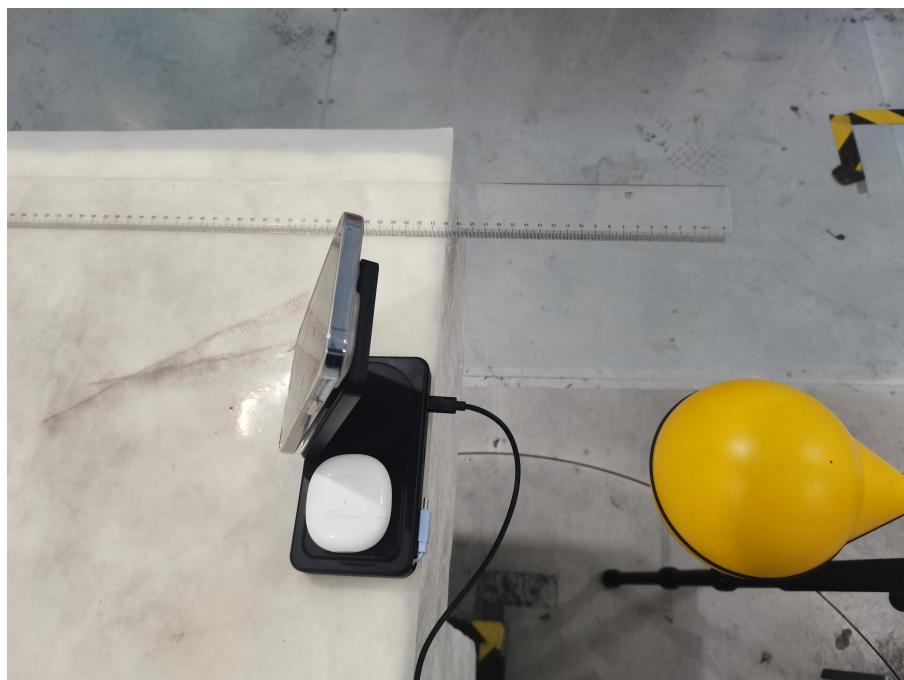
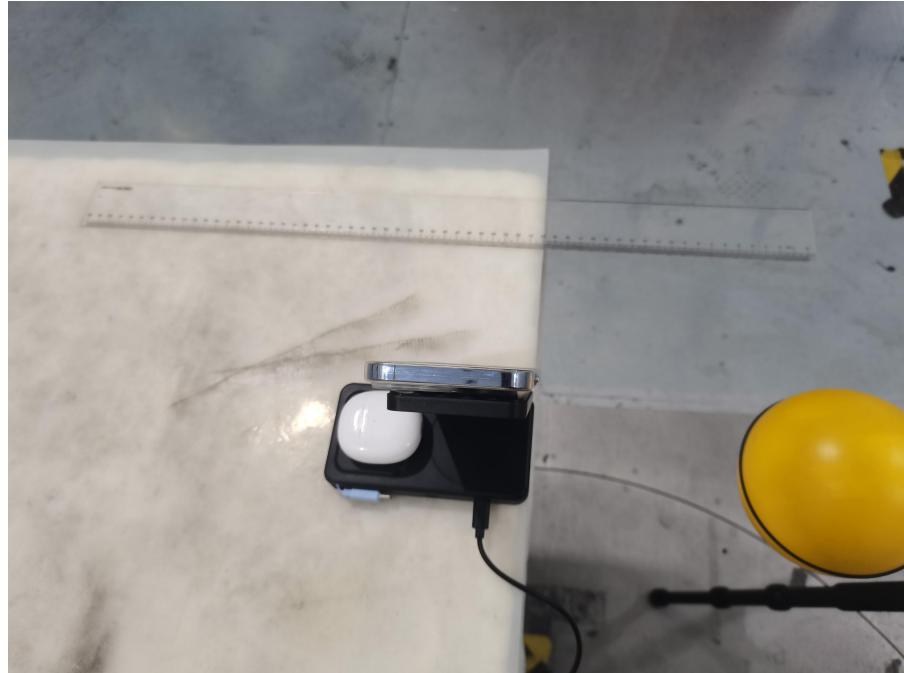
Note: A/m = uT/1.25

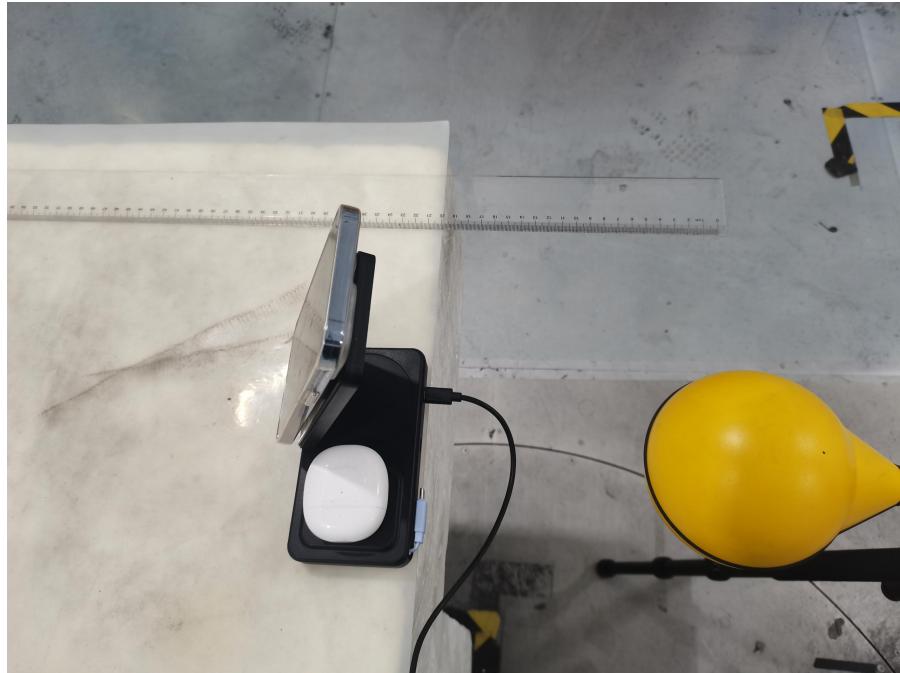


6 Test Set-up Photo

| Probe | Length | Width | Radius |
|-------|--------|-------|--------|
| | 11cm | 11cm | 5.5cm |







***** END OF REPORT *****