Radio Test Report

Report No.: AGC05443250435ER04

PRODUCT DESIGNATION	:	3 in 1 wireless charger
BRAND NAME	:	N/A
MODEL NAME	:	MO2749
APPLICANT	:	MID OCEAN BRANDS B.V.
DATE OF ISSUE	:	May 15, 2025
STANDARD(S)	:	ETSI EN 300 330 V2.1.1 (2017-02)
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 15, 2025	Valid	Initial Release

Table of Contents

1. General Information

Applicant	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Factory	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Product Designation	3 in 1 wireless charger
Brand Name	N/A
Test Model	MO2749
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Apr. 27, 2025
Date of Test	Apr. 27, 2025~May 15, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-EU-RF ID-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Cici Li (Project Engineer)	May. 15, 2025
Reviewed By	Bibo Zhang (Reviewer)	May. 15, 2025
Approved By	Angela Li (Authorized Officer)	May. 15, 2025

2. Product Information

2.1 Product Technical Description

Equipment Type	Radio Frequency Identification Technology (RF ID)
Permitted Range of Operating Frequency	325kHz to 330kHz
Operation Frequency	326.5kHz
Hardware Version	V1.0
Software Version	V1.0
Modulation Type	ASK
Receiver Category	Class 3
Product Class	☒Class 1 ☐Class 2 ☐Class 3 ☐Class 4
Equipment Technology	☒Tagging Systems ☐System in the 27MHz Range ☐all Other
Corrected Amplitude H-field	-14.87dBμA/m
Antenna Designation	Coil Antenna
Power Supply	Type-C input: DC 5V/3A, 9V/3A Wireless output for Apple Watch: 2.5W Max.

Note: For more details, refer to the user's manual of the EUT.

2.2 Test Frequency

The nominal operating frequency 125kHz declared by the manufacturer.

2.3 Objective

Perform Radio Spectrum tests for CE Marking according to the provisions of article 3.2 of the Radio Equipment Directive (2014/53/EU) for the RF ID function of the EUT.

2.4 Test Items and The Results

The tests were performed according to following standards:

ETSI EN 300 330 V2.1.1 (2017-02)	Short Range Devices (SRD); Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz; Harmonized Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

Test items and the results are as bellow:

No.	Test Item	Standard Require	Condition	Result
ETSI EN 300 330 for Transmitter Requirement				
1	Permitted Range of Operating Frequencies	sub-clause 4.3.1	/	Pass
2	Operating Frequency Ranges	sub-clause 4.3.2	/	Pass
3	Modulation Bandwidth	sub-clause 4.3.3	/	Pass
4	Transmitter H-field Requirements	sub-clause 4.3.4	Only for equipment under class 1 and class 2	Pass
5	Transmitter RF Carrier Current	sub-clause 4.3.5	Only for equipment under class 3	N/A
6	Transmitter Radiated E-field	sub-clause 4.3.6	Only for equipment under class 4	N/A
7	Transmitter Conducted Spurious Emissions	sub-clause 4.3.7	Only for equipment under class 3	N/A
8	Transmitter Radiated Spurious Domain Emission Limits < 30 MHz	sub-clause 4.3.8	/	Pass
9	Transmitter radiated spurious domain emission limits > 30 MHz	sub-clause 4.3.9	For equipment under class 1, 2 and 4	Pass
10	Transmitter Frequency Stability	sub-clause 4.3.10	Only for channelized systems	N/A
ETSI EN 300 330 for Receiver Requirement				
1	Receiver Spurious Emissions	sub-clause 4.4.2	Does only apply to receivers which a not co-located with transmitters	N/A
2	Adjacent Channel Selectivity	sub-clause 4.4.3	Only for channelized systems	N/A
3	Receiver locking or Desensitization	sub-clause 4.4.4	Not for tagging systems	N/A

Note: N/A means not applicable. This equipment does not meet the above test item evaluation conditions, so it is not applicable.

3. Setup of Equipment Under Test

3.1 Setup Configuration of EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

3.2 Support Equipment

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
No				
Item	Equipment	Trade Name	Model No.	Specification
1	Watch wireless charging load	N/A	N/A	--
2	Adapter	HUAWEI	HW-200440C00	Input(AC):100V-240V 50/60Hz 2.4A Output(DC):USB-C(5V/3A;9V/3A;10V/4A;11V/6A;12V/3A;15V/3A;20V4.4A) USB-A(5V/2A;10V/4A;11V/6A;20V/4.4A)

4. Test Environment

4.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

4.3 Environmental Conditions

Normal Condition	Temperature	15 °C to 35 °C	
	Relative humidity	20 % to 75 %.	
	Voltage	☐Mains voltage	Nominal mains voltage
		☐Lead-acid battery	1.1 * the nominal voltage of the battery
		☒Other	the normal test voltage shall be that declared by the equipment provider
Extreme Condition	Temperature	☐ -20°C to + 55°C for Category I (General)	
		☐ -10 °C to +55 °C for Category II (Portable)	
		☒ 0 °C to +35 °C for Category III (Equipment for normal indoor use)	
	Voltage	☐Mains voltage	±10 %* the nominal mains voltage
		☐Lead-acid battery	1,3 and 0,9 multiplied by the nominal voltage of the battery
		☒Leclanché or the lithium battery	Lower extreme voltage: 0.85*the nominal voltage upper extreme voltage: declared by the equipment provider
		☐Nickel-cadmium battery	Lower extreme voltage: 0.9*the nominal voltage upper extreme voltage: declared by the equipment provider
		☐Other	the normal test voltage shall be that declared by the equipment provider

Normal Condition	VN=nominal Voltage	DC 9.0V
	TN=normal Temperature	25 °C
Extreme Condition	VL=lower Voltage	DC 8.1V
	TL=lower Temperature	-20 °C
	VH=higher Voltage	DC 9.9V
	TH=higher Temperature	40 °C

4.4 Measurement Uncertainty

Test Items	Measurement Uncertainty	Notes
Frequency error	18Hz	(1)
Transmitter power conducted	0.63dB	(1)
Transmitter power Radiated	2.38dB	(1)
Radiated spurious emission 9kHz-30MHz	3.45dB	(1)
Radiated Emissions 30~1000MHz	4.80 dB	(1)

Note：

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.5 List of Equipment Used

● RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-ER-E086	Spectrum Analyzer	KEYSIGHT	N9020A	MY53300860	2024-05-24	2025-05-23
☒	AGC-EM-E002	Wireless Connectivity Tester	HP	8920B	US35010106	2024-05-24	2025-05-23
☒	AGC-ER-E059	Signal Generator	Agilent	N5182B	MY53050647	2025-01-14	2026-01-13
☒	AGC-ER-E037	Signal Generator	Agilent	N5182A	MY50140530	2024-05-23	2025-05-22
☒	AGC-ER-E075	Small Environmental Tester	SH-242	ESPEC	93008290	2024-07-24	2026-07-23
☒	AGC-EM-A007	30dB Attenuator	Weinachel	58-30-33	/	2023-06-01	2025-05-31
☒	AGC-ER-A004	Power splitter	Agilent	1167B	/	2023-06-01	2025-05-31
☒	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A
☒	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A

● Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2025-01-14	2026-01-13
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2025-03-14	2027-03-13
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2025-03-27	2026-03-26
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
☒	AGC-EM-A088	UHF Filter	N/A	N/A	N/A	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

5. ETSI EN 300 330 Requirements for Transmitter and Receiver

5.1 Operating Frequency Ranges and Permitted Range of Operating Frequencies

The operating frequency range (OFR) is the frequency range over which the EUT is transmitting. The operating frequency range of the EUT is determined by the lowest (f_L) and highest frequency (f_H) as occupied by the power envelope. With the center frequency of the OFR as: $f_C = (f_H+f_L)/2$. An EUT could have more than one operating frequency range.

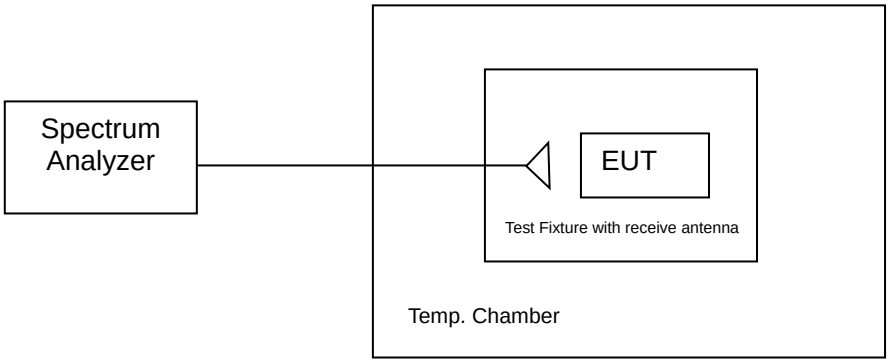
Test Limit

Table 1: Short Range Devices within the 9 kHz to 30 MHz permitted frequency bands

	Frequency Bands/frequencies	Applications
Transmit and Receive	9 kHz to 90 kHz	Inductive devices, Generic use
Transmit and Receive	90 kHz to 119 kHz	Inductive devices, Generic use
Transmit and Receive	119 kHz to 140 kHz	Inductive devices, Generic use
Transmit and Receive	140 kHz to 148,5 kHz	Inductive devices, Generic use
Transmit and Receive	148,5 kHz to 5 MHz	Inductive devices, Generic use
Transmit and Receive	400 kHz to 600 kHz	RFID only
Transmit and Receive	5 MHz to 30 MHz	Inductive devices, Generic use
Transmit and Receive	3 155 kHz to 3 400 kHz	Inductive devices, Generic use
Transmit and Receive	984 kHz to 7 484 kHz (Note 3, Centre frequency is 4 234 kHz)	Inductive devices, Railway applications
Transmit and Receive	4 516 kHz	Inductive devices, Railway applications
Transmit and Receive	6 765 kHz to 6 795 kHz	Inductive devices, Generic use
Transmit and Receive	7 400 kHz to 8 800 kHz	Inductive devices, Generic use
Transmit and Receive	10 200 kHz to 11,000 MHz	Inductive devices, Generic use
Transmit and Receive	11,810 MHz to 15,310 MHz (Centre frequency is 13,56 MHz)	RFID only
Transmit and Receive	12,5 MHz to 20 MHz	Inductive devices, Wireless healthcare
Transmit and Receive	13,553 MHz to 13,567 MHz	Inductive devices, Generic use
Transmit and Receive	26,957 MHz to 27,283 MHz	Inductive devices, Generic use
Transmit and Receive	27,090 MHz to 27,100 MHz	Inductive devices, Railway applications
NOTE 1: In addition, it should be noted that other frequency bands may be available in a country within the frequency range 9 kHz to 30 MHz. NOTE 2: On non-harmonised parameters, national administrations may impose certain conditions such as the type of modulation, frequency, channel/frequency separations, maximum transmitter radiated power, duty cycle, and the inclusion of an automatic transmitter shut-off facility, as a condition for the issue of an Individual Rights for use of spectrum or General Authorization, or as a condition for use under "licence exemption" as it is in most cases for Short Range Devices. NOTE 3: Transmitting only on receipt of a Balise/Eurobalise tele-powering signal from a train.		

The frequency ranges and limits of the present document are based on the European Commission Decision for SRDs [i.10], CEPT/ERC/REC 70-03 [i.1].

Test Setup



Test Procedure

1. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 5.5 and Sub-clause 5.6 for the test conditions.
2. Please refer to ETSI EN 300 330 (V2.1.1) Sub-clause 6.2.2 for the measurement method.

Test Result

Test Conditions			99% Bandwidth (kHz)	F_L at 99% BW (kHz)	F_H at 99% BW (kHz)	Limit Band (kHz)	Result
Frequency (kHz)	Temperature (°C)	Voltage (V)					
326.5	25	9.0	24.230	314.385	338.615	302.0125 ~350.9875	Pass
	-20	9.9	24.156	314.422	338.578		Pass
		8.1	24.164	314.418	338.582		Pass
	40	8.1	24.187	314.407	338.593		Pass
		9.9	24.219	314.390	338.610		Pass

5.2 Transmitter H-Field Requirements

In the case of a transmitter with an integral or dedicated antenna, the radiated H-field is defined in the direction of maximum field strength under specified conditions of measurement.

Test Limit

Table 2: H-field limits at 10 m

Frequency range (MHz)	H-field strength limit (H_f) dBµA/m at 10 m or specified in mW e.r.p.
0,009 ≤ f < 0,090	72 descending 3 dB/oct above 0,03 MHz or according to note 1 (see note 5)
0,09 ≤ f < 0,119	42
0,119 ≤ f < 0,135	66 descending 3 dB/oct above 0,119 MHz or according to note 1 (see notes 3 and 5)
0,135 ≤ f < 0,140	42
0,140 ≤ f < 0,1485	37,7
0,1485 ≤ f < 30	-5 (see note 4)
0,315 ≤ f < 0,600	-5
3,155≤ f < 3,400	13,5
4,234	9 (see note 9)
4,516	7
7,400 ≤ f < 8,800	9
10,2 ≤ f < 11,00	9
12,5 ≤ f ≤ 20	-7
6,765 ≤ f ≤ 6,795	42 (see notes 3 and 7)
26,957 ≤ f ≤ 27,283	42 (see note 3)
13,410 ≤ f ≤13,553, 13,567 ≤ f ≤ 13,710	9 (see note 6)
13,110 ≤ f ≤ 13,410, 13,710 ≤ f ≤ 14,010	-3,5 (see note 6)
12,660 ≤ f ≤ 13,110, 14,010 ≤ f ≤ 14,460	-10 (see note 6)
11,810 ≤ f ≤ 12,660, 14,460 ≤ f ≤ 15,310	-16 (see note 6)
13,460 ≤ f ≤ 13,553, 13,567 ≤ f ≤ 13,660	27 (see note 6)
13,360 ≤ f ≤ 13,460, 13,660 ≤ f ≤ 13,760	Linear transition from 27 to -3,5 (see note 6)
13,110 ≤ f ≤ 13,360, 13,760 ≤ f ≤ 14,010	-3,5 (see note 6)
12,660 ≤ f ≤ 13,110, 14,010 ≤ f ≤ 14,460	-5 (see note 6)
13,553 ≤ f ≤ 13,567	42 (see note 3) or 60 (see notes 2 and 3)
27,095	42

Frequency range (MHz)	H-field strength limit (H_f) dBμA/m at 10 m or specified in mW e.r.p.
26,995, 27,045, 27,095, 27,145, 27,195 (see note 8)	100 mW

NOTE 1: For the frequency ranges 9 kHz to 135 kHz, the following additional restrictions apply to limits above 42 dBμA/m:
- for loop coil antennas with an area ≥ 0,16 m^2 this table and table B.1 with the antenna limitations apply;
- for loop coil antennas with an area between 0,05 m^2 and 0,16 m^2 table B.1 applies with a correction factor. The limit is: table value + 10 × log (area/0,16 m^2);
- for loop coil antennas with an area < 0,05 m^2 the limit is 10 dB below table B.1.

NOTE 2: For RFID (incl. NFC) and EAS applications only.
NOTE 3: Spectrum mask limit, see annex I.
NOTE 4: For further information see annex G.
NOTE 5: Limit is 42 dBμA/m for the following spot frequencies: 60 kHz ± 250 Hz, 66,6 kHz ± 750 Hz, 75 kHz ± 250 Hz, 77,5 kHz ± 250 Hz, and 129,1 kHz ± 500 Hz.
NOTE 6: Only in conjunction with spectrum mask, see annex I.
NOTE 7: The frequency range 6,765 MHz - 6,795 MHz is not a harmonised ISM frequency band according article 5.138 of the ITU Radio Regulations [i.13].
NOTE 8: Center frequencies for channelized systems by using ≤ 10 kHz bandwidth.
NOTE 9: The limit is valid in the range 984 kHz - 7 484 kHz for Transmitting only on receipt of a Balise/Eurobalise tele-powering signal from a train.

The H-field limit in dBμA/m at 3 m, H_{3m}, is determined by the following equation:

$$H_{3m} = H_{10m} + C_3 \quad (F.2)$$

Where: H_{10m} is the H-field limit in dBμA/m at 10 m distance according to the present document; and C_3 is a conversion factor in dB determined from figure F.2.

The limit at 10 m(H_{10m}) is 60 dBμA/m or 66 dBμA/m

For 13.65MHz:

Owing to the frequency EUT is 13.56MHz, so the C_3 approach to 23dB.

Then the limit at 3m(H_{3m}) = H_{10m} + C_3 = 60 + 23 =83 dBμA/m.

The H Field Strength shall not exceed the values 83 dBuA/m 3m Distance under normal test conditions.

For 0.125MHz:

Owing to the frequency EUT is 0.125MHz, so the C_3 approach to 31.65dB.

Then the limit at 3m(H_{3m}) = H_{10m} + C_3 = 66 + 31.65 =97.65 dBμA/m.

The H Field Strength shall not exceed the values 97.65 dBuA/m 3m Distance under normal test conditions.

- E(dBuV/m) = dBuA/m+51.5;
- ERP (dBm)=E(dBuV/m) +20lg(D)-104.8, D is the measurement distance;
- ERP=10lgP(mW)

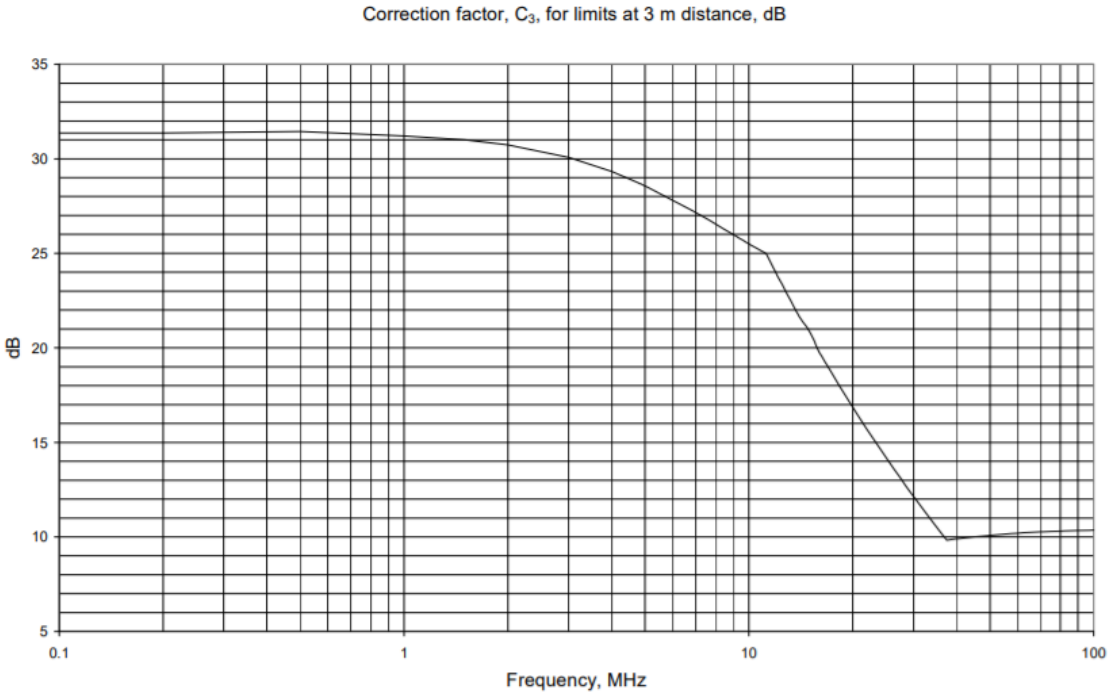
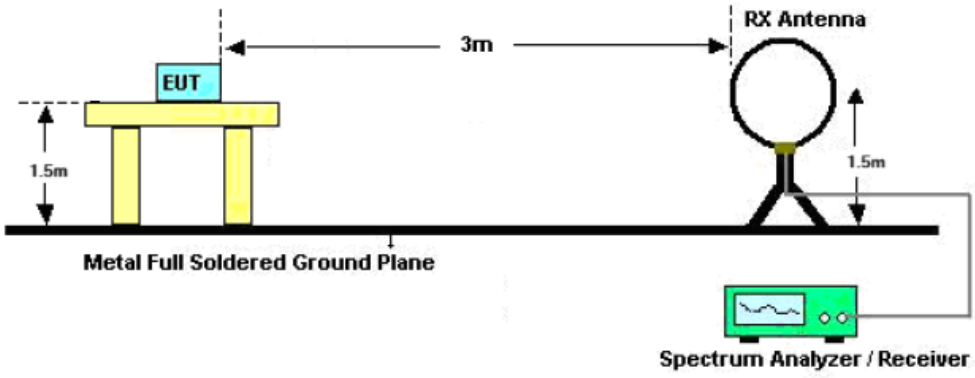


Figure H.2: Conversion factor C_3 versus frequency

Test Setup



Test Procedure

The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber.

