



RF TEST REPORT

Report No: FCS202607176W01

Issued for

Applicant:	Mid Ocean Brands B.V.
Address:	Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong.
Product Name:	Wireless charger
Brand Name:	N/A
Model Name:	MO2281
Series Model:	N/A
Test Standard:	ETSI EN 303 417 V1.1.1 (2017-09)
Issued By: Dongguan Funas Testing Technology Co.,Ltd Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan, China Tel: 0769-27280901 Fax:0769-27280901 http://www.fcs-lab.com E-mail:andy.yue@fcs-lab.com	

**TEST REPORT CERTIFICATION**

Applicant's Name.....: Mid Ocean Brands B.V.
Address.....: Unit 711-716, 7/F., Tower A, 83 King Lam Street,
Cheung Sha Wan, Kowloon, Hong Kong.
Manufacturer's Name.....: Mid Ocean Brands B.V.
Address.....: Unit 711-716, 7/F., Tower A, 83 King Lam Street,
Cheung Sha Wan, Kowloon, Hong Kong.

Product Description

Product Name.....: Wireless charger
Brand Name: N/A
Model Name.....: MO2281
Series Model.....: See the first page of the report

Test Standards.....: ETSI EN 303 417 V1.1.1 (2017-09)

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test.....:

Date (s) of performance of tests.....: July 13, 2026~July 20, 2026

Date of Issue.....: July 20, 2026

Test Result.....: **Pass**

Tested by :

(orange OuYang)

Reviewed by :

(jayden)

Approved by :

(Jack Wang)



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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	July 20, 2026	FCS202607176W01	N/A	Initial Issue

1. GENERAL INFORMATION

Product Name:	Wireless charger
Brand Name:	N/A
Model Name:	MO2281
Series Name:	See the first page of the report
Model Discrepancy:	N/A
Adapter:	Input :DC 9V 2A, 5V 2A Output: DC 5V 1A, 7.5V 1A, 9V 1.1A, 9V 1.67A Power: Wireless Power: 15 W Max.
Frequency Range:	105kHz~205kHz
Modulation Technique:	FSK
Antenna gain:	0 dBi
Hardware version number:	V1.0
Software version number:	V1.0
Temperature Range:	10°C ~ 35°C

Channel List

Operational Mode	Channel	Frequency(KHz)
Mode 1	01	145.55
Mode 2	02	120.55
Mode 3/4	03	130.55

2. SETUP OF EQUIPMENT UNDER TEST

2.1 SETUP CONFIGURATION OF THE EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

Remark:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

2.2 TEST FACTORY

Company Name:	Dongguan Funas Testing Technology Co., Ltd.
Address:	Room 105, 1/F.. Baohao Technology Building 1, No.15, Gongye West Road.Songshan Lake Hi-Tech Industrial Area, Dongguan, Guangdong, China
Telephone:	+86-0769-27280901
Fax:	+86-0769-27280901
FCC Test Firm Registration Number: 514908 CNAS Number: L15566 Designation number: CN0127 A2LA accreditation number: 5545.01 ISED Number: 25801	

2.3 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated below 1GHz	$\pm 2.26\text{dB}$
4	All emissions, radiated 1GHz-18GHz	$\pm 2\text{dB}$
5	All emissions, radiated >18G	$\pm 2.88\text{dB}$



2.4 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2025.08.25	2026.08.24
Signal Analyzer	R&S	FSV40-N	FCS-E012	2025.08.25	2026.08.24
Loop Antenna	HTC	Loop Antenna	FCS-E030	2025.08.25	2026.08.24
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2025.08.25	2026.08.24
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2025.08.25	2026.08.24
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2025.08.25	2026.08.24
Pre-Amplifier(0.1M-3G Hz)	EMCI	EM330N	FCS-E004	2025.08.25	2026.08.24
Pre-Amplifier (1G-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2025.08.25	2026.08.24
Pre-Amplifier (18G-40GHz)	TERA-MW	TRLA-0400	FCS-E019	2025.08.25	2026.08.24
Temperature & Humidity	HTC-1	victor	FCS-E005	2025.08.25	2026.08.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	FCS-E020	2025.08.25	2026.08.24
LISN	R&S	ENV216	FCS-E007	2025.08.25	2026.08.24
LISN	ETS	3810/2NM	FCS-E009	2025.08.25	2026.08.24
Temperature & Humidity	HTC-1	victor	FCS-E008	2025.08.25	2026.08.24

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
Spectrum Analyzer	Keysight	N9020A	FCS-E015	2025.08.25	2026.08.24
Spectrum Analyzer	Agilent	E4447A	MY50180039	2025.08.25	2026.08.24
Spectrum Analyzer	R&S	FSV-40	101499	2025.08.25	2026.08.24

NOTE: Equipments listed above have been calibrated and are in the period of validation.



2.5 TEST SUMMARY

Test Item	Test Mode	Applicable(Y/N)	Result
Permitted range of operating frequencies	declare	Y	PASS
Operating frequency ranges	Mode 1/2/3/4	Y	PASS
Transmitter H-field requirements	Mode 1/2/3/4	Y	PASS
Transmitter spurious emissions	Mode 1/2/3/4	Y	PASS
Transmitter out of band (OOB) emissions	Mode 1/2/3/4	Y	PASS
WPT system unwanted conducted emissions	Mode 1/2/3/4	Y	PASS
Receiver blocking	Mode 1/2/3	Y	PASS
RF Exposure	Mode 1/2/3/4	Y	PASS

Remark:

N/A: Not Applicable

RF: In this whole report RF means Radio Frequency.

The manufacture declare the test mode is mode 1, mode 2, mode 3, mode 4.

Mode 3 and Mode 4 are tested together.

For Transmitter spurious emissions test items: "Operating" means mode 2, 3 and 4; "standby" means mode 1.

Operational Mode	Set-up	Function of base station	Function of mobile device
Mode 1: base station in stand-by, idle mode	Single device	Transmitter	Not applicable
Mode 2: Communication before charging, adjustment charging mode / position	In combination	TX and RX	TX and RX
Mode 3: Communication	WPT system alignment	TX and RX	TX and RX
Mode 4: energy transmission	WPT system alignment	TX and RX	TX and RX

3. TEST METHODOLOGY

3.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT has been tested according to ETSI EN 303 417 V1.1.1 (2017-09)

ETSI EN 303 417 V1.1.1 (2017-09)	Wireless power transmission systems, using technologies other than radio frequency beam in the 19 - 21 kHz, 59 - 61 kHz, 79 - 90 kHz, 100 - 300 kHz, 6 765 - 6 795 kHz ranges; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
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3.2 TEST MODES

The EUT has been tested under normal operating condition. Control the EUT for staying in continuous transmitting for testing.

The field strength of spurious radiation emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The following data show only with the worst case setup. The worst case of Y axis without cradle was reported.

3.3 TEST CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35°C
- Humidity: 20-75 %
- Atmospheric pressure: 86-106 kPa

1). Mains voltage

The extreme test voltage for equipment to be connected to an AC mains source shall be the nominal mains voltage $\pm 10\%$.

2). Lead-acid battery power sources used on vehicles

When radio equipment is intended for operation from the usual type of alternator fed lead-acid battery power source used on vehicles, then extreme test voltage shall be 1,3 and 0,9 times the nominal voltage of the battery (5 V, 9 V, etc.).

3). Power sources using other types of batteries

The Low extreme test voltages for equipment with power sources using the following types of battery shall be:

- for the Leclanché or lithium type battery: 0,85 times the nominal voltage of the battery;
 - for the mercury or nickel-cadmium type of battery: 0,9 times the nominal voltage of the battery.
- In both cases, the High extreme test voltage shall be 1,15 times the nominal voltage of the battery.

4). Other power sources

For equipment using other power sources, or capable of being operated from a variety of power sources (primary or secondary), the extreme test voltages shall be those stated by the manufacturer and shall be recorded.