The table was rotated 360 degrees to determine the position of the highest radiation.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
The H-field is measured with a shielded loop antenna connected to a measurement receiver.
The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12.
The EUT operate with modulation under normal and extreme conditions.

Test Result

Test Mode: Transmitting

Test conditions	Test Temp.	Test Volt.	Note
TN/VN	25°C	9.0V	Worst case
TL/ VL	-20°C	9.9V	-
TH/VL	40°C	9.9V	-
TL/VH	-20°C	8.1V	-
TH/VH	40°C	8.1V	-

Frequency (kHz)	Reading (dBμV/m)	Corrected Factor (dB)	Field Strength at 3m (dBμV/m)	Field Strength at 3m (dBμA/m)	Calculated at 10m (dBμA/m)	Limit at 10m (dBμA/m)	Result
326.5	46.56	21.72	68.28	16.78	-14.87	-5	Pass

Remark:
- E-Field Strength(dBμV/m) = Reading Level + Corrected Factor
- For the calculated method, please refer to Annex H at EN 300 330.
- All extreme conditions were considered for test, but only record the worst case.
- EIRP(dBm)= E-Field Strength(dBμV/m)+20lg(D)-104.8, D is the measurement distance.
- E-Field Strength(dBμV/m)=H-Field Strength(dBμA/m)+51.5, so the dBμA/m=EIRP(dBm)+43.7, EIRP=10lgP(mW)

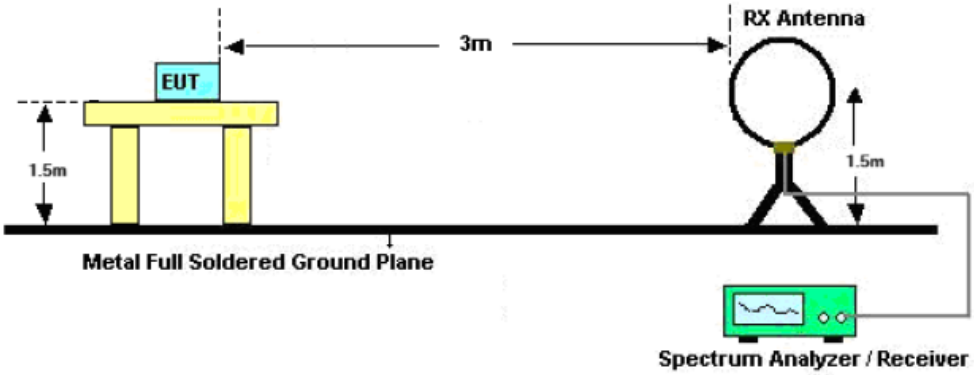
5.3 Transmitter Radiated Spurious Domain Emission (Limit<30MHz)

Spurious domain emission limits are limits on emissions at frequencies other than those of the carrier and sidebands associated (clauses 4.3.2 and 4.3.3) with normal test modulation (clause 5.8).

Test Limit

Operating Mode		
Frequency Range	Distance	Maximum Field Strength Limit
9 kHz ≤ f < 10 MHz	10m	27dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-3.5 dBμA/m
Stand-by Mode		
9 kHz ≤ f < 10 MHz	10m	5.5dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-25 dBμA/m

Test Setup



Test Procedure

For test method of frequency range (9 kHz-30MHz)

The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber.

The table was rotated 360 degrees to determine the position of the highest radiation.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

The H-field is measured with a shielded loop antenna connected to a measurement receiver.

The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12

Test Result

FREQUENCY RANGE (9KHZ-30MHZ)

OPERATION MODE					
Frequency	Reading level	Total Factor	Emission level	10M Limit	Margin
(MHz)	(dBμA/m)	(dB)	(dB μA/m)	(dBμA/m)	(dBμA/m)
--	--	--	--	27 dBμA/m at 9KHz descending 3dB/oct(9KHz – 10MHz)	--
--	--	--	--		--
--	--	--	--	-3.5 dBμA/m(10MHz – 30MHz)	--
--	--	--	--		--

STANDBY MODE					
Frequency	Reading level	Total Factor	Emission level	10M Limit	Margin
(MHz)	(dBμA/m)	(dB)	(dB μA/m)	(dBμA/m)	(dBμA/m)
--	--	--	--	5.5 dBμA/m at 9KHz descending 3dB/oct (9KHz – 10MHz)	--
--	--	--	--		--
--	--	--	--	-25 dBμA/m (10MHz – 30MHz)	--
--	--	--	--		--

Remark:

(1) Corrected Power (dBm) = Total Factor + Reading Level

(2) Measuring frequencies from 9KHz to the 30MHz.

(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

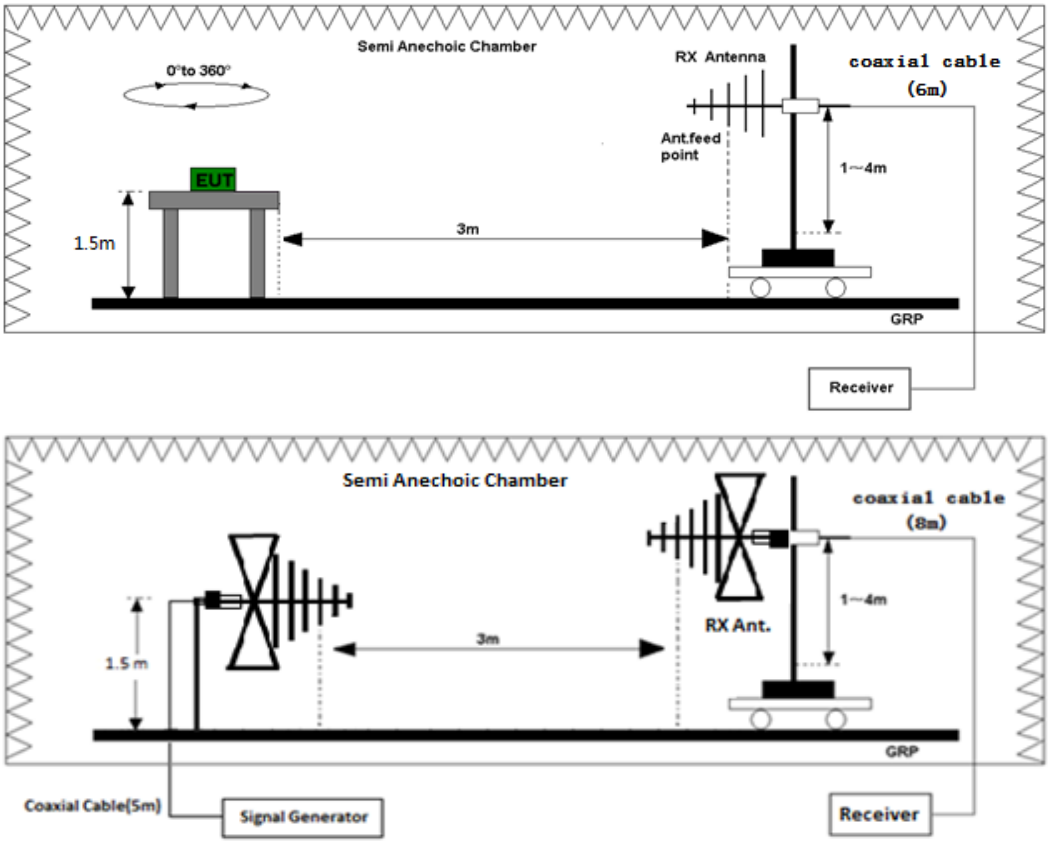
5.4 Transmitter Radiated Spurious Domain Emission (Limit > 30MHz)

Spurious emissions are emissions at frequencies other than those of the carrier and sidebands associated with normal modulation.

Test Limit

Frequency Range	Operating Mode Limit	Standby Mode Limit
47 MHz to 74 MHz	4 nW	2 nW
87.5 MHz to 118 MHz	4 nW	2 nW
174 MHz to 230 MHz	4 nW	2 nW
470 MHz to 790 MHz	4 nW	2 nW
Other frequency between 30 MHz to 1000 MHz	250 nW	2 nW

Test Setup



Radiated Emission Test Set-Up Frequency 30 MHz ~ 1 GHz

Test Procedure

For test method of frequency range (30 MHz-1000MHz)

EUT was placed on a 1.5m height wooden table. The search antenna is placed at 3m distances from the EUT and search antenna height is from 1-4m. With the transmitter operating at continuously mode, the turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction is determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.

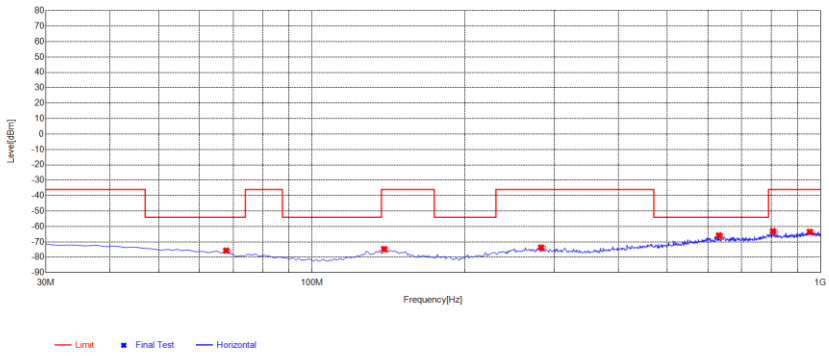
The EUT was removed from the turntable and replaced with a linearly polarized antenna connected to a calibrated RF signal generator. The RF generator was set to a measured emission frequency and the search antenna was raised and lowered to produce a maximum received reading. The generator output was increased to match the radiated emission reading measured previously, and the result expressed in dB EIRP or ERP, correcting for substitution antenna gain at each frequency.

Factor=Antenna Factor + Cable loss, Margin=Limit- Measurement Level.
The “Factor” value can be calculated automatically by software of measurement system.
All test modes had been pre-tested. The worst case and recorded in the report.

Test Resul

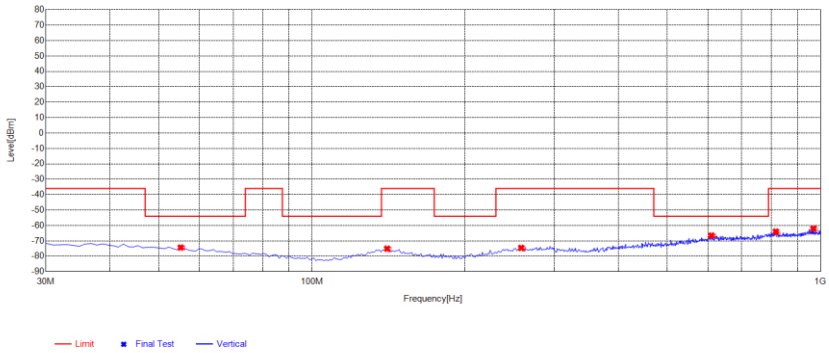
Test mode:	Operating	Test Frequency:	326.5kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	67.83	-100.30	-75.68	-54.00	21.68	24.62	350	Horizontal
2	138.64	-101.43	-74.66	-36.00	38.66	26.77	100	Horizontal
3	282.2	-100.92	-73.66	-36.00	37.66	27.26	330	Horizontal
4	631.4	-100.17	-65.82	-54.00	11.82	34.35	360	Horizontal
5	806	-100.17	-63.05	-36.00	27.05	37.12	110	Horizontal
6	952.47	-101.70	-63.53	-36.00	27.53	38.17	70	Horizontal

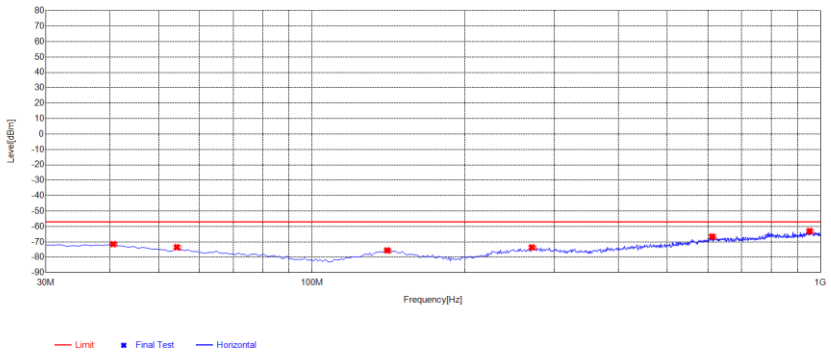
Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	55.22	-101.21	-74.36	-54.00	20.36	26.85	150	Vertical
2	140.58	-102.06	-75.09	-36.00	39.09	26.97	160	Vertical
3	257.95	-101.99	-74.58	-36.00	38.58	27.41	320	Vertical
4	610.06	-100.67	-66.57	-54.00	12.57	34.10	290	Vertical
5	816.67	-100.91	-63.99	-36.00	27.99	36.92	270	Vertical
6	967.99	-100.02	-62.09	-36.00	26.09	37.93	270	Vertical

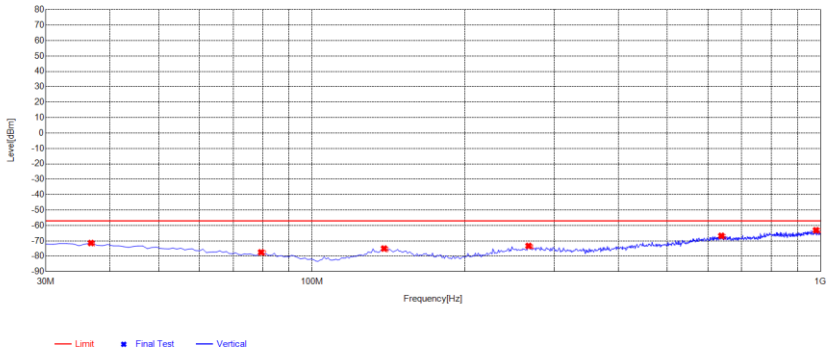
Test mode:	Standby	Test Frequency:	326.5kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	40.67	-101.05	-71.50	-57.00	14.50	29.55	50	Horizontal
2	54.25	-100.56	-73.51	-57.00	16.51	27.05	180	Horizontal
3	140.58	-102.52	-75.55	-57.00	18.55	26.97	130	Horizontal
4	270.56	-100.99	-73.60	-57.00	16.60	27.39	290	Horizontal
5	612	-100.68	-66.57	-57.00	9.57	34.11	30	Horizontal
6	951.5	-101.17	-62.99	-57.00	5.99	38.18	320	Horizontal

Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	36.79	-101.02	-71.40	-57.00	14.40	29.62	240	Vertical
2	79.47	-101.45	-77.45	-57.00	20.45	24.00	170	Vertical
3	138.64	-101.77	-75.00	-57.00	18.00	26.77	320	Vertical
4	266.68	-100.70	-73.28	-57.00	16.28	27.42	0	Vertical
5	638.19	-101.23	-66.77	-57.00	9.77	34.46	310	Vertical
6	979.63	-101.10	-63.14	-57.00	6.14	37.96	280	Vertical

Appendix I: Photographs of Test Setup

Radiated Spurious Emissions Below 1GHz Test Setup

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC05443250435AP01

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

-----End of Report-----

Radio Test Report

Report No.: AGC05443250435ER03

PRODUCT DESIGNATION	:	3 in 1 wireless charger
BRAND NAME	:	N/A
MODEL NAME	:	MO2749
APPLICANT	:	MID OCEAN BRANDS B.V.
DATE OF ISSUE	:	May 15, 2025
STANDARD(S)	:	ETSI EN 303 417 V1.1.1 (2017-09)
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 15, 2025	Valid	Initial Release

Table of Contents

1. General Information

Applicant	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Factory	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Product Designation	3 in 1 wireless charger
Brand Name	N/A
Test Model	MO2749
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Apr. 27, 2025
Date of Test	Apr. 27, 2025~May 15, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-EU-WPT-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Cici Li (Project Engineer)	May. 15, 2025
Reviewed By	Bibo Zhang (Reviewer)	May. 15, 2025
Approved By	Angela Li (Authorized Officer)	May. 15, 2025

2. Product Information

2.1 Product Technical Description

Equipment Type	WPT System
Permitted Range of Operating Frequency	☐WPT Band 1: 19~21kHz
	☐WPT Band 2: 59~61kHz
	☐WPT Band 3: 79~90kHz
	☒WPT Band 4: 100~119kHz,119~140kHz,140~148.5kHz
	☒WPT Band 4: 148.5~300kHz
	☐WPT Band 5: 6765kHz~6795kHz
Operation Frequency	110kHz-205kHz
Hardware Version	V1.0
Software Version	V1.0
Modulation Type	ASK
Corrected Amplitude H-field@10m	-11.19dBμA/m (Max.)
Antenna Designation	Coil Antenna
Input Rating	Type-C input: DC 5V/3A, 9V/3A
Output Rating	Wireless output for AirPods: 3W Max.

Note: For more details, refer to the user's manual of the EUT.

2.2 Objective

Perform Radio Spectrum tests for CE Marking according to the provisions of article 3.2 of the Radio Equipment Directive (2014/53/EU) for the WPT function of the EUT.

2.3 Test Items and The Results

The tests were performed according to following standards:

ETSI EN 303 417 V1.1.1 (2017-09)	Wireless power transmission systems, using technologies other than radio frequency beam in the 19-21kHz,59-61kHz,79-90kHz,100-300 kHz, 6765-6795kHz ranges; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

Test items and the results are as bellow:

No.	Test Item	Standard Require	Condition	Result
Harmonised Standard ETSI EN 303 417				
1	Permitted range of Operating Frequencies	sub-clause 4.3.2	/	Pass
2	Operating Frequency Ranges	sub-clause 4.3.3	/	Pass
3	H-field Requirements	sub-clause 4.3.4	/	Pass
4	Transmitter Spurious Emissions	sub-clause 4.3.5	/	Pass
5	Transmitter Out of Band (OOB) Emissions	sub-clause 4.3.6	/	Pass
6	WPT System Unwanted Conducted Emissions	sub-clause 4.3.7	Only for equipment which has a cable between the off board power supply and the primary coil which is longer than 3 m	N/A
7	Receiver Blocking	sub-clause 4.4.2	Only for Mode1, Mode2 and Mode3 (see Table 2)	Pass

Note: N/A means not applicable. This equipment does not meet the above test item evaluation conditions, so it is not applicable.

2.3 Overview of Operational Modes within a WPT System

EN 303 417 Clauses 4.2.3 Table 2: Overview of operational modes within a WPT system					
Operational Mode	Set-up	Function of base station	Function of mobile device	Test Scenario	Conformance Requirements
Mode 1: base station in stand-by, idle mode	Single device	TX	Not applicable	Single radiation test (TX) with the base station/charging pad. The test set-up as described in clause 6.1.2 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Performance criteria test (RX test) (clause 4.4)
Mode 2: Communication before charging, adjustment charging mode / position	In combination	TX and RX	TX and RX	Specific test setup, declared by the manufacturer. Manufacturer shall declare the maximal distance between base station and mobile device the WPT system is able to communicate (distance D). The test setup- up shall be performed with the largest communication distance. The test set-up as described in clause 6.1.3 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Wanted performance criteria test (RX test) (clause 4.4)
Mode 3: Communication	WPT system alignment	TX and RX	TX and RX	● Worst case alignment ● Both tests can be performed within one set-up, worst-case alignment. ● The test set-up as described in clause 6.1.4 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Wanted Performance criteria test (RX test) (clause 4.4)
Mode 4: energy transmission	WPT system alignment	TX and RX	TX and RX		

2.4 Description of Test Modes

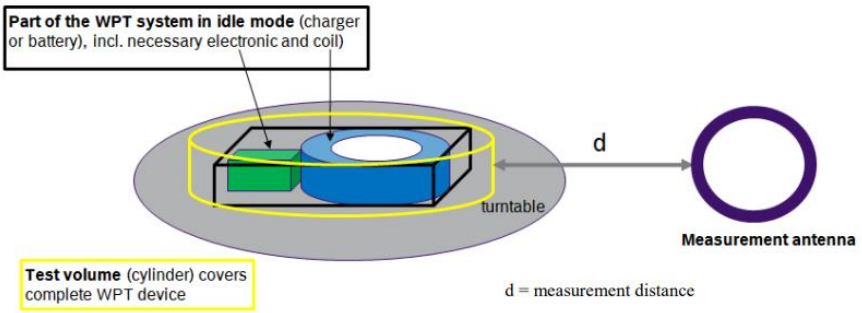
No.	Test Mode Description	Test Channel		
		Lowest	Middle	Highest
1	base station in stand-by, idle mode	/		
2	Communication before charging, adjustment charging mode / position	/	/	/
3	Communication	128.8kHz		
4	Energy transmission	114.27kHz	132.45kHz	194.68kHz

Note:
1) During the initial establishment of the charging mode (mode 2), no or very low emission occur (below the sensitivity level of the test set-up), so the mode 2 can be assumed as irrelevant for the test.
2) Mode 1 is only for base station function equipment and is not taken into consideration
3) Mode 3 and mode 4 have been performed within one set-up, worst-case alignment.
4) The communication frequency 128.8 kHz corresponds to the maximum field strength.

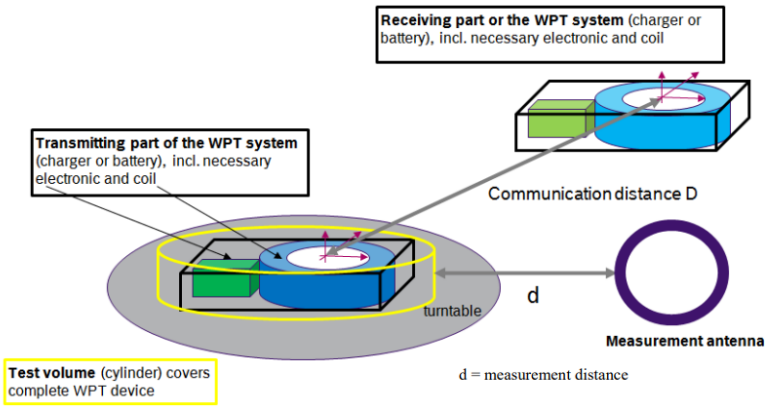
3. Setup of Equipment Under Test

3.1 Setup Configuration of EUT

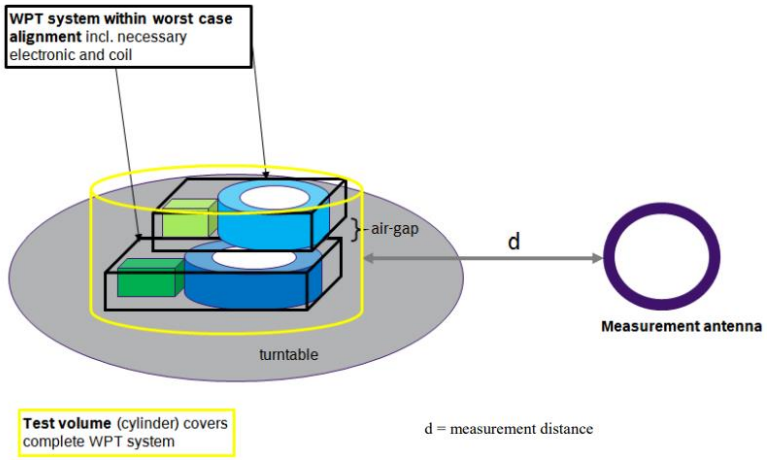
◆ **Mode 1: Idle Mode**



◆ **Mode 2: Charging Adjustment**



◆ **Mode 3 and Mode 4: Power Transmission Arrangement**



3.2 Support Equipment

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
☐No ☒Yes				
Item	Equipment	Manufacturer	Model No.	Specification
1	Headphones	N/A	N/A	--
2	Adapter	HUAWEI	HW-200440C00	Input(AC):100V-240V 50/60Hz 2.4A Output(DC):USB-C(5V/3A;9V/3A;10V/4A;11V/6A;12V/3A;15V/3A;20V4.4A) USB-A(5V/2A;10V/4A;11V/6A;20V/4.4A)

4. Test Environment

4.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

4.3 Environmental Conditions

Normal Condition	VN=nominal Voltage	DC 9V
	TN=normal Temperature	25 °C
Extreme Condition	VL=lower Voltage	DC 8.1V
	TL=lower Temperature	-20 °C
	VH=higher Voltage	DC 9.9V
	TH=higher Temperature	-40 °C
Note: The maximum temperature of 40 is not a standard requirement and is measured according to the maximum service temperature stated by the manufacturer.		

4.4 Measurement Uncertainty

Test Items	Measurement Uncertainty
Frequency error	± 1 x 10^{-7}
Transmitter power conducted	± 0.75dB
Maximum Frequency Deviation: Within 300Hz and 6KHz of Audio Frequency Within 6KHz and 25KHz of Audio Frequency	± 5% ± 3dB
Adjacent channel power	± 3dB
Conducted Emission of Transmitter, Valid Up to 12.75GHz	± 4dB
Conducted Emissions of Receivers	± 3dB
Radiated Emission of Transmitter, Valid Up to 12.75GHz	± 6dB

Note:This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.5 List of Equipment Used

● Radiated Spurious Emission& RF Conducted Test							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2025-01-14	2026-01-13
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2025-03-14	2027-03-13
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2025-03-27	2026-03-26
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
☒	AGC-EM-A088	UHF Filter	N/A	N/A	N/A	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

5. ETSI EN 303 417 Requirements for Transmitter and Receiver

5.1 Operating Frequency Ranges and Permitted Range of Operating Frequencies

Test Limit

The permitted range of operating frequency range(s) for intentional emissions shall be within 19 - 21 kHz, 59 - 61 kHz, 79 - 90 kHz, 100 - 300 kHz, 6 765 - 6 795 kHz,

Test Description

- The operating frequency range is the frequency range over which the WPT system is intentionally transmitting (all operational modes, see clause 4.2.3, Table 2).
- The operating frequency range(s) of the WPT system are determined by the lowest (f_L) and highest frequency (f_H) as occupied by the power envelope.
- The WPT system could have more than one operating frequency range. For a single frequency systems the OFR is equal to the occupied bandwidth (OBW) of the WPT system.
- For multi-frequency systems the OFR is described in Figures 2 and 3.

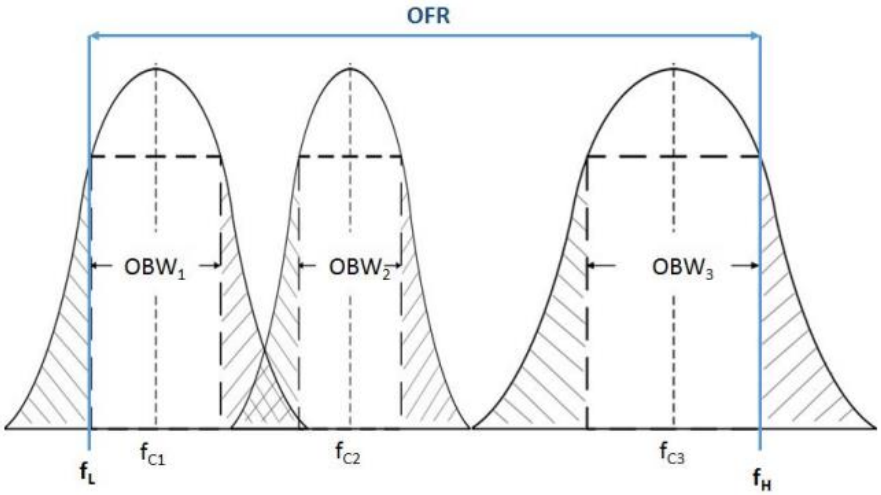


Figure 2: OFR of a multi - frequency WPT system within one frequency range of Table 2 and within one WPT system cycle time

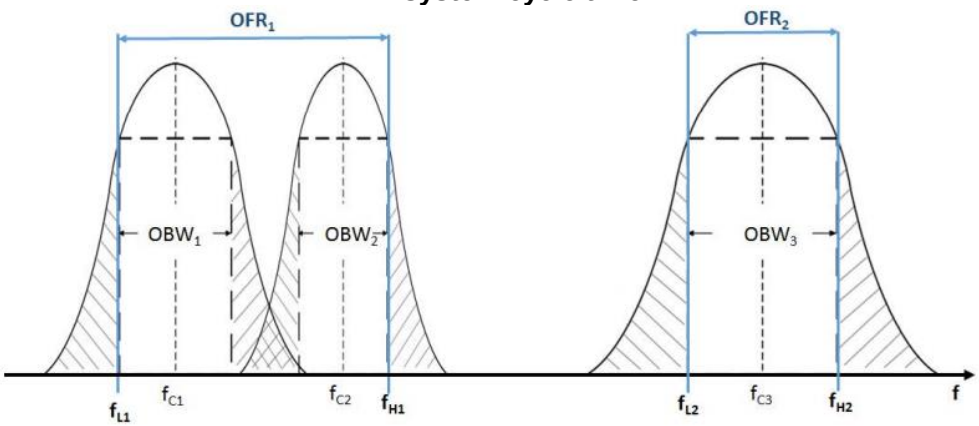
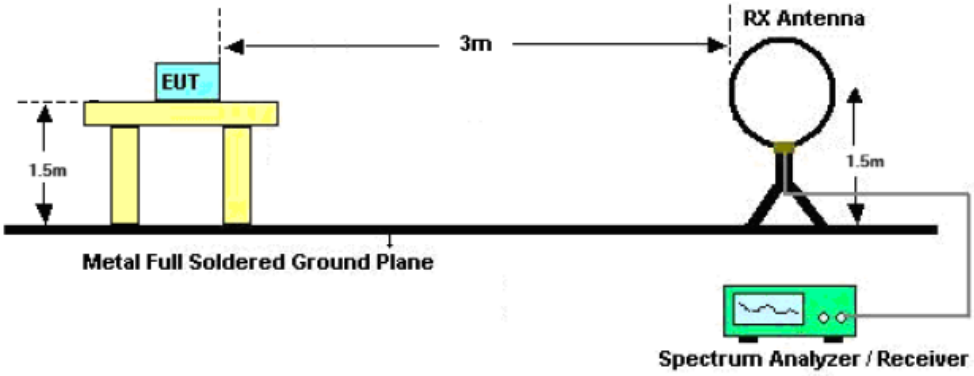


Figure 3: OFR of a multi - frequency WPT system within two frequency ranges of Table 2 and within one WPT system cycle time

Test Setup



Test Procedure

1. The EUT was placed on a turn table which is 1.5m above ground plane.
2. The EUT was modulated by normal signal,
3. Set SPA Center Frequency = fundamental frequency, RBW=VBW=200Hz, Span=5kHz, Detector=RMS. The 99 % OBW function shall be used to determine the operating frequency range, f_H is the frequency of the upper marker resulting from the OFR, f_L is the frequency of the lower marker resulting from the OFR.
4. Both normal test condition and extreme test condition applied

Test Result

☒Test Mode: Mode 3

Frequency (kHz)	Test Conditions		99% Bandwidth (kHz)	F_L at 99% BW (kHz)	F_H at 99% BW (kHz)	Limit Band (kHz)	Result
	Temperature (°C)	Voltage (V)					
128.8	-20	9.9	0.987	128.305	129.292	100~300	Pass
		8.1	0.989	128.307	129.296		Pass
	25	9.0	0.997	128.302	129.299		Pass
	40	8.1	0.990	128.308	129.298		Pass
		9.9	0.988	128.305	129.293		Pass

☒Test Mode: Mode 4

Frequency Range (kHz)	Test Conditions		Lower Frequency (kHz)	Upper Frequency (kHz)	Limit Band (kHz)
	Temperature (°C)	Voltage (V)			
114.27-194.68	-20	9.9	113.774	195.178	100~300
		8.1	113.780	195.171	
	25	9.0	113.774	195.178	
	40	8.1	113.780	195.172	
		9.9	113.779	195.175	
OFR	81.404kHz				
Result	Pass				

5.2 Transmitter H-Field Requirements

Test Limit

- The H-field limits are provided in Table 3.
- They have been specified for control of any radiated emissions within the OFR originating from the WPT system (power transmission and accompanying data communication).
- The H-field limits in Table 3 are EU wide harmonised according to EC Decision 2013/752/EU [i.2]. Further information is available in CEPT/ERC/REC 70-03 [i.1].

Table 3: H-field limits

Frequency range [MHz]	H-field strength limit [dBµA/m at 10 m]	Comments
0,019 ≤ f < 0,021	72	
0,059 ≤ f < 0,061	69,1 descending 10 dB/dec above 0,059 MHz	See note 1
0,079 ≤ f < 0,090	67,8 descending 10 dB/dec above 0,079 MHz	See note 2
0,100 ≤ f < 0,119	42	
0,119 ≤ f < 0,135	66 descending 10 dB/dec above 0,119 MHz	See note 1
0,135 ≤ f < 0,140	42	
0,140 ≤ f < 0,1485	37,7	
0,1485 ≤ f < 0,30	-5	
6,765 ≤ f < 6,795	42	
NOTE 1: Limit is 42 dBµA/m for the following spot frequencies: 60 kHz ± 250 Hz and 129,1 kHz ± 500 Hz. NOTE 2: At the time of preparation of the present document the feasibility of increased limits for high power wireless power transmission systems to charge vehicles [i.4] was prepared. New specific requirements for such systems (e.g. higher H-field emission limits in the 79 - 90 kHz band) will be reflected within a future revision of the present document.		

- The H-field limit in dBµA/m at 3 m, H_{3m}, is determined by the following equation:

$$H_{3m} = H_{10m} + C_3 \quad (F.2)$$

Where: H_{10m} is the H-field limit in dBµA/m at 10 m distance according to the present document; and C_3 is a conversion factor in dB determined from figure F.2.

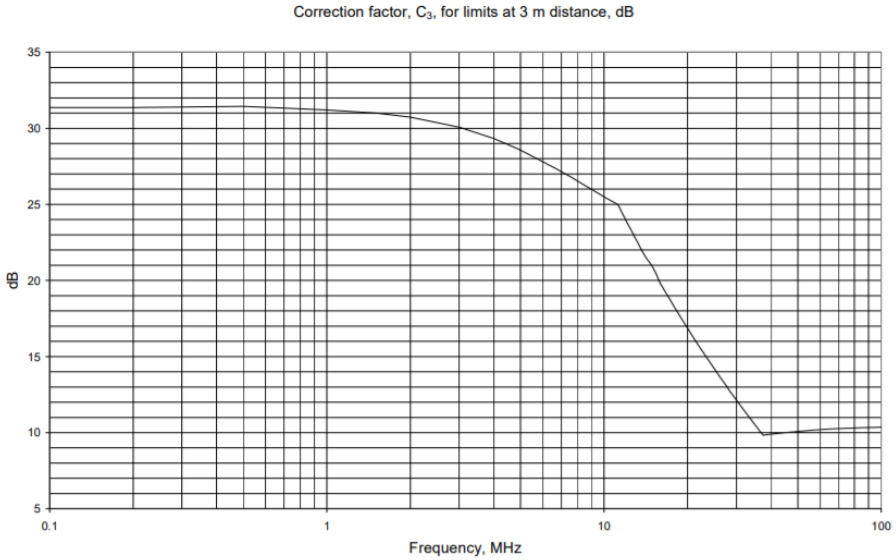
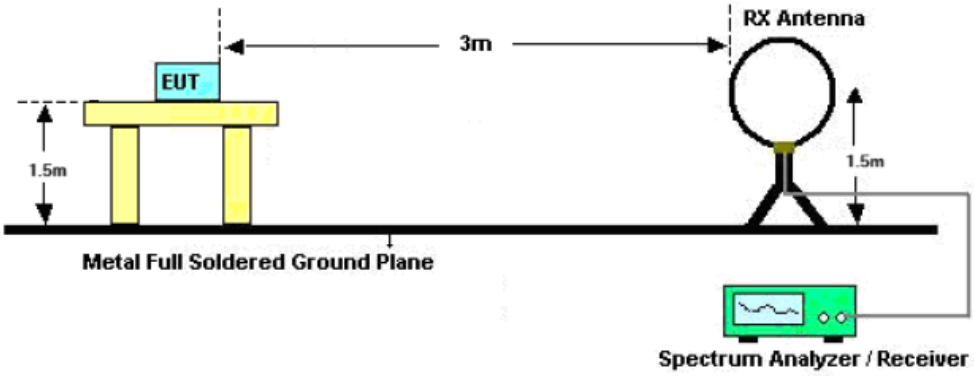


Figure H.2: Conversion factor C_3 versus frequency

- E(dBµV/m) = dBµA/m+51.5;
- ERP (dBm)=E(dBµV/m) +20lg(D)-104.8, D is the measurement distance;
- ERP=10lgP(mW)

Test Setup



Test Procedure

1. The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The H-field is measured with a shielded loop antenna connected to a measurement receiver.
4. The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12.
5. The EUT operate with modulation under normal and extreme conditions.

Test Result

Test conditions	Test Temp.	Test Volt.	Note
TN/VN	25°C	9.0V	Worst case
TL/ VL	-20°C	9.9V	-
TH/VL	40°C	9.9V	-
TL/VH	-20°C	8.1V	-
TH/VH	40°C	8.1V	-

☒Test Mode: Mode 3

Frequency (kHz)	Reading (dBμA/m)	Factor (dB)	Field Strength (dBμV/m@3m)	Field Strength (dBμA/m@3m)	Calculated (dBμA/m@10m)	Limit at 10m (dBμA/m@10m)	Result
128.8	44.36	27.15	71.51	20.01	-11.19	65.66	Pass

☒Test Mode: Mode 4

Frequency (kHz)	Reading (dBμA/m)	Factor (dB)	E-Field Strength (dBμV/m@3m)	H-Field Strength (dBμA/m@3m)	Calculated (dBμA/m@10m)	Limit at 10m (dBμA/m@10m)	Result
114.27	36.14	27.15	63.29	11.79	-19.41	42.00	Pass
132.45	35.21	27.15	62.36	10.86	-20.34	65.53	Pass
194.68	36.54	27.15	63.69	12.19	-19.01	-5.00	Pass

Remark:
1. Field Strength at 3m(dBμA/m) = Reading Level + Corrected Factor
2. Calculated at 10m(dBμA/m) = Field Strength at 3m(dBμA/m)-31.2dB
3. For the calculated method, please refer to Annex F at EN 300330.

5.3 Transmitter Out of Band (OOB) Emissions

Test Limit

The OOB limits are visualized in Figures 4 and 5; they are descending from the intentional limits from Table 3 at f_H/f_L with 10 dB/decade.