The follow condition is applicable

Test Conditions	Normal	LTLV	LTHV	HTHV	HTLV
Temperature (°C)	22	10	10	35	35
Voltage (VDC)	24	23	25	25	23

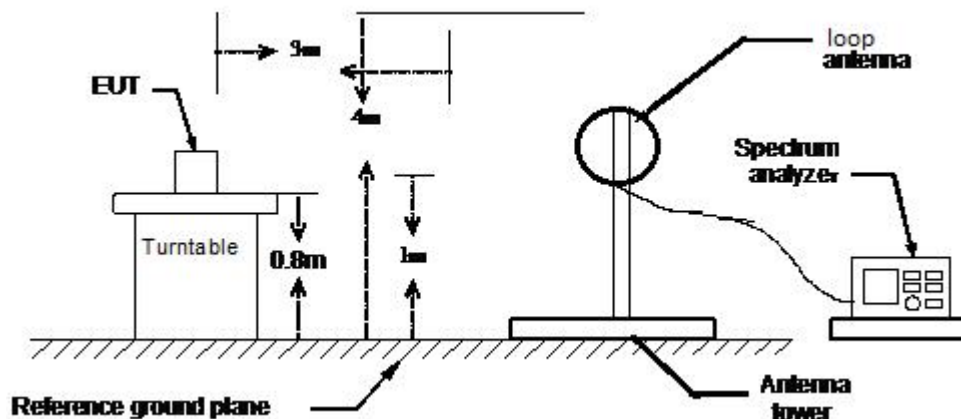
4. PERMITTED RANGE OF OPERATING FREQUENCIES

4.1 LIMIT

The permitted range of operating frequencies used by the EUT shall be declared by the manufacturer. The permitted range of operating frequencies for intentional emissions shall be entirely within the frequency bands in below table.

Table 1			
	WPT frequency range	Frequency Bands	Applications
Transmit and Receive	1	19 kHz to 21 kHz	WPT systems
Transmit and Receive	2	59 kHz to 61 kHz	WPT systems
Transmit and Receive	3	79 kHz to 90 kHz	WPT systems
Transmit and Receive	4	100 kHz to 119 kHz	WPT systems
Transmit and Receive		119 kHz to 140 kHz	WPT systems
Transmit and Receive		140 kHz to 148,5 kHz	WPT systems
Transmit and Receive		148,5 kHz to 300 kHz	WPT systems
Transmit and Receive	5	6 765 kHz to 6 795 kHz	WPT systems

4.2 TEST CONFIGURATION





4.3 TEST RESULTS

Mode 1

Test Conditions		Frequency Range			
		fL (KHz)	fH (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		143.5600	147.5300	100	300
Extreme	LTLV	143.5500	147.5600	100	300
	LTHV	143.5300	147.5400	100	300
	HTLT	143.5800	147.5900	100	300
	HTHV	143.5700	147.5500	100	300

Mode 2

Test Conditions		Frequency Range			
		fL Low Channel (KHz)	fH High Channel (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		118.5600	125.5900	100	300
Extreme	LTLV	118.5300	125.5200	100	300
	LTHV	118.5900	125.5600	100	300
	HTLT	118.5300	124.5300	100	300
	HTHV	118.5700	125.5700	100	300

Mode 3/4

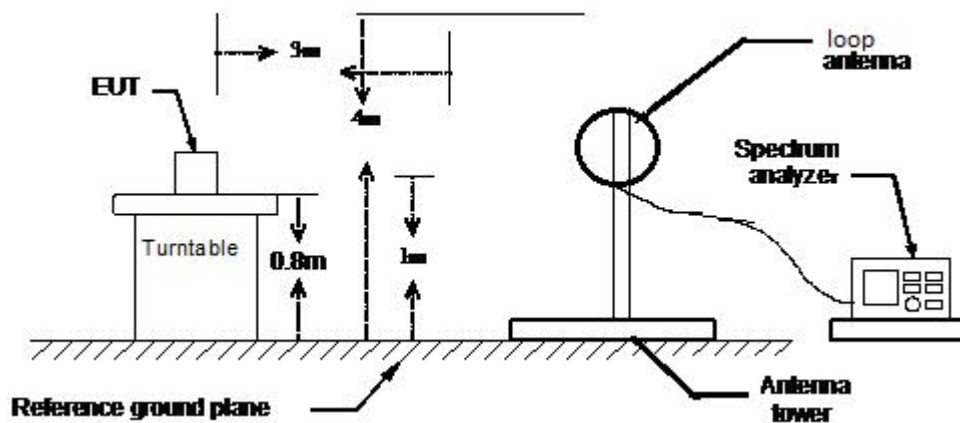
Test Conditions		Frequency Range			
		fL Low Channel (KHz)	fH High Channel (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		120.5300	132.5000	100	300
Extreme	LTLV	120.5200	132.5500	100	300
	LTHV	120.4900	132.5500	100	300
	HTLT	120.4700	132.5500	100	300
	HTHV	120.5000	133.5500	100	300

5. OPERATING FREQUENCY RANGES

5.1 LIMIT

The operating frequency ranges for intentional emissions shall be entirely within the frequency bands in table 1

5.2 TEST CONFIGURATION



5.3 TEST PROCEDURE

1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.2 for the measurement method.