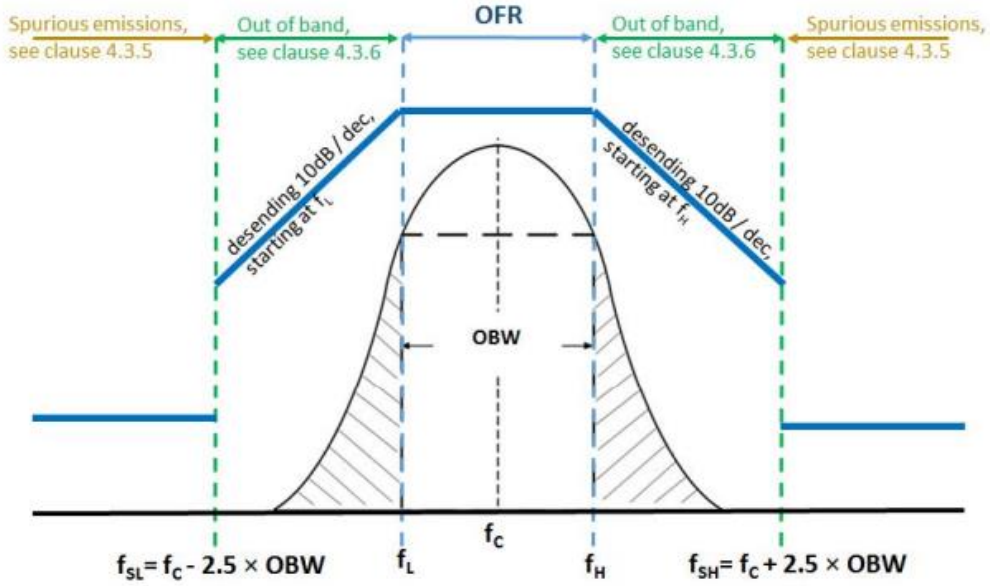


Figure 4: Out of band and spurious domain of a single frequency WPT system

The transmitter spurious emissions for a multi frequency system (within one WPT frequency range from Table 2) are to be considered in frequency ranges defined in Figure 5 ($f < f_{SL}$ and $f > f_{SH}$)

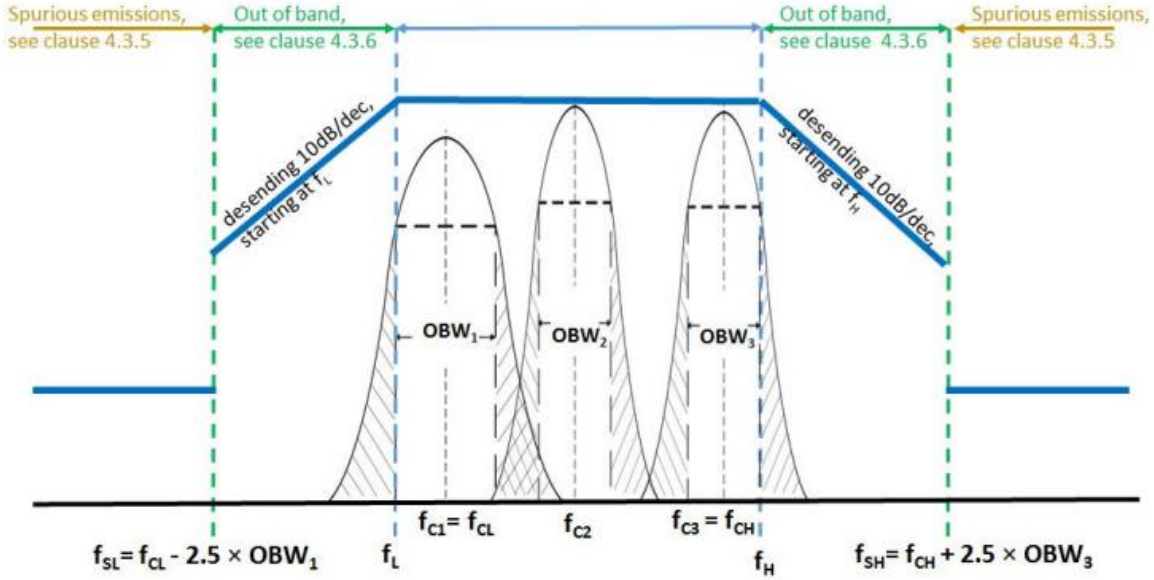
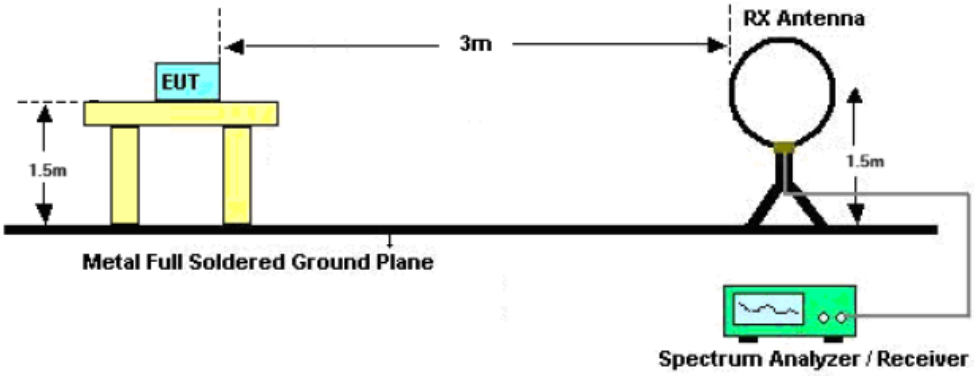


Figure 5: Out of band and spurious domain of a multi - frequency system (during one WPT system cycle time)

Test Setup



Test Procedure

1. The EUT was placed on a turn table which is 1.5m above ground plane.
2. The EUT was modulated by normal signal,
3. Set SPA Center Frequency = fundamental frequency, RBW=VBW=200Hz, Span=5KHz, Detector=RMS. The 99 % OBW function shall be used to determine the operating frequency range, f_H is the frequency of the upper marker resulting from the OFR, f_L is the frequency of the lower marker resulting from the OFR.
4. Both normal test condition and extreme test condition applied

Test Result

☒Test Mode: Mode 3

Test Frequency (kHz)	Frequency Range (kHz)		Maximum level @10m (dBμA/m)	Limit @ 10m (dBμA/m)	Result
128.8	f_{SL}-f_L	126.308 - 128.302	Less than -20.35	See figure 4	Pass
	f_L	128.302	-20.35	65.66	Pass
	f_H	129.299	-20.87	65.66	Pass
	f_H-f_{SH}	129.299 - 131.293	Less than -20.87	See figure 4	Pass

☒Test Mode: Mode 4

Test Frequency (kHz)	Frequency Range (kHz)		Maximum level @10m (dBμA/m)	Limit @ 10m (dBμA/m)	Result
113.65-194.33	f_{SL}-f_L	111.79 - 113.774	Less than -28.57	See figure 4	Pass
	f_L	113.774	-28.57	42.00	Pass
	f_H	195.178	-28.69	-5.00	Pass
	f_H-f_{SH}	195.178 - 197.17	Less than -28.69	See figure 4	Pass

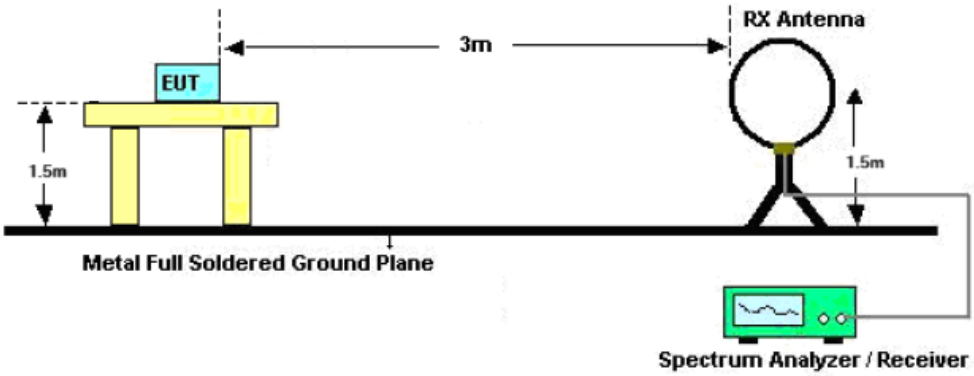
5.4 Transmitter Spurious Emissions (Frequency Below 30MHz)

Test Limit

Operating Mode		
Frequency Range	Distance	Maximum Field Strength Limit
9 kHz ≤ f < 10 MHz	10m	27dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-3.5 dBμA/m
Stand-by Mode		
9 kHz ≤ f < 10 MHz	10m	5.5dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-25 dBμA/m

Note: "Operating" means mode 2, 3 and 4 according to Table 2; "standby" means mode 1 according to Table 2.

Test Setup



Test Procedure

◆ For test method of frequency range (9 kHz-30MHz)

1. The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The H-field is measured with a shielded loop antenna connected to a measurement receiver.
4. The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12

Test Result

☒Test Mode: Mode 3 (Operating Mode: Face)

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.033	20.48	35.88	56.36	45.90	-5.60	21.35	26.95
0.364	17.36	33.13	50.49	40.03	-11.47	10.93	22.40
0.647	14.68	33.13	47.81	37.35	-14.15	8.43	22.58
1.708	14.59	25.45	40.04	29.58	-21.92	4.22	26.13
3.057	12.69	22.66	35.35	24.89	-26.61	1.69	28.30
5.511	11.08	18.56	29.64	19.18	-32.32	-0.87	31.45

☒Test Mode: Mode 3 (Operating Mode: Side)

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.054	20.79	35.88	56.67	46.21	-5.29	19.22	24.51
0.297	17.66	33.13	50.79	40.33	-11.17	11.82	22.98
0.614	14.40	33.13	47.53	37.07	-14.43	8.66	23.09
1.808	14.77	25.45	40.22	29.76	-21.74	3.97	25.71
3.636	12.47	22.66	35.13	24.67	-26.83	0.94	27.76
4.612	11.26	18.56	29.82	19.36	-32.14	-0.10	32.04

☒Test Mode: Mode 4 (Operating Mode: Face), Lowest Channel Worst Case

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.020	20.53	35.88	56.41	45.95	-5.55	23.53	29.08
0.229	17.73	33.13	50.86	40.40	-11.10	12.94	24.05
0.524	14.41	33.13	47.54	37.08	-14.42	9.35	23.76
1.467	14.57	25.45	40.02	29.56	-21.94	4.88	26.82
2.891	12.76	22.66	35.42	24.96	-26.54	1.93	28.48
4.638	11.01	18.56	29.57	19.11	-32.39	-0.12	32.27

☒Test Mode: Mode 4 (Operating Mode: Side), Lowest Channel Worst Case

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.025	20.73	35.88	56.61	46.15	-5.35	22.54	27.90
0.240	17.54	33.13	50.67	40.21	-11.29	12.74	24.03
0.563	14.62	33.13	47.75	37.29	-14.21	9.03	23.24
1.354	14.51	25.45	39.96	29.50	-22.00	5.22	27.22
3.258	12.56	22.66	35.22	24.76	-26.74	1.41	28.15
3.071	11.03	18.56	29.59	19.13	-32.37	1.67	34.04

Notes:

1. Negative sign (-) in the margin column signify levels below the limit.
2. Other emissions found were at least 20 dB below the limit.
3. E-Field Strength@3m(dBμV/m) = Reading Level + Factor
4. E-Field Strength@10m(dBμV/m) = E-Field Strength@3m(dBμV/m)+10.46dB
5. H-Field Strength(dBμA/m)= E-Field Strength(dBμV/m)-51.5dB

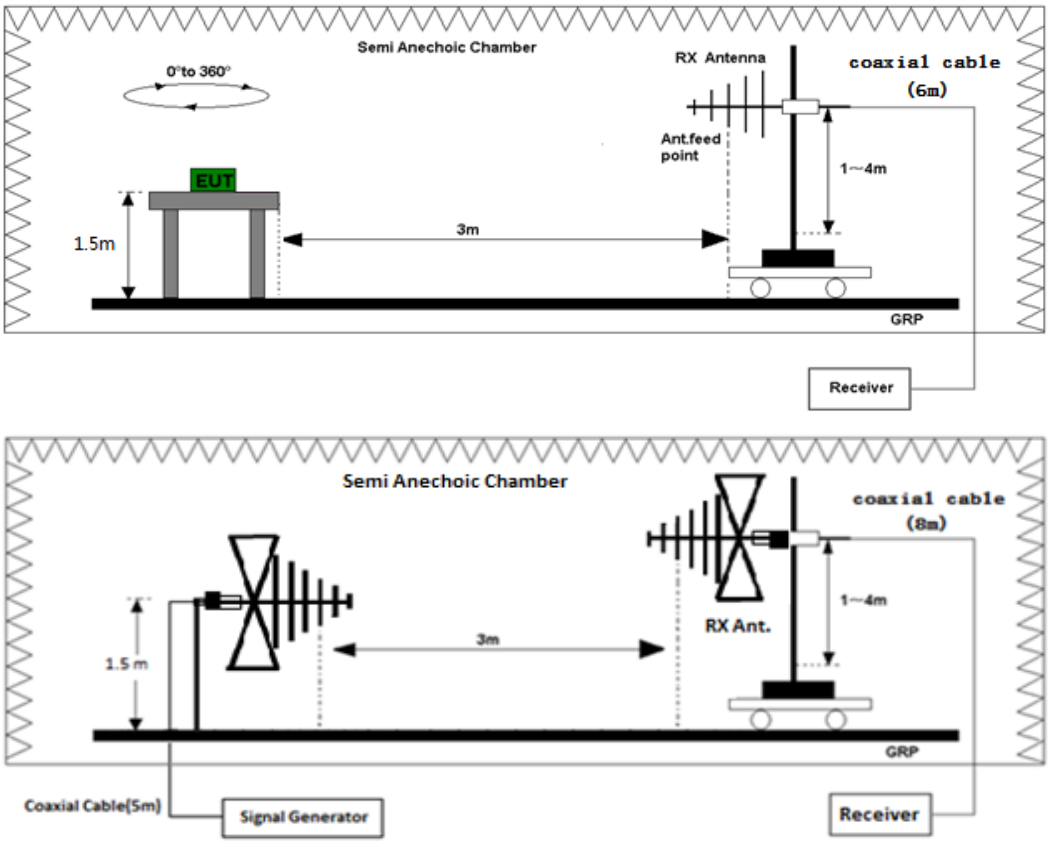
5.5 Transmitter Spurious Emissions (Frequency Above 30MHz)

Spurious emissions are emissions at frequencies other than those of the carrier and sidebands associated with normal modulation.

Test Limit

Frequency Range	Operating Mode Limit	Standby Mode Limit
47 MHz to 74 MHz	4 nW	2 nW
87.5 MHz to 118 MHz	4 nW	2 nW
174 MHz to 230 MHz	4 nW	2 nW
470 MHz to 790 MHz	4 nW	2 nW
Other frequency between 30 MHz to 1000 MHz	250 nW	2 nW

Test Setup



Radiated Emission Test Set-Up Frequency 30 MHz ~ 1 GHz

Test Procedure

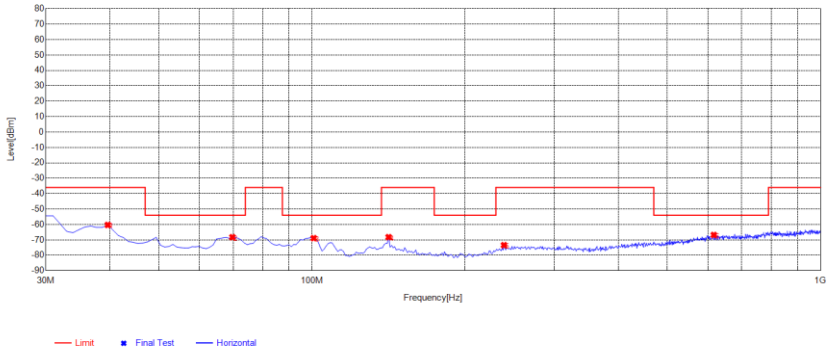
◆ For test method of frequency range (30 MHz-1000MHz)

1. EUT was placed on a 1.5m height wooden table. The search antenna is placed at 3m distances from the EUT and search antenna height is from 1-4m. With the transmitter operating at continuously mode, the turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction is determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.
2. The EUT was removed from the turntable and replaced with a linearly polarized antenna connected to a calibrated RF signal generator. The RF generator was set to a measured emission frequency and the search antenna was raised and lowered to produce a maximum received reading. The generator output was increased to match the radiated emission reading measured previously, and the result expressed in dB EIRP or ERP, correcting for substitution antenna gain at each frequency.
3. Factor=Antenna Factor + Cable loss, Margin=Limit- Measurement Level.
4. The “Factor” value can be calculated automatically by software of measurement system.
5. All test modes had been pre-tested. The worst case and recorded in the report.

Test Result

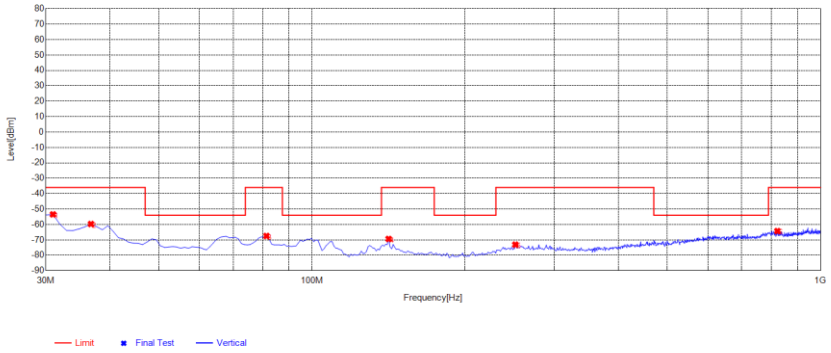
Test mode:	Operating (Mode 3)	Test Frequency:	128.8kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	39.7	-90.01	-60.35	-36.00	24.35	29.66	360	Horizontal
2	69.77	-92.60	-68.28	-54.00	14.28	24.32	300	Horizontal
3	100.81	-88.73	-68.90	-54.00	14.90	19.83	270	Horizontal
4	141.55	-95.08	-68.26	-36.00	32.26	26.82	70	Horizontal
5	238.55	-99.64	-73.46	-36.00	37.46	26.18	300	Horizontal
6	616.85	-100.99	-66.85	-54.00	12.85	34.14	330	Horizontal

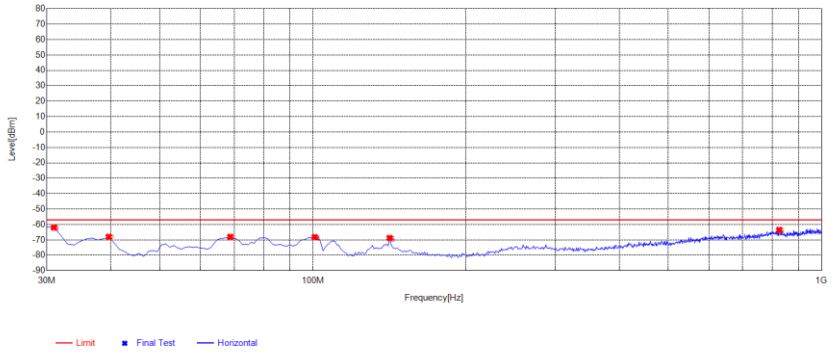
Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	30.97	-83.06	-53.50	-36.00	17.50	29.56	150	Vertical
2	36.79	-89.35	-59.73	-36.00	23.73	29.62	70	Vertical
3	81.41	-91.20	-67.50	-36.00	31.50	23.70	70	Vertical
4	141.55	-96.24	-69.42	-36.00	33.42	26.82	60	Vertical
5	251.16	-100.58	-73.13	-36.00	37.13	27.45	0	Vertical
6	822.49	-101.05	-64.30	-36.00	28.30	36.75	300	Vertical

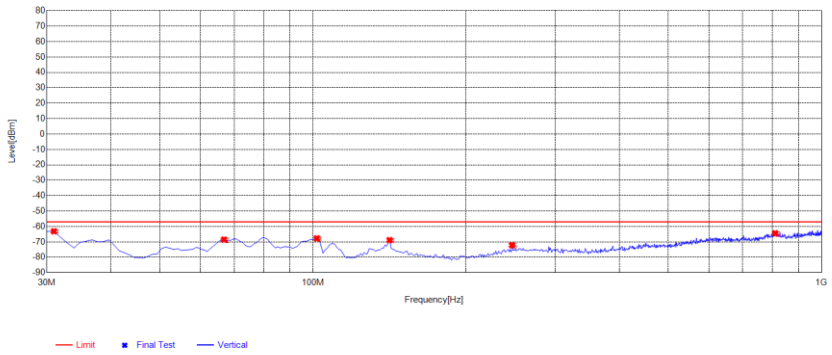
Test mode:	Operating (Mode 4)	Test Frequency:	132.45kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	30.97	-91.58	-62.02	-57.00	5.02	29.56	200	Horizontal
2	39.7	-97.71	-68.05	-57.00	11.05	29.66	230	Horizontal
3	68.8	-92.60	-68.05	-57.00	11.05	24.55	200	Horizontal
4	100.81	-88.06	-68.23	-57.00	11.23	19.83	200	Horizontal
5	141.55	-95.61	-68.79	-57.00	11.79	26.82	190	Horizontal
6	825.4	-100.27	-63.56	-57.00	6.56	36.71	270	Horizontal

Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	30.97	-92.72	-63.16	-57.00	6.16	29.56	70	Vertical
2	66.86	-93.35	-68.56	-57.00	11.56	24.79	140	Vertical
3	101.78	-87.69	-67.78	-57.00	10.78	19.91	340	Vertical
4	141.55	-95.72	-68.90	-57.00	11.90	26.82	260	Vertical
5	246.31	-99.22	-72.16	-57.00	15.16	27.06	80	Vertical
6	810.85	-101.52	-64.47	-57.00	7.47	37.05	60	Vertical

5.6 Receiver Blocking

Test Limit

The EUT shall achieve the wanted performance criterion, in the presence of the blocking signal.

	In-band signal	OOB signal	Remote-band signal
Frequency	Centre frequency (f_c) of the WPT system (see clause 4.3.3)	$f = f_c \pm F$ (see note)	$f = f_c \pm 10*F$ (see note)
Signal level field strength at the EUT	72dBμA/m	72dBμA/m	82dBμA/m
Note: F = OFR see clause 4.3.3.			

Test Setup

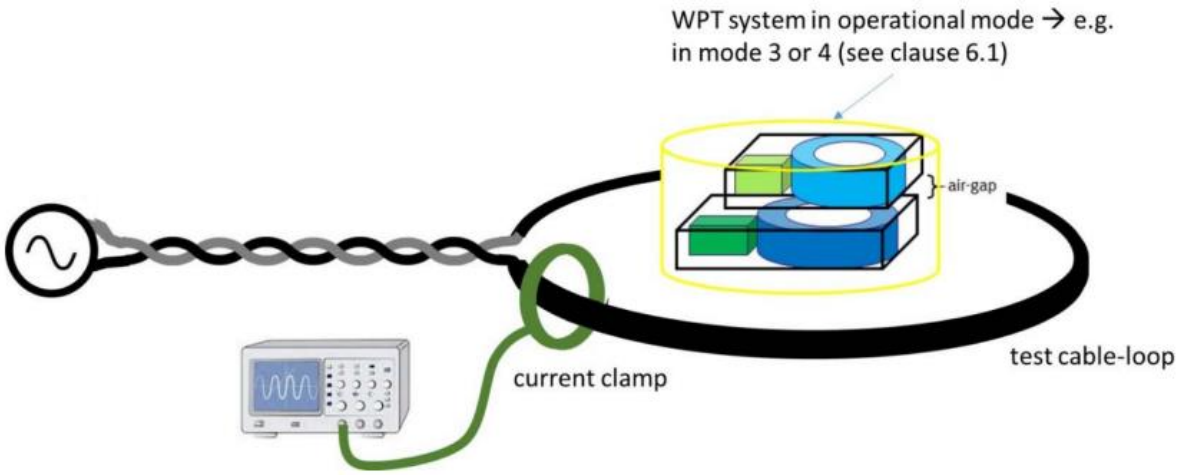


Figure 11: Schematic test set-up for the RX-blocking test

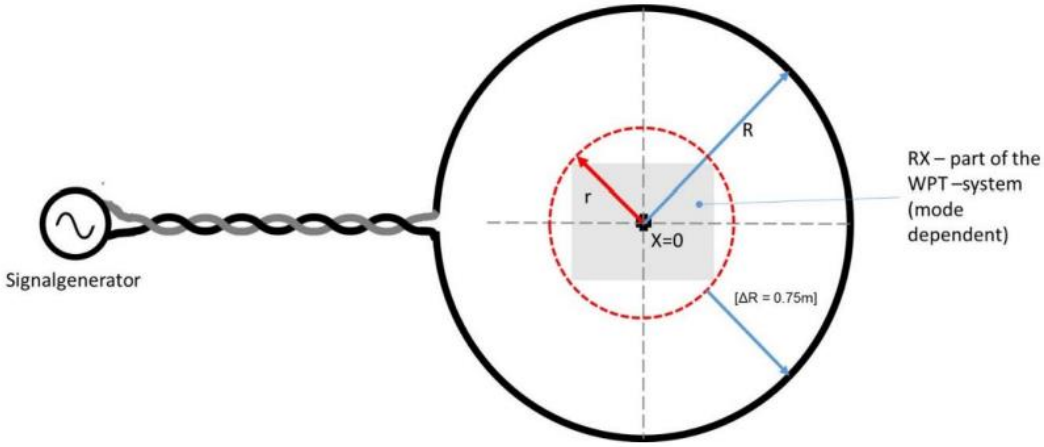


Figure 12: Schematic test set-up for the RX-blocking test

Test Procedure

The fulfilment of the WPT system performance criterion in all possible operational modes (see clause 4.2.3) shall be tested in presence of the inference signals according to Table 6.

- The manufacturer shall declare in which device orientation(s) (worst case) the test shall be performed.
- The WPT system shall initially operate without interference according to its specified sensitivity (detecting an specific object in the maximum depth as declared by the manufacturer (see clause 4.2.2 on wanted performance criteria)).
- The test setup is visualized in the following Figures 11 and 12.
- The tool shall be operated as intended (e.g. some tools might require to be moved across the object, some tool can be used stationary).
- The test shall be carried out inside a test chamber according to clauses C.1.1 and C.1.2 in ETSI EN 300 330 [1].
- A test loop with a radius r shall be used to create the magnetic field; the test loop shall lie on a non-metallic ground and the minimum distance to metallic objects (e.g. ground plane) shall be 0,75 m.
- The EUT shall be placed to the centre of the test-loop (e.g. see Figures 11 and 12).
- The test loop shall be sufficiently large so that the test loop itself does not influence the WPT system; The radius R of the test-loop shall be in minimum ΔR = 0,75 m larger than the maximum dimension r of the EUT.
- (See Figure 12): R >= r + ΔR.
- The maximum H-Field can be calculated from the loop current I (into the test-loop) with the following formula:

$$H = \frac{I}{2R}$$

Test Result

☒Test Mode: Mode 3

Interference Type	Test Frequency (kHz)	Signal level @ EUT	Performance	Result
In-band signal	128.8	72dBuA/m	No function loss	Pass
OOB signal	127.803	72dBuA/m	No function loss	Pass
	129.797	72dBuA/m	No function loss	Pass
Remote-band signal	118.83	82dBuA/m	No function loss	Pass
	138.77	82dBuA/m	No function loss	Pass

Appendix I: Photographs of Test Setup

Radiated Spurious Emissions Below 1GHz Test Setup

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC05443250435AP01

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3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

-----End of Report-----

Radio Test Report

Report No.: AGC05443250435ER02

PRODUCT DESIGNATION	:	3 in 1 wireless charger
BRAND NAME	:	N/A
MODEL NAME	:	MO2749
APPLICANT	:	MID OCEAN BRANDS B.V.
DATE OF ISSUE	:	May 15, 2025
STANDARD(S)	:	ETSI EN 303 417 V1.1.1 (2017-09)
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 15, 2025	Valid	Initial Release

Table of Contents

1. General Information

Applicant	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Factory	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Product Designation	3 in 1 wireless charger
Brand Name	N/A
Test Model	MO2749
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Apr. 27, 2025
Date of Test	Apr. 27, 2025~May 15, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-EU-WPT-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Cici Li (Project Engineer)	May. 15, 2025
Reviewed By	Bibo Zhang (Reviewer)	May. 15, 2025
Approved By	Angela Li (Authorized Officer)	May. 15, 2025

2. Product Information

2.1 Product Technical Description

Equipment Type	WPT System
Permitted Range of Operating Frequency	☐WPT Band 1: 19~21kHz
	☐WPT Band 2: 59~61kHz
	☐WPT Band 3: 79~90kHz
	☒WPT Band 4: 100~119kHz,119~140kHz,140~148.5kHz
	☒WPT Band 4: 148.5~300kHz
	☐WPT Band 5: 6765kHz~6795kHz
Operation Frequency	110kHz-205kHz
Hardware Version	V1.0
Software Version	V1.0
Modulation Type	ASK
Corrected Amplitude H-field@10m	-11.18dBμA/m (Max.)
Antenna Designation	Coil Antenna
Input Rating	Type-C input: DC 5V/3A, 9V/3A
Output Rating	Wireless output for Mobile phone: 15W Max.

Note: For more details, refer to the user's manual of the EUT.

2.2 Objective

Perform Radio Spectrum tests for CE Marking according to the provisions of article 3.2 of the Radio Equipment Directive (2014/53/EU) for the WPT function of the EUT.

2.3 Test Items and The Results

The tests were performed according to following standards:

ETSI EN 303 417 V1.1.1 (2017-09)	Wireless power transmission systems, using technologies other than radio frequency beam in the 19-21kHz,59-61kHz,79-90kHz,100-300 kHz, 6765-6795kHz ranges; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU

Test items and the results are as bellow:

No.	Test Item	Standard Require	Condition	Result
Harmonised Standard ETSI EN 303 417				
1	Permitted range of Operating Frequencies	sub-clause 4.3.2	/	Pass
2	Operating Frequency Ranges	sub-clause 4.3.3	/	Pass
3	H-field Requirements	sub-clause 4.3.4	/	Pass
4	Transmitter Spurious Emissions	sub-clause 4.3.5	/	Pass
5	Transmitter Out of Band (OOB) Emissions	sub-clause 4.3.6	/	Pass
6	WPT System Unwanted Conducted Emissions	sub-clause 4.3.7	Only for equipment which has a cable between the off board power supply and the primary coil which is longer than 3 m	N/A
7	Receiver Blocking	sub-clause 4.4.2	Only for Mode1, Mode2 and Mode3 (see Table 2)	Pass

Note: N/A means not applicable. This equipment does not meet the above test item evaluation conditions, so it is not applicable.

2.3 Overview of Operational Modes within a WPT System

EN 303 417 Clauses 4.2.3 Table 2: Overview of operational modes within a WPT system					
Operational Mode	Set-up	Function of base station	Function of mobile device	Test Scenario	Conformance Requirements
Mode 1: base station in stand-by, idle mode	Single device	TX	Not applicable	Single radiation test (TX) with the base station/charging pad. The test set-up as described in clause 6.1.2 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Performance criteria test (RX test) (clause 4.4)
Mode 2: Communication before charging, adjustment charging mode / position	In combination	TX and RX	TX and RX	Specific test setup, declared by the manufacturer. Manufacturer shall declare the maximal distance between base station and mobile device the WPT system is able to communicate (distance D). The test setup- up shall be performed with the largest communication distance. The test set-up as described in clause 6.1.3 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Wanted performance criteria test (RX test) (clause 4.4)
Mode 3: Communication	WPT system alignment	TX and RX	TX and RX	● Worst case alignment ● Both tests can be performed within one set-up, worst-case alignment. ● The test set-up as described in clause 6.1.4 shall be used.	● Operating frequency range (clause 4.3.3) ● H-Field emission (clause 4.3.4) ● TX spurious (clauses 4.3.5, 4.3.6 and 4.3.7) ● Wanted Performance criteria test (RX test) (clause 4.4)
Mode 4: energy transmission	WPT system alignment	TX and RX	TX and RX		

2.4 Description of Test Modes

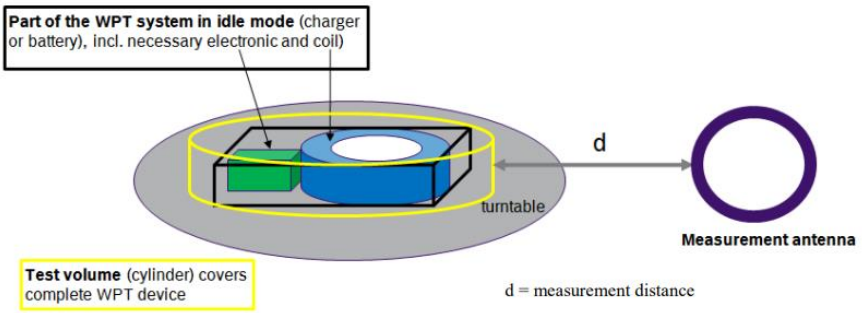
No.	Test Mode Description	Test Channel		
		Lowest	Middle	Highest
1	base station in stand-by, idle mode	/		
2	Communication before charging, adjustment charging mode / position	/	/	/
3	Communication	120.8kHz		
4	Energy transmission	113.65kHz	127.64kHz	194.33kHz

Note:
1) During the initial establishment of the charging mode (mode 2), no or very low emission occur (below the sensitivity level of the test set-up), so the mode 2 can be assumed as irrelevant for the test.
2) Mode 1 is only for base station function equipment and is not taken into consideration
3) Mode 3 and mode 4 have been performed within one set-up, worst-case alignment.
4) The communication frequency 120.8 kHz corresponds to the maximum field strength.

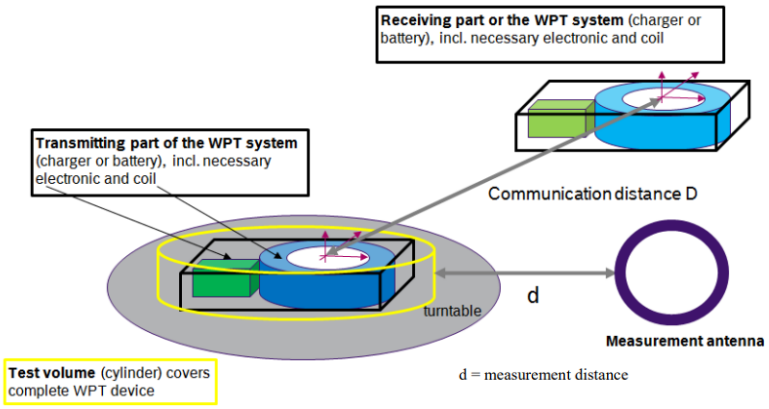
3. Setup of Equipment Under Test

3.1 Setup Configuration of EUT

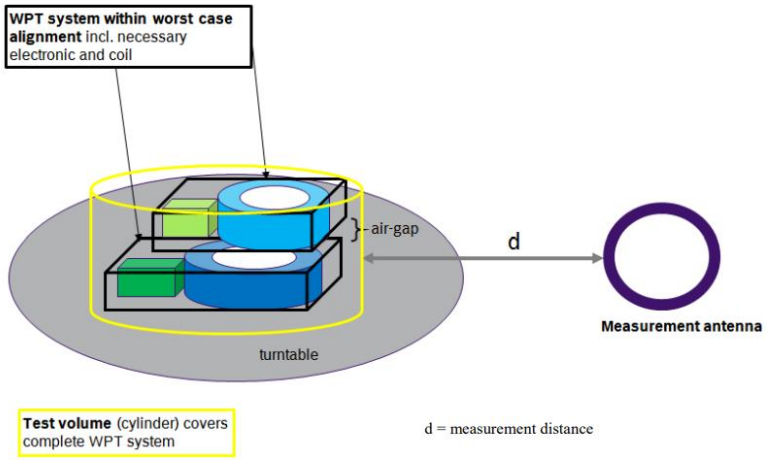
◆ **Mode 1: Idle Mode**



◆ **Mode 2: Charging Adjustment**



◆ **Mode 3 and Mode 4: Power Transmission Arrangement**



3.2 Support Equipment

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
☐No ☒Yes				
Item	Equipment	Manufacturer	Model No.	Specification
1	Wireless Charging Load	--	YBZ-QI 2.0	Support 5W,7.5W,15W
2	Adapter	HUAWEI	HW-200440C00	Input(AC):100V-240V 50/60Hz 2.4A Output(DC):USB-C(5V/3A;9V/3A;10V/4A;11V/6A;12V/3A;15V/3A;20V 4.4A) USB-A(5V/2A;10V/4A;11V/6A;20V/4.4A)

4. Test Environment

4.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

4.3 Environmental Conditions

Normal Condition	VN=nominal Voltage	DC 9V
	TN=normal Temperature	25 °C
Extreme Condition	VL=lower Voltage	DC 8.1V
	TL=lower Temperature	-20 °C
	VH=higher Voltage	DC 9.9V
	TH=higher Temperature	-40 °C
Note: The maximum temperature of 40 is not a standard requirement and is measured according to the maximum service temperature stated by the manufacturer.		

4.4 Measurement Uncertainty

Test Items	Measurement Uncertainty
Frequency error	± 1 x 10^{-7}
Transmitter power conducted	± 0.75dB
Maximum Frequency Deviation: Within 300Hz and 6KHz of Audio Frequency Within 6KHz and 25KHz of Audio Frequency	± 5% ± 3dB
Adjacent channel power	± 3dB
Conducted Emission of Transmitter, Valid Up to 12.75GHz	± 4dB
Conducted Emissions of Receivers	± 3dB
Radiated Emission of Transmitter, Valid Up to 12.75GHz	± 6dB

Note:This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.5 List of Equipment Used

● Radiated Spurious Emission& RF Conducted Test							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2025-01-14	2026-01-13
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2025-03-14	2027-03-13
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2025-03-27	2026-03-26
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
☒	AGC-EM-A088	UHF Filter	N/A	N/A	N/A	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

5. ETSI EN 303 417 Requirements for Transmitter and Receiver

5.1 Operating Frequency Ranges and Permitted Range of Operating Frequencies

Test Limit

The permitted range of operating frequency range(s) for intentional emissions shall be within 19 - 21 kHz, 59 - 61 kHz, 79 - 90 kHz, 100 - 300 kHz, 6 765 - 6 795 kHz,

Test Description

- The operating frequency range is the frequency range over which the WPT system is intentionally transmitting (all operational modes, see clause 4.2.3, Table 2).
- The operating frequency range(s) of the WPT system are determined by the lowest (f_L) and highest frequency (f_H) as occupied by the power envelope.
- The WPT system could have more than one operating frequency range. For a single frequency systems the OFR is equal to the occupied bandwidth (OBW) of the WPT system.
- For multi-frequency systems the OFR is described in Figures 2 and 3.