5.4 TEST RESULTS

Mode 1

Test Conditions		Frequency Range			
		fL (KHz)	fH (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		143.5900	147.5800	100	300
Extreme	LTLV	143.5300	147.5300	100	300
	LTHV	143.5500	147.5600	100	300
	HTLT	143.5700	147.5700	100	300
	HTHV	143.5900	147.5200	100	300

Mode 2

Test Conditions		Frequency Range			
		fL Low Channel (KHz)	fH High Channel (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		118.6300	123.1800	100	300
Extreme	LTLV	118.7700	123.1600	100	300
	LTHV	118.7600	123.1700	100	300
	HTLT	118.6000	123.1800	100	300
	HTHV	118.6200	123.1700	100	300

Mode 3/4

Test Conditions		Frequency Range			
		fL Low Channel (KHz)	fH High Channel (KHz)	fL Limit (KHz)	fH Limit (KHz)
Normal		128.4300	132.5600	100	300
Extreme	LTLV	128.4600	132.5300	100	300
	LTHV	128.4800	132.6200	100	300
	HTLT	128.4600	132.5700	100	300
	HTHV	128.4700	132.5400	100	300

6. H-FIELD REQUIREMENTS

6.1 LIMIT

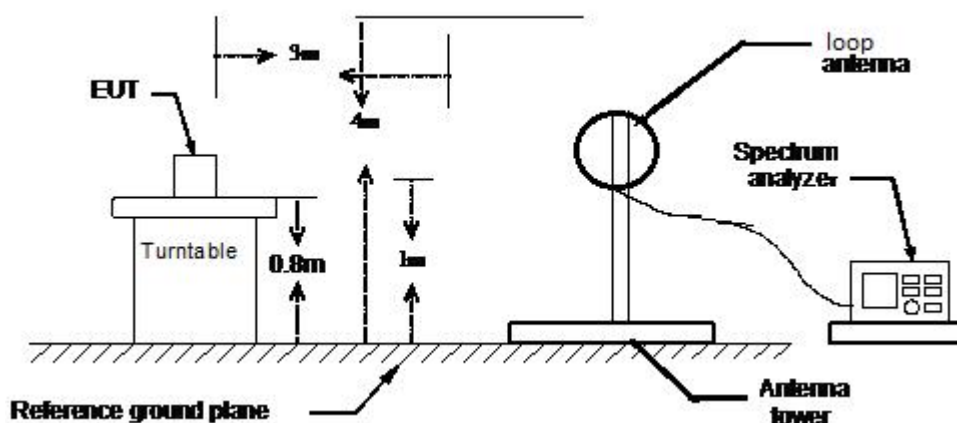
Table 3: H-field limits

Frequency range [MHz]	H-field strength limit [dB μ A/m at 10 m]	Comments
$0,019 \leq f < 0,021$	72	
$0,059 \leq f < 0,061$	69,1 descending 10 dB/dec above 0,059 MHz	See note 1
$0,079 \leq f < 0,090$	67,8 descending 10 dB/dec above 0,079 MHz	See note 2
$0,100 \leq f < 0,119$	42	
$0,119 \leq f < 0,135$	66 descending 10 dB/dec above 0,119 MHz	See note 1
$0,135 \leq f < 0,140$	42	
$0,140 \leq f < 0,1485$	37,7	
$0,1485 \leq f < 0,30$	-5	
$6,765 \leq f < 6,795$	42	

NOTE 1: Limit is 42 dB μ A/m for the following spot frequencies: 60 kHz $\pm$ 250 Hz and 129,1 kHz $\pm$ 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.

6.2 TEST CONFIGURATION



6.3 TEST PROCEDURE

1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.2 for the measurement method.