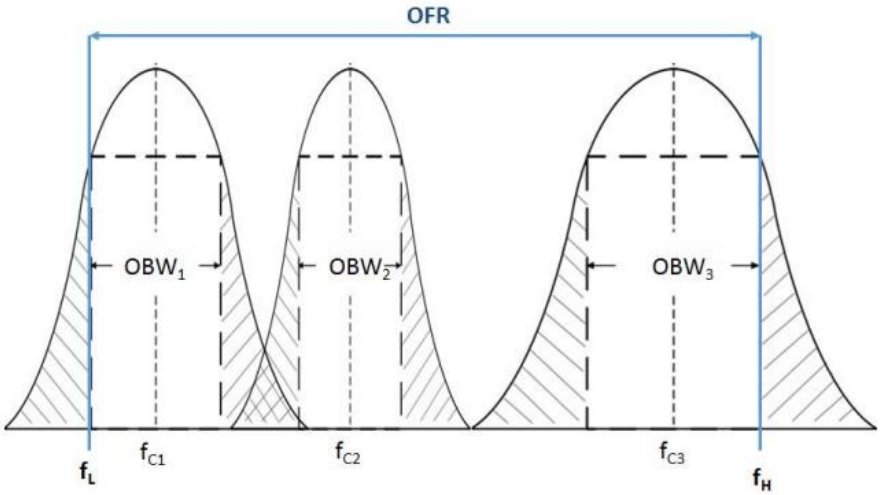


Figure 2: OFR of a multi - frequency WPT system within one frequency range of Table 2 and within one WPT system cycle time

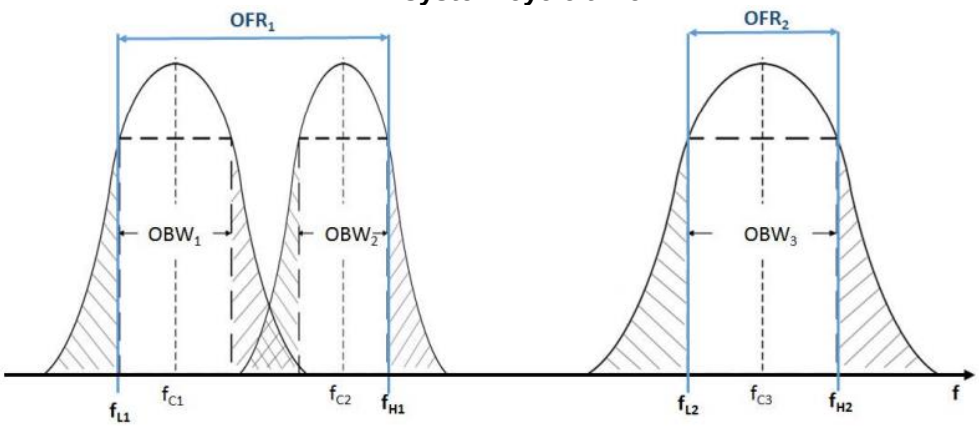
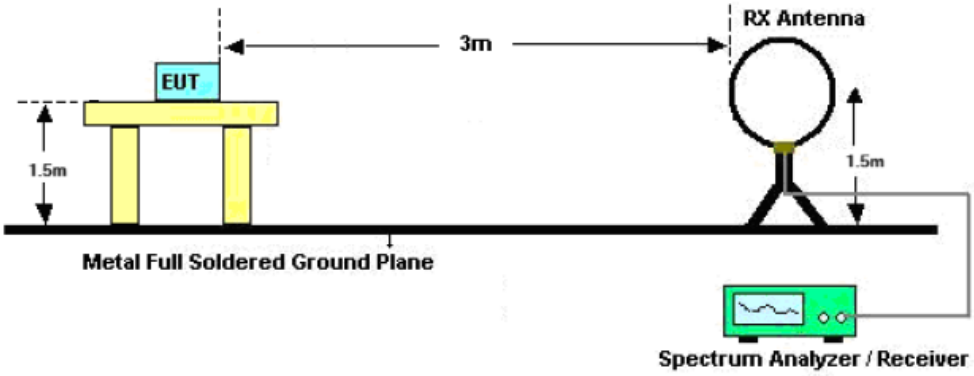


Figure 3: OFR of a multi - frequency WPT system within two frequency ranges of Table 2 and within one WPT system cycle time

Test Setup



Test Procedure

1. The EUT was placed on a turn table which is 1.5m above ground plane.
2. The EUT was modulated by normal signal,
3. Set SPA Center Frequency = fundamental frequency, RBW=VBW=200Hz, Span=5kHz, Detector=RMS. The 99 % OBW function shall be used to determine the operating frequency range, f_H is the frequency of the upper marker resulting from the OFR, f_L is the frequency of the lower marker resulting from the OFR.
4. Both normal test condition and extreme test condition applied

Test Result

☒Test Mode: Mode 3

Frequency (kHz)	Test Conditions		99% Bandwidth (kHz)	F_L at 99% BW (kHz)	F_H at 99% BW (kHz)	Limit Band (kHz)	Result
	Temperature (°C)	Voltage (V)					
120.8	-20	9.9	0.993	120.303	121.296	100~300	Pass
		8.1	0.987	120.307	121.294		Pass
	25	9.0	0.996	120.302	121.298		Pass
	40	8.1	0.988	120.303	121.291		Pass
		9.9	0.987	120.307	121.294		Pass

☒Test Mode: Mode 4

Frequency Range (kHz)	Test Conditions		Lower Frequency (kHz)	Upper Frequency (kHz)	Limit Band (kHz)
	Temperature (°C)	Voltage (V)			
113.65-194.33	-20	9.9	113.155	194.823	100~300
		8.1	113.156	194.827	
	25	9.0	113.153	194.827	
	40	8.1	113.159	194.822	
		9.9	113.156	194.825	
OFR	81.674kHz				
Result	Pass				

5.2 Transmitter H-Field Requirements

Test Limit

- The H-field limits are provided in Table 3.
- They have been specified for control of any radiated emissions within the OFR originating from the WPT system (power transmission and accompanying data communication).
- The H-field limits in Table 3 are EU wide harmonised according to EC Decision 2013/752/EU [i.2]. Further information is available in CEPT/ERC/REC 70-03 [i.1].

Table 3: H-field limits

Frequency range [MHz]	H-field strength limit [dBµA/m at 10 m]	Comments
0,019 ≤ f < 0,021	72	
0,059 ≤ f < 0,061	69,1 descending 10 dB/dec above 0,059 MHz	See note 1
0,079 ≤ f < 0,090	67,8 descending 10 dB/dec above 0,079 MHz	See note 2
0,100 ≤ f < 0,119	42	
0,119 ≤ f < 0,135	66 descending 10 dB/dec above 0,119 MHz	See note 1
0,135 ≤ f < 0,140	42	
0,140 ≤ f < 0,1485	37,7	
0,1485 ≤ f < 0,30	-5	
6,765 ≤ f < 6,795	42	
NOTE 1: Limit is 42 dBµA/m for the following spot frequencies: 60 kHz ± 250 Hz and 129,1 kHz ± 500 Hz. NOTE 2: At the time of preparation of the present document the feasibility of increased limits for high power wireless power transmission systems to charge vehicles [i.4] was prepared. New specific requirements for such systems (e.g. higher H-field emission limits in the 79 - 90 kHz band) will be reflected within a future revision of the present document.		

- The H-field limit in dBµA/m at 3 m, H_{3m}, is determined by the following equation:

$$H_{3m} = H_{10m} + C_3 \quad (F.2)$$

Where: H_{10m} is the H-field limit in dBµA/m at 10 m distance according to the present document; and C_3 is a conversion factor in dB determined from figure F.2.

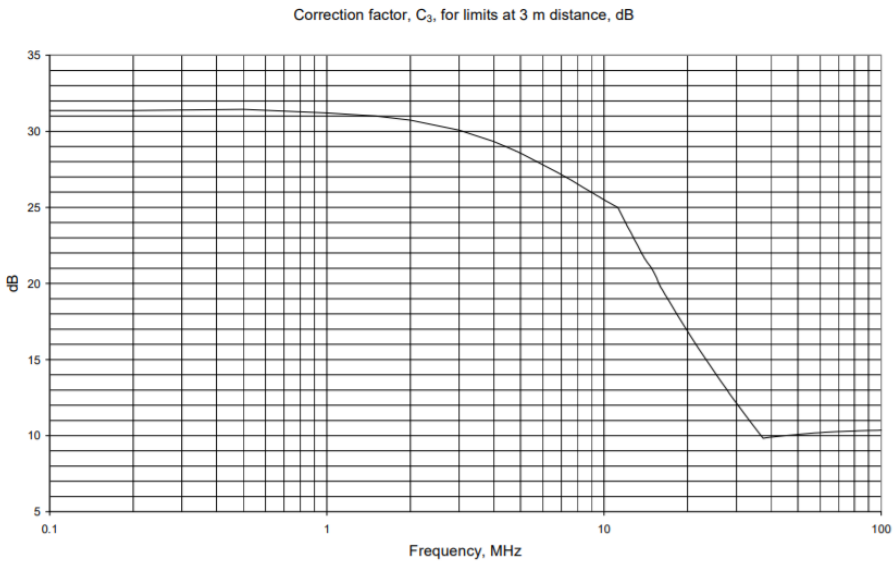
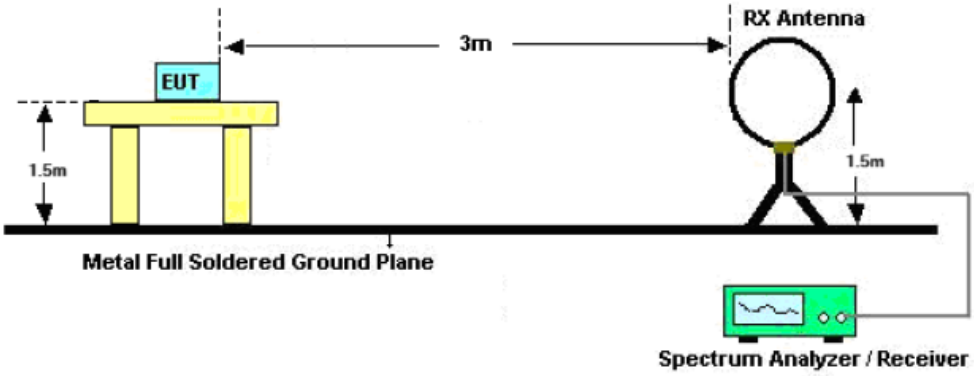


Figure H.2: Conversion factor C_3 versus frequency

- E(dBµV/m) = dBµA/m+51.5;
- ERP (dBm)=E(dBµV/m) +20lg(D)-104.8, D is the measurement distance;
- ERP=10lgP(mW)

Test Setup



Test Procedure

1. The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The H-field is measured with a shielded loop antenna connected to a measurement receiver.
4. The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12.
5. The EUT operate with modulation under normal and extreme conditions.

Test Result

Test conditions	Test Temp.	Test Volt.	Note
TN/VN	25°C	9.0V	Worst case
TL/ VL	-20°C	9.9V	-
TH/VL	40°C	9.9V	-
TL/VH	-20°C	8.1V	-
TH/VH	40°C	8.1V	-

☒Test Mode: Mode 3

Frequency (kHz)	Reading (dBμA/m)	Factor (dB)	Field Strength (dBμV/m@3m)	Field Strength (dBμA/m@3m)	Calculated (dBμA/m@10m)	Limit at 10m (dBμA/m@10m)	Result
120.8	44.37	27.15	71.52	20.02	-11.18	65.93	Pass

☒Test Mode: Mode 4

Frequency (kHz)	Reading (dBμA/m)	Factor (dB)	E-Field Strength (dBμV/m@3m)	H-Field Strength (dBμA/m@3m)	Calculated (dBμA/m@10m)	Limit at 10m (dBμA/m@10m)	Result
113.65	33.68	27.15	60.83	9.33	-21.87	42.00	Pass
127.64	34.67	27.15	61.82	10.32	-20.88	65.70	Pass
194.33	33.82	27.15	60.97	9.47	-21.73	-5.00	Pass

Remark:
1. Field Strength at 3m(dBμA/m) = Reading Level + Corrected Factor
2. Calculated at 10m(dBμA/m) = Field Strength at 3m(dBμA/m)-31.2dB
3. For the calculated method, please refer to Annex F at EN 300330.

5.3 Transmitter Out of Band (OOB) Emissions

Test Limit

The OOB limits are visualized in Figures 4 and 5; they are descending from the intentional limits from Table 3 at f_H/f_L with 10 dB/decade.

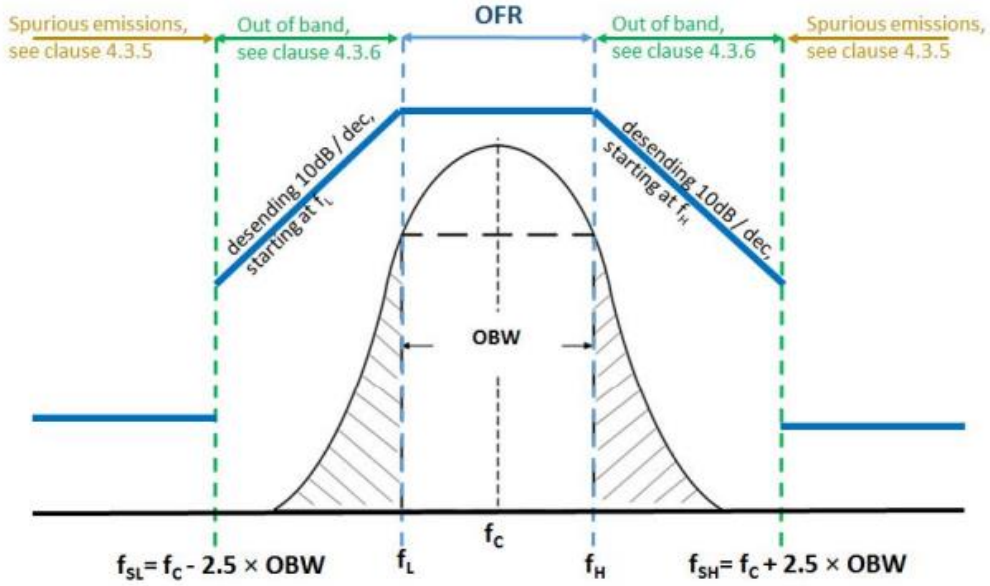


Figure 4: Out of band and spurious domain of a single frequency WPT system

The transmitter spurious emissions for a multi frequency system (within one WPT frequency range from Table 2) are to be considered in frequency ranges defined in Figure 5 ($f < f_{SL}$ and $f > f_{SH}$)

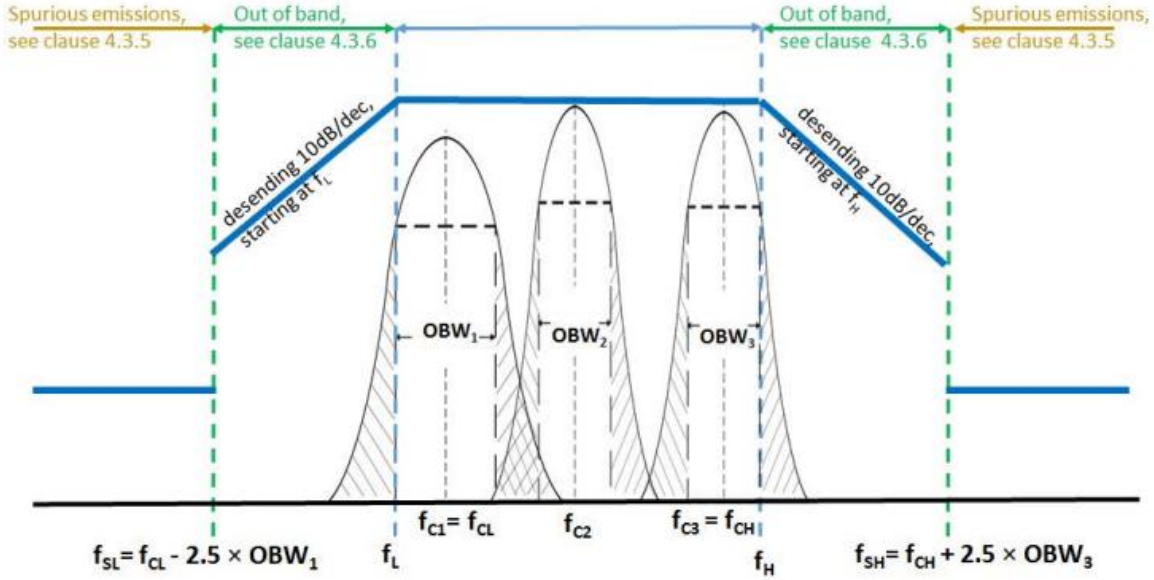
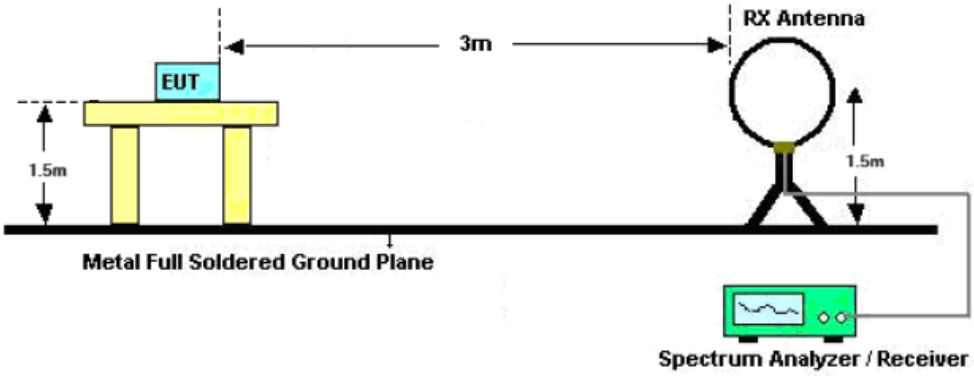


Figure 5: Out of band and spurious domain of a multi - frequency system (during one WPT system cycle time)

Test Setup



Test Procedure

1. The EUT was placed on a turn table which is 1.5m above ground plane.
2. The EUT was modulated by normal signal,
3. Set SPA Center Frequency = fundamental frequency, RBW=VBW=200Hz, Span=5KHz, Detector=RMS. The 99 % OBW function shall be used to determine the operating frequency range, f_H is the frequency of the upper marker resulting from the OFR, f_L is the frequency of the lower marker resulting from the OFR.
4. Both normal test condition and extreme test condition applied

Test Result

☒Test Mode: Mode 3

Test Frequency (kHz)	Frequency Range (kHz)		Maximum level @10m (dBμA/m)	Limit @ 10m (dBμA/m)	Result
120.8	f_{SL}-f_L	118.31 - 120.302	Less than -20.34	See figure 4	Pass
	f_L	120.302	-20.34	65.93	Pass
	f_H	121.298	-20.86	65.93	Pass
	f_H-f_{SH}	121.298 - 123.29	Less than -20.86	See figure 4	Pass

☒Test Mode: Mode 4

Test Frequency (kHz)	Frequency Range (kHz)		Maximum level @10m (dBμA/m)	Limit @ 10m (dBμA/m)	Result
113.65-194.33	f_{SL}-f_L	111.165 - 113.153	Less than -31.03	See figure 4	Pass
	f_L	113.153	-31.03	42.00	Pass
	f_H	194.827	-31.41	-5.00	Pass
	f_H-f_{SH}	194.827 - 196.815	Less than -31.41	See figure 4	Pass

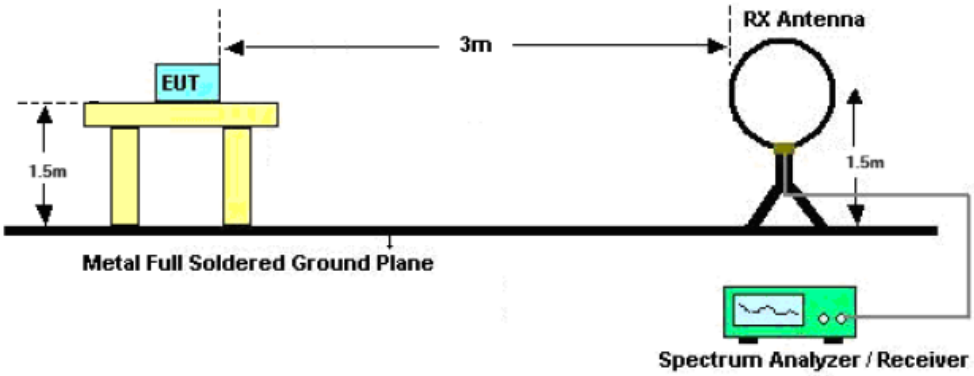
5.4 Transmitter Spurious Emissions (Frequency Below 30MHz)

Test Limit

Operating Mode		
Frequency Range	Distance	Maximum Field Strength Limit
9 kHz ≤ f < 10 MHz	10m	27dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-3.5 dBμA/m
Stand-by Mode		
9 kHz ≤ f < 10 MHz	10m	5.5dBμA/m at 9 kHz descending 3 dB/oct
10 MHz ≤ f < 30 MHz	10m	-25 dBμA/m

Note: "Operating" means mode 2, 3 and 4 according to Table 2; "standby" means mode 1 according to Table 2.

Test Setup



Test Procedure

◆ For test method of frequency range (9 kHz-30MHz)

1. The EUT was placed on the top of an insulating table 1.5 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The H-field is measured with a shielded loop antenna connected to a measurement receiver.
4. The measuring bandwidth and detector type of the measurement receiver shall be in accordance with EN 300 330 V2.1.1 clause 5.12

Test Result

☒Test Mode: Mode 3 (Operating Mode: Face)

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.040	20.57	35.88	56.45	45.99	-5.51	20.57	26.07
0.299	17.60	33.13	50.73	40.27	-11.23	11.78	23.01
0.557	14.44	33.13	47.57	37.11	-14.39	9.08	23.47
1.916	14.78	25.45	40.23	29.77	-21.73	3.72	25.45
2.767	12.59	22.66	35.25	24.79	-26.71	2.12	28.84
4.460	10.97	18.56	29.53	19.07	-32.43	0.05	32.48

☒Test Mode: Mode 3 (Operating Mode: Side)

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.035	20.82	35.88	56.70	46.24	-5.26	21.15	26.41
0.310	17.64	33.13	50.77	40.31	-11.19	11.63	22.82
0.654	14.60	33.13	47.73	37.27	-14.23	8.38	22.62
1.828	14.35	25.45	39.80	29.34	-22.16	3.92	26.08
3.004	12.67	22.66	35.33	24.87	-26.63	1.77	28.39
4.427	11.29	18.56	29.85	19.39	-32.11	0.08	32.19

☒Test Mode: Mode 4 (Operating Mode: Face), Lowest Channel Worst Case

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.025	20.51	35.88	56.39	45.93	-5.57	22.51	28.09
0.282	17.63	33.13	50.76	40.30	-11.20	12.04	23.24
0.503	14.46	33.13	47.59	37.13	-14.37	9.53	23.90
1.552	14.66	25.45	40.11	29.65	-21.85	4.63	26.49
2.317	12.75	22.66	35.41	24.95	-26.55	2.89	29.44
3.458	11.32	18.56	29.88	19.42	-32.08	1.15	33.24

☒Test Mode: Mode 4 (Operating Mode: Side), Lowest Channel Worst Case

Transmitter Spurious Emissions for 9kHz to 30MHz							
Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	E-Field Strength@3m (dBμV/m)	E-Field Strength@10m (dBμV/m)	Calculated@10m (dBμA/m)	Limit@10m (dBμA/m)	Margin (dB)
0.020	20.55	35.88	56.43	45.97	-5.53	23.47	29.00
0.295	17.78	33.13	50.91	40.45	-11.05	11.85	22.90
0.391	14.50	33.13	47.63	37.17	-14.33	10.62	24.95
1.334	14.67	25.45	40.12	29.66	-21.84	5.29	27.13
2.793	12.73	22.66	35.39	24.93	-26.57	2.08	28.65
3.431	11.26	18.56	29.82	19.36	-32.14	1.19	33.33

Notes:

1. Negative sign (-) in the margin column signify levels below the limit.
2. Other emissions found were at least 20 dB below the limit.
3. E-Field Strength@3m(dBμV/m) = Reading Level + Factor
4. E-Field Strength@10m(dBμV/m) = E-Field Strength@3m(dBμV/m)+10.46dB
5. H-Field Strength(dBμA/m)= E-Field Strength(dBμV/m)-51.5dB

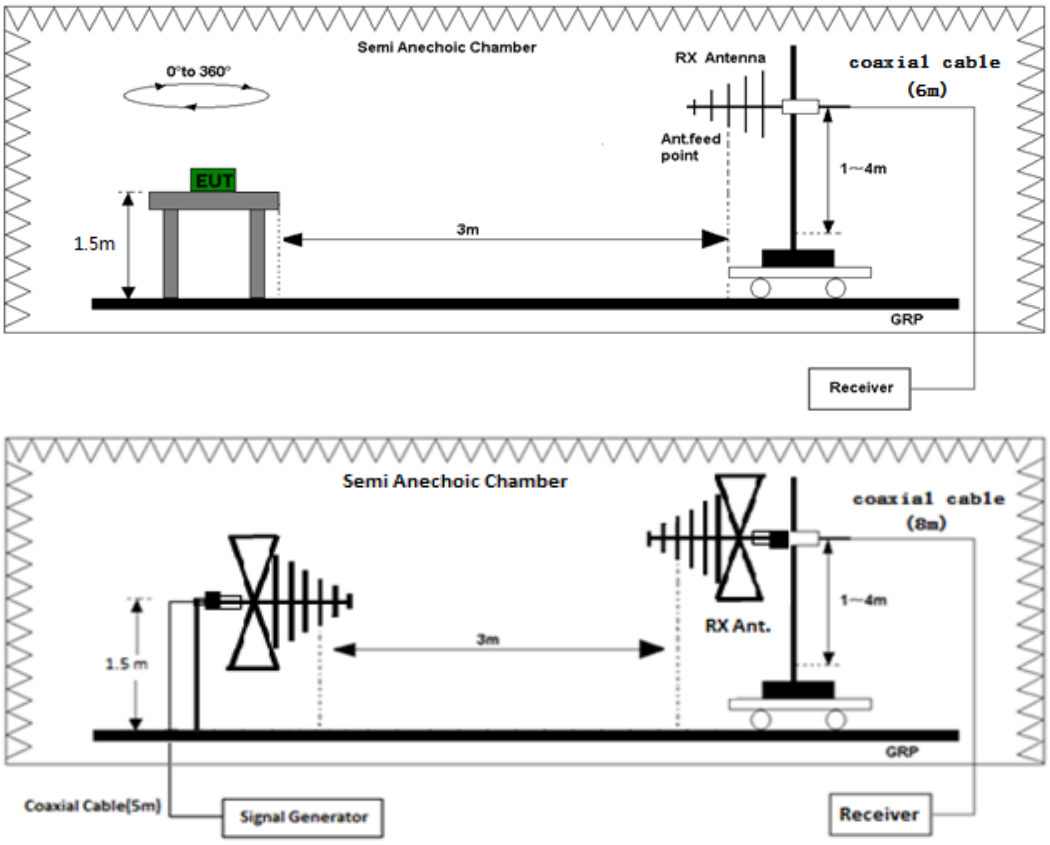
5.5 Transmitter Spurious Emissions (Frequency Above 30MHz)

Spurious emissions are emissions at frequencies other than those of the carrier and sidebands associated with normal modulation.

Test Limit

Frequency Range	Operating Mode Limit	Standby Mode Limit
47 MHz to 74 MHz	4 nW	2 nW
87.5 MHz to 118 MHz	4 nW	2 nW
174 MHz to 230 MHz	4 nW	2 nW
470 MHz to 790 MHz	4 nW	2 nW
Other frequency between 30 MHz to 1000 MHz	250 nW	2 nW

Test Setup



Radiated Emission Test Set-Up Frequency 30 MHz ~ 1 GHz

Test Procedure

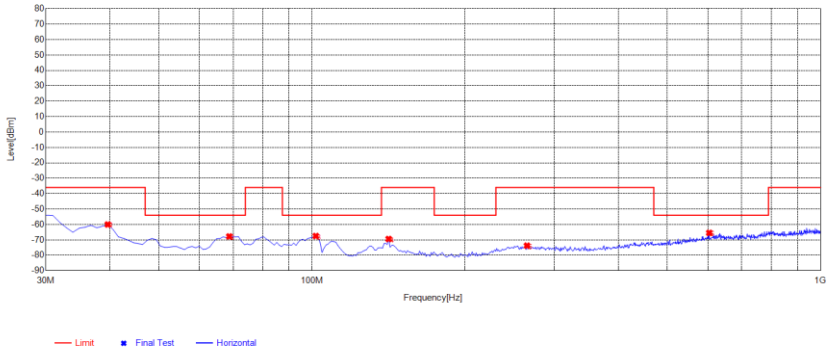
◆ For test method of frequency range (30 MHz-1000MHz)

1. EUT was placed on a 1.5m height wooden table. The search antenna is placed at 3m distances from the EUT and search antenna height is from 1-4m. With the transmitter operating at continuously mode, the turntable was slowly rotated to locate the direction of maximum emission. Once maximum direction is determined, the search antenna was raised and lowered in both vertical and horizontal polarizations.
2. The EUT was removed from the turntable and replaced with a linearly polarized antenna connected to a calibrated RF signal generator. The RF generator was set to a measured emission frequency and the search antenna was raised and lowered to produce a maximum received reading. The generator output was increased to match the radiated emission reading measured previously, and the result expressed in dB EIRP or ERP, correcting for substitution antenna gain at each frequency.
3. Factor=Antenna Factor + Cable loss, Margin=Limit- Measurement Level.
4. The “Factor” value can be calculated automatically by software of measurement system.
5. All test modes had been pre-tested. The worst case and recorded in the report.

Test Result

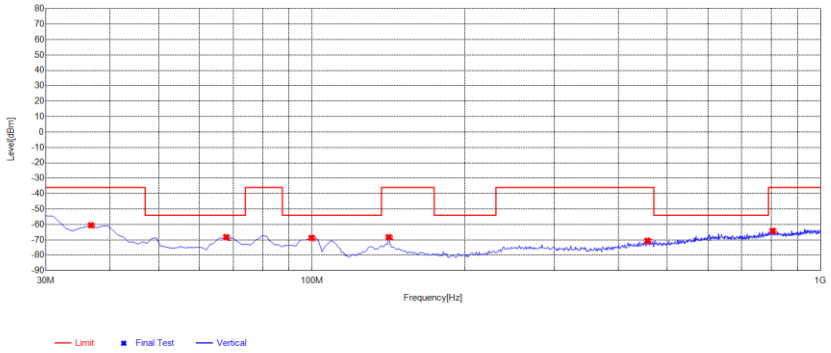
Test mode:	Operating (Mode 3)	Test Frequency:	120.8kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	39.7	-89.72	-60.06	-36.00	24.06	29.66	340	Horizontal
2	68.8	-92.35	-67.80	-54.00	13.80	24.55	320	Horizontal
3	101.78	-87.43	-67.52	-54.00	13.52	19.91	250	Horizontal
4	141.55	-96.26	-69.44	-36.00	33.44	26.82	50	Horizontal
5	264.74	-101.21	-73.78	-36.00	37.78	27.43	60	Horizontal
6	604.24	-99.54	-65.49	-54.00	11.49	34.05	30	Horizontal

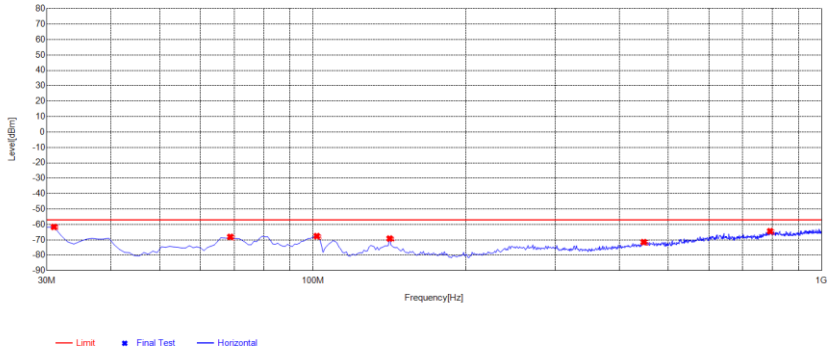
Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	36.79	-90.17	-60.55	-36.00	24.55	29.62	300	Vertical
2	67.83	-92.85	-68.23	-54.00	14.23	24.62	320	Vertical
3	99.84	-88.57	-68.71	-54.00	14.71	19.86	250	Vertical
4	141.55	-95.07	-68.25	-36.00	32.25	26.82	170	Vertical
5	456.8	-101.01	-70.55	-36.00	34.55	30.46	70	Vertical
6	805.03	-101.22	-64.08	-36.00	28.08	37.14	270	Vertical

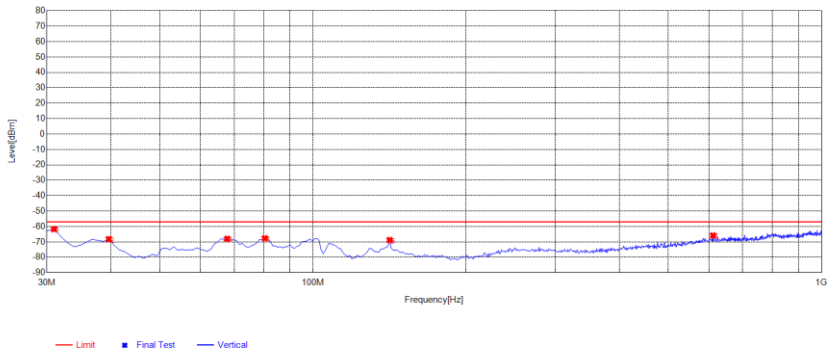
Test mode:	Operating (Mode 4)	Test Frequency:	127.64kHz

Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	30.97	-91.18	-61.62	-57.00	4.62	29.56	260	Horizontal
2	68.8	-92.63	-68.08	-57.00	11.08	24.55	20	Horizontal
3	101.78	-87.49	-67.58	-57.00	10.58	19.91	220	Horizontal
4	141.55	-95.98	-69.16	-57.00	12.16	26.82	240	Horizontal
5	447.1	-101.62	-71.47	-57.00	14.47	30.15	140	Horizontal
6	792.42	-101.16	-64.40	-57.00	7.40	36.76	140	Horizontal

Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	30.97	-91.30	-61.74	-57.00	4.74	29.56	340	Vertical
2	39.7	-97.88	-68.22	-57.00	11.22	29.66	160	Vertical
3	67.83	-92.67	-68.05	-57.00	11.05	24.62	250	Vertical
4	80.44	-91.64	-67.72	-57.00	10.72	23.92	80	Vertical
5	141.55	-95.66	-68.84	-57.00	11.84	26.82	130	Vertical
6	612	-99.98	-65.87	-57.00	8.87	34.11	70	Vertical

5.6 Receiver Blocking

Test Limit

The EUT shall achieve the wanted performance criterion, in the presence of the blocking signal.

	In-band signal	OOB signal	Remote-band signal
Frequency	Centre frequency (f_c) of the WPT system (see clause 4.3.3)	$f = f_c \pm F$ (see note)	$f = f_c \pm 10*F$ (see note)
Signal level field strength at the EUT	72dBμA/m	72dBμA/m	82dBμA/m
Note: F = OFR see clause 4.3.3.			

Test Setup

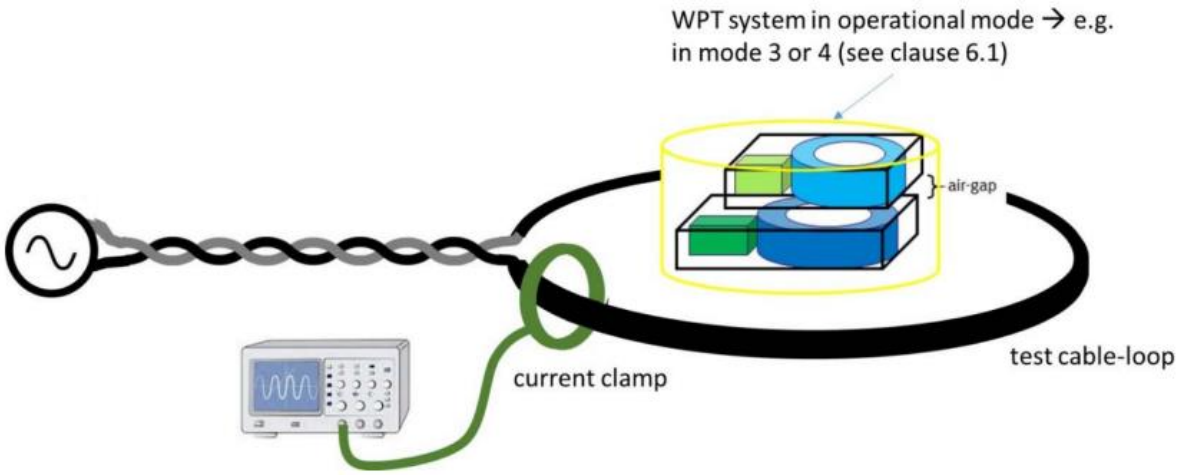


Figure 11: Schematic test set-up for the RX-blocking test

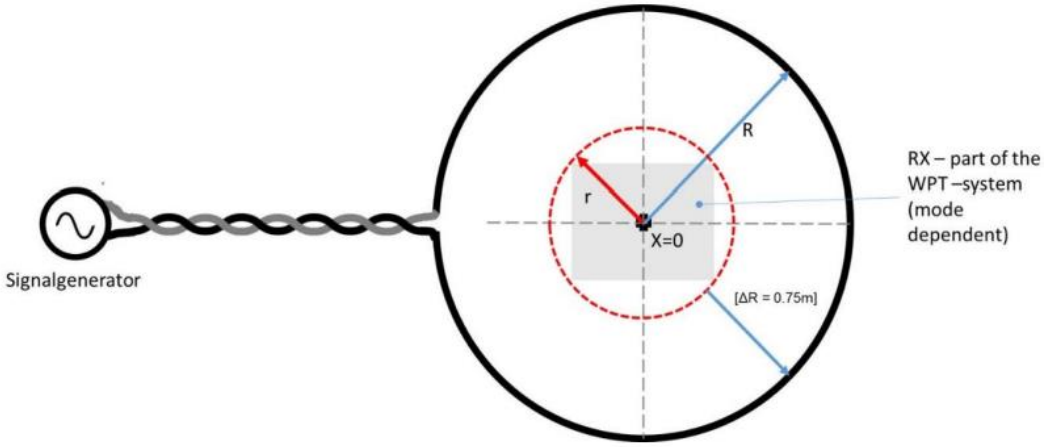


Figure 12: Schematic test set-up for the RX-blocking test

Test Procedure

The fulfilment of the WPT system performance criterion in all possible operational modes (see clause 4.2.3) shall be tested in presence of the inference signals according to Table 6.

- The manufacturer shall declare in which device orientation(s) (worst case) the test shall be performed.
- The WPT system shall initially operate without interference according to its specified sensitivity (detecting an specific object in the maximum depth as declared by the manufacturer (see clause 4.2.2 on wanted performance criteria)).
- The test setup is visualized in the following Figures 11 and 12.
- The tool shall be operated as intended (e.g. some tools might require to be moved across the object, some tool can be used stationary).
- The test shall be carried out inside a test chamber according to clauses C.1.1 and C.1.2 in ETSI EN 300 330 [1].
- A test loop with a radius r shall be used to create the magnetic field; the test loop shall lie on a non-metallic ground and the minimum distance to metallic objects (e.g. ground plane) shall be 0,75 m.
- The EUT shall be placed to the centre of the test-loop (e.g. see Figures 11 and 12).
- The test loop shall be sufficiently large so that the test loop itself does not influence the WPT system; The radius R of the test-loop shall be in minimum ΔR = 0,75 m larger than the maximum dimension r of the EUT.
- (See Figure 12): R >= r + ΔR.
- The maximum H-Field can be calculated from the loop current I (into the test-loop) with the following formula:

$$H = \frac{I}{2R}$$

Test Result

☒Test Mode: Mode 3

Interference Type	Test Frequency (kHz)	Signal level @ EUT	Performance	Result
In-band signal	120.8	72dBuA/m	No function loss	Pass
OOB signal	119.804	72dBuA/m	No function loss	Pass
	121.796	72dBuA/m	No function loss	Pass
Remote-band signal	110.84	82dBuA/m	No function loss	Pass
	130.76	82dBuA/m	No function loss	Pass

Appendix I: Photographs of Test Setup

Radiated Spurious Emissions Below 1GHz Test Setup

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC05443250435AP01

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

-----End of Report-----

Health Test Report

Report No.: AGC05443250435EH01

PRODUCT DESIGNATION	:	3 in 1 wireless charger
BRAND NAME	:	N/A
MODEL NAME	:	MO2749
APPLICANT	:	MID OCEAN BRANDS B.V.
DATE OF ISSUE	:	May 15, 2025
STANDARD(S)	:	EN IEC 62311:2020 EN 50665:2017
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 15, 2025	Valid	Initial Release

Table of Contents

1. General Information

Applicant	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Factory	MID OCEAN BRANDS B.V.
Address	7/F. Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Product Designation	3 in 1 wireless charger
Brand Name	N/A
Test Model	MO2749
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Apr. 27, 2025
Date of Test	Apr. 27, 2025~May 15, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-EU-Health/5-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Cici Li (Project Engineer)	May. 15, 2025
Reviewed By	Bibo Zhang (Reviewer)	May. 15, 2025
Approved By	Angela Li (Authorized Officer)	May. 15, 2025

2. Product Information

2.1 Product Technical Description

Product Designation	3 in 1 wireless charger
Test Model	MO2749
Hardware Version	V1.0
Software Version	V1.0
Power Supply	DC 5V or 9V by adapter
Input Rating	Type-C input: DC 5V/3A, 9V/3A
Output Rating	Wireless output for AirPods: 3W Max. Wireless output for Apple Watch: 2.5W Max. Wireless output for Mobile phone: 15W Max.
WPT Technical Parameters	
Operation Frequency Range	WPT Band 1: 110-205 kHz(for AirPods)
	WPT Band 2: 110-205 kHz(for Mobile phone)
	WPT Band 3: 325-330kHz (Charging pad for Apple Watch)
Modulation Type	ASK
Antenna Designation	Coil Antenna

Note:

1. The above information was declared by the manufacturer.
2. The equipment submitted are representative production models.
3. For more details, please refer to the User's manual of the EUT.