6.4 TEST RESULTS

Mode 1

Frequency (KHz)	Corrected Amplitude E-field (dB μ V/m)	Corrected Amplitude H-field_3m (dB μ A/m)	Corrected Amplitude H-field_10m (dB μ A/m)	Limit_10m (dB μ A/m)	Margin (dB)	Result
145.55	118.913	67.413	36.213	37.7	-1.49	Pass

Mode 2

Frequency (KHz)	Corrected Amplitude E-field (dB μ V/m)	Corrected Amplitude H-field_3m (dB μ A/m)	Corrected Amplitude H-field_10m (dB μ A/m)	Limit_10m (dB μ A/m)	Margin (dB)	Result
120.50	99.929	48.429	17.229	66.049	-48.82	Pass
122.85	98.809	47.309	16.109	66.138	-50.02	Pass

Mode 3/4

Frequency (KHz)	Corrected Amplitude E-field (dB μ V/m)	Corrected Amplitude H-field_3m (dB μ A/m)	Corrected Amplitude H-field_10m (dB μ A/m)	Limit_10m (dB μ A/m)	Margin (dB)	Result
122.30	82.962	31.462	0.262	66.119	-65.85	Pass
130.55	86.258	34.758	3.558	66.406	-62.84	Pass

7. TRANSMITTER SPURIOUS EMISSIONS

7.1 LIMIT

Limit below 30MHz

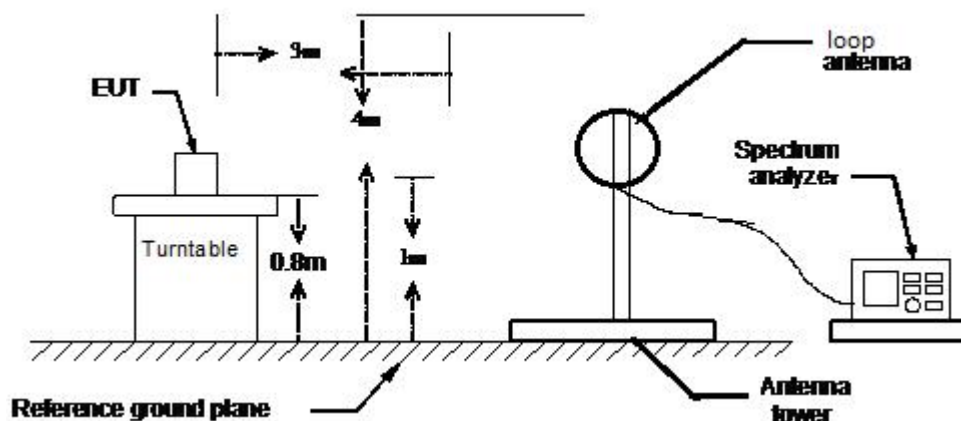
State	Frequency $9 \text{ kHz} \leq f < 10 \text{ MHz}$	Frequency $10 \text{ MHz} \leq f < 30 \text{ MHz}$
Operating	27 dB μ A/m at 9 kHz descending 10 dB/oct	-3,5 dB μ A/m
Standby	5,5 dB μ A/m at 9 kHz descending 10 dB/oct	-25 dB μ A/m

Limit above 30MHz

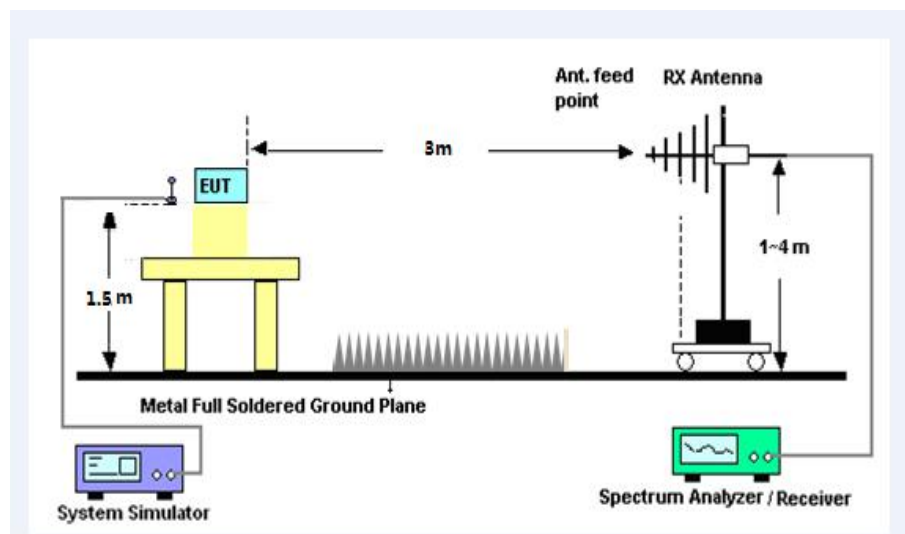
State	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies between 30 MHz to 1000 MHz
Operating	4nW(-54dBm)	250nW(-36dBm)
Standby	2nW(-57dBm)	2nW(-57dBm)