3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

4. EN 62311 Requirements for Near Field Measurements

4.1 Evaluation Methodology

- This International Standard applies to electronic and electrical equipment for which no dedicated product- or product family standard regarding human exposure to electromagnetic fields applies.
- This generic standard applies to electronic and electrical apparatus for which no dedicated product- or product family standard regarding human exposure to electromagnetic fields applies.
- The frequency range covered is 0 Hz to 300 GHz.
- The object of this generic standard is to provide assessment methods and criteria to evaluate such equipment against basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields and induced and contact current.

Note: This standard is intended to cover both intentional and non-intentional radiators. If the equipment complies with the requirements in another relevant standard, e.g. EN 62479 covering low power equipment, then the requirements of this standard (IEC 62311) are considered to be met and the application of this standard to that equipment is not necessary.

4.2 Measurement limits

According to EN IEC 62311:2020, Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0Hz–300GHz).

Annex F Measurement of E and H field

A commonly used probe size is 100 cm^2, also the contribution of the three axes X, Y and Z can be evaluated separately.

Frequency Range	E-field Strength (V/m)	H-Field Strength (A/m)	B-Field (uT)	Equivalent plane Wave Power Density (W/m^2)
0-1 Hz	--	$3.2*10^4$	$4*10^4$	--
1-8 Hz	10000	$3.2*10^4/f^2$	$4*10^4/f^2$	--
8-25 Hz	10000	4000/f	5000/f	--
0.025-0.8 kHz	250/f	4/f	5/f	--
0.8-3 kHz	250/f	5	6.25	--
3-150 kHz	87	5	6.25	--
0.15-1 MHz	87	0.73/f	0.92/f	--
1-10 MHz	$87/f^{1/2}$	0.73/f	0.92/f	--
10-400 MHz	28	0.073	0.092	2
400-2000 MHz	$1.375\ f^{1/2}$	$0.0037\ f^{1/2}$	$0.0046\ f^{1/2}$	f/200
2-300 GHz	61	0.16	0.20	10

*Note:

1. f as indicated in the frequency range column.
2. Provided that basic restrictions are met and adverse indirect effects can be excluded, field strength values can be exceeded.
3. For frequencies between 100 kHz and 10 GHz, S, E2 , H2 and B2 are to be averaged over any 6-min period.
4. For peak values at frequencies up to 100 kHz see Table 4, note 3.
5. For peak values at frequencies exceeding 100 kHz see Figs.1 and 2. Between 100 KHz and 10MHz, peak

values for the field strengths are obtained by interpolation from the 1.5-fold peak at 100 kHz to the 32-fold peak at 10 MHz. For frequencies exceeding 10 MHz it is suggested that the peak equivalent plane wave power density, as averaged over the pulse width, does not exceed 1,000 times the S restrictions, or that the field strength does not exceed 32 times the field strength exposure levels given in the table.

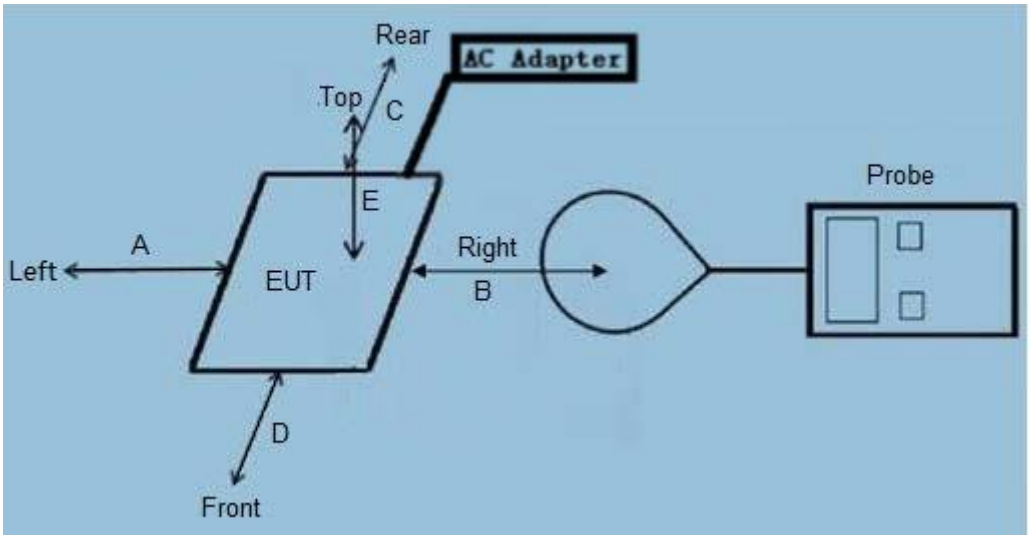
6. For frequencies exceeding 10 GHz, S, E2 , H2 and B2 are to be averaged over any 68/ f1.05 –min period (f in GHz).
7. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields, Electric shock from low impedance sources is prevented by established electrical safety procedures for such equipment

4.3 Measurement Method and Arrangement

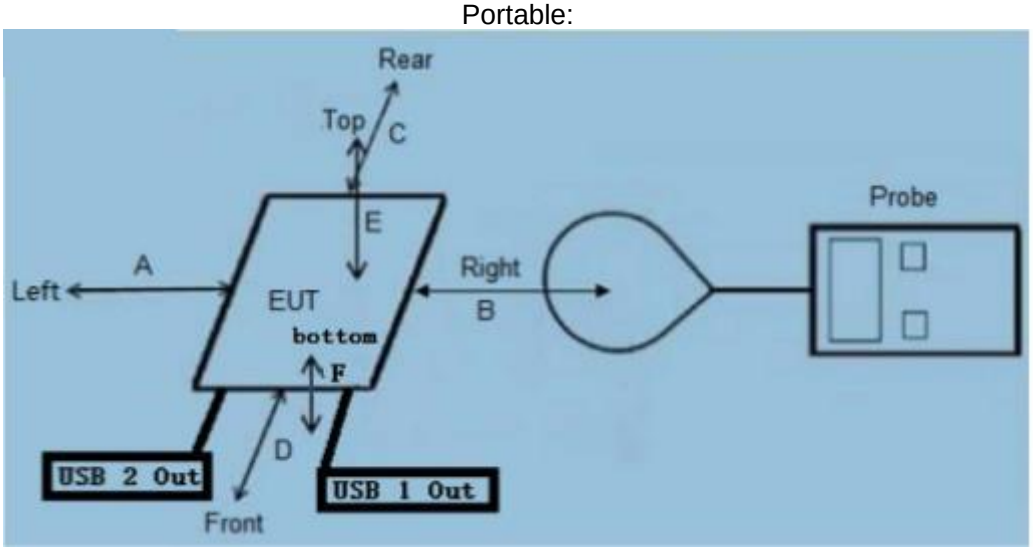
- **Measurement of E and H field**

A commonly used probe size is 100 cm^2, also the contribution of the three axes X, Y and Z can be evaluated separately

Mobile:



Portable:



Note:

1. Position D: Front of EUT; Position A: Left of EUT; Position C: Back/Rear of EUT; Position B: Right of EUT; Position E: Top of EUT, Position F: Bottom of EUT
2. The peripheral load in the diagram is for reference only. It may not match the actual USB peripherals.

4.4 Test Equipment List

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-RF-011	Broadband Field Meter	WAVECONTROL	SMP2	J-0004	2024-06-06	2025-06-05
☒	AGC-RF-012	Probe FHP	WAVECONTROL	WP400	J-0015	2024-06-06	2025-06-05

4.5 Measurement Uncertainty

The reported uncertainty of measurement y ±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%.

Item	Measurement Uncertainty
E-Field Strength (0.003-0.4MHz)	±1.5dB
E-Field Strength (0.4-10MHz)	±1.3dB
H-Field Strength (0.003-0.4MHz)	±1.3dB
H-Field Strength (0.4-10MHz)	±1.2dB

4.6 Description of Test Modes

No.	Test Mode Description	Exposure Conditions
1	Input 9V, 3A +EUT+Apple Watch Wireless Output(2.5W)+AirPods Wireless Output(3W)+Phone Wireless Output(15W)	Mobile
2	Input 9V, 3A +EUT+Phone Wireless Output(15W)	Mobile
3	Input 5V, 3A +EUT+AirPods Wireless Output(10W)	Mobile
4	Input 5V, 3A +EUT+Apple Watch Wireless Output(2.5W)	Mobile
5	Input 5V, 3A +EUT+AirPods Wireless Output(3W)	Mobile
6	Input 5V, 3A +EUT+Wireless Output(0W)	Mobile
7	Input 9V, 3A+EUT+Wireless Output(0W)	Mobile
Note: All test modes were pre-tested, but we only recorded the worst case in this report.		

4.7 Test Result

Mode Description	Test Frequency (kHz)	Maximum Radiated H-Field at 20cm (A/m)		Limit (A/m)	Result
Mode 1	120.8	Position A	0.038	5	Pass
		Position B	0.034		
		Position C	0.033		
		Position D	0.035		
		Position E	0.045		

Mode Description	Test Frequency (kHz)	Maximum Radiated H-Field at 20cm (A/m)		Limit (A/m)	Result
Mode 1	128.8	Position A	0.041	5	Pass
		Position B	0.039		
		Position C	0.034		
		Position D	0.038		
		Position E	0.049		

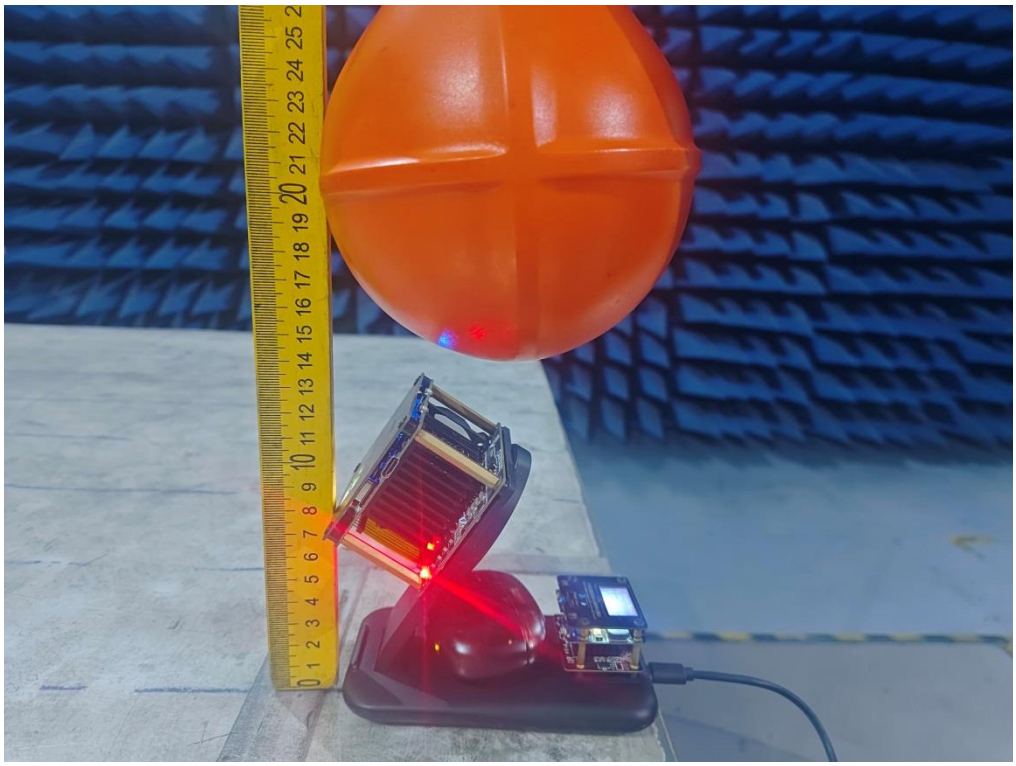
Mode Description	Test Frequency (kHz)	Maximum Radiated H-Field at 20cm (A/m)		Limit (A/m)	Result
Mode 1	326.5	Position A	0.042	2.24	Pass
		Position B	0.043		
		Position C	0.037		
		Position D	0.036		
		Position E	0.051		

5.8 Evaluation Conclusion

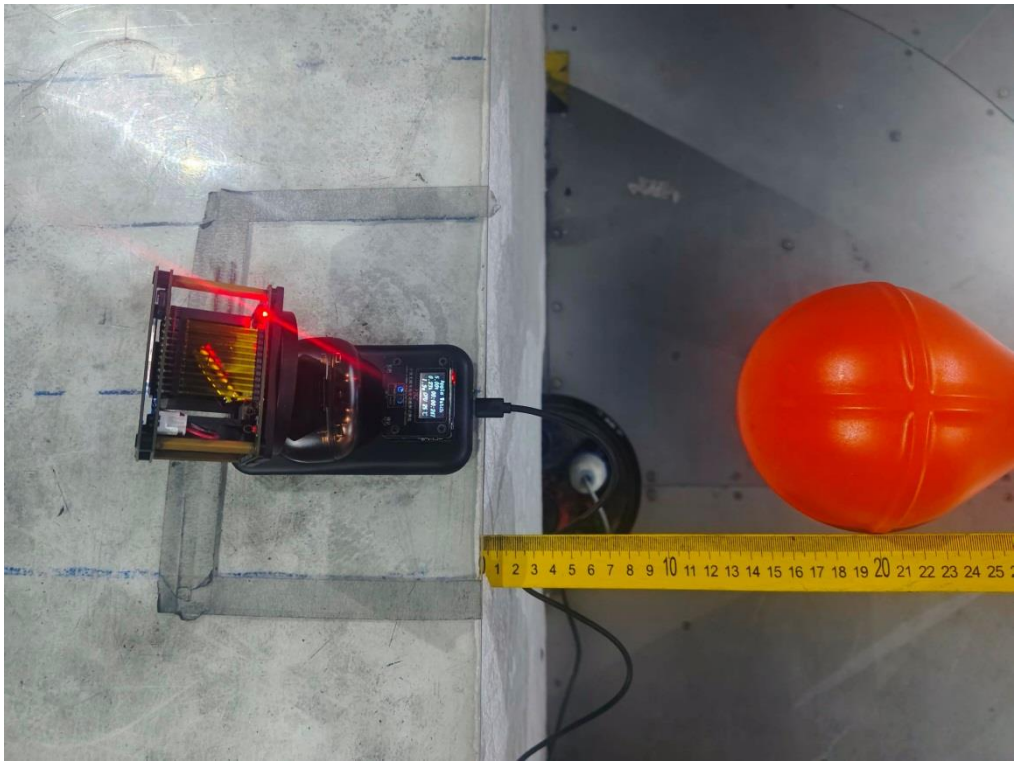
Remark: EUT meets the basic requirements in the standard.

Appendix I: Photographs of Test Setup

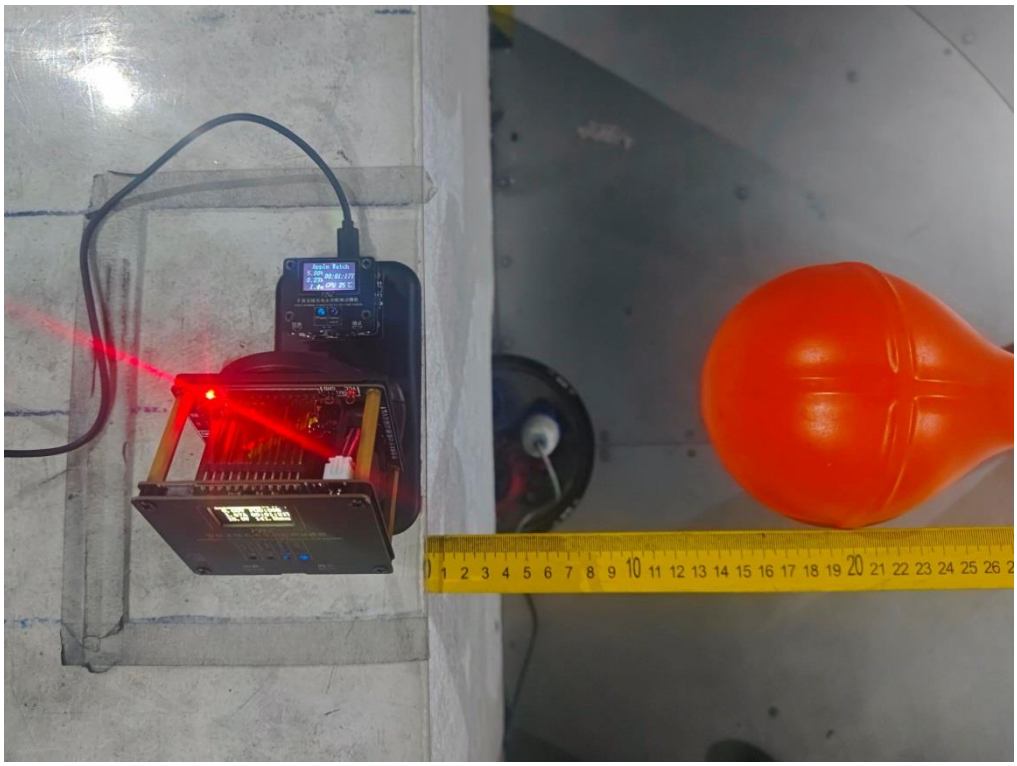
Measure Position E



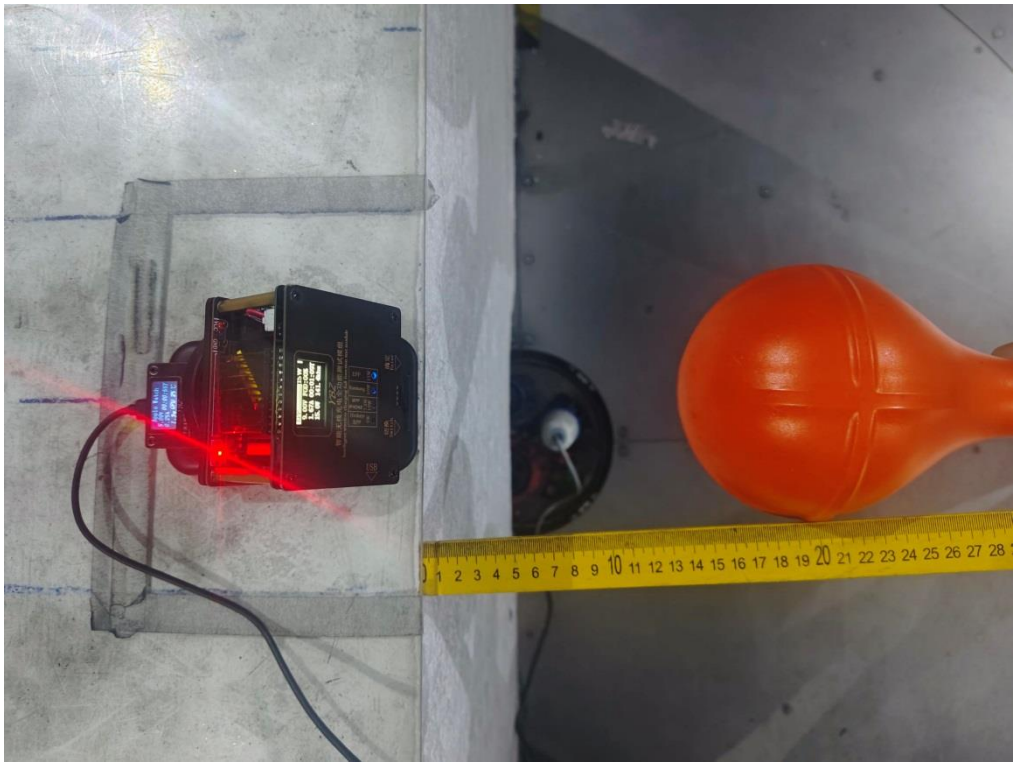
Measure Position C



Measure Position B



Measure Position D



Measure Position A

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

-----End of Report-----