7.2 TEST CONFIGURATION

Below 30MHz



30MHz-1GHz



7.3 TEST PROCEDURE

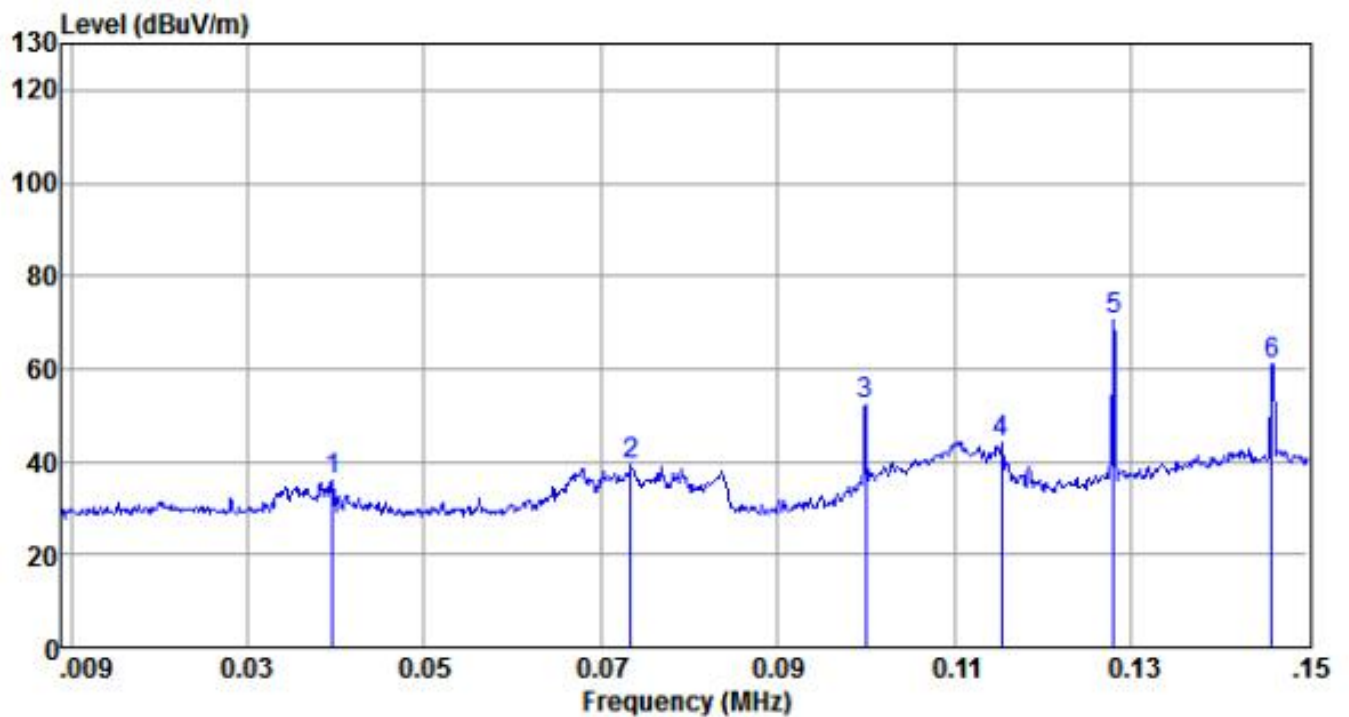
1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.2 for the measurement method.

7.4 TEST RESULT

Note: The test report only show the worst case.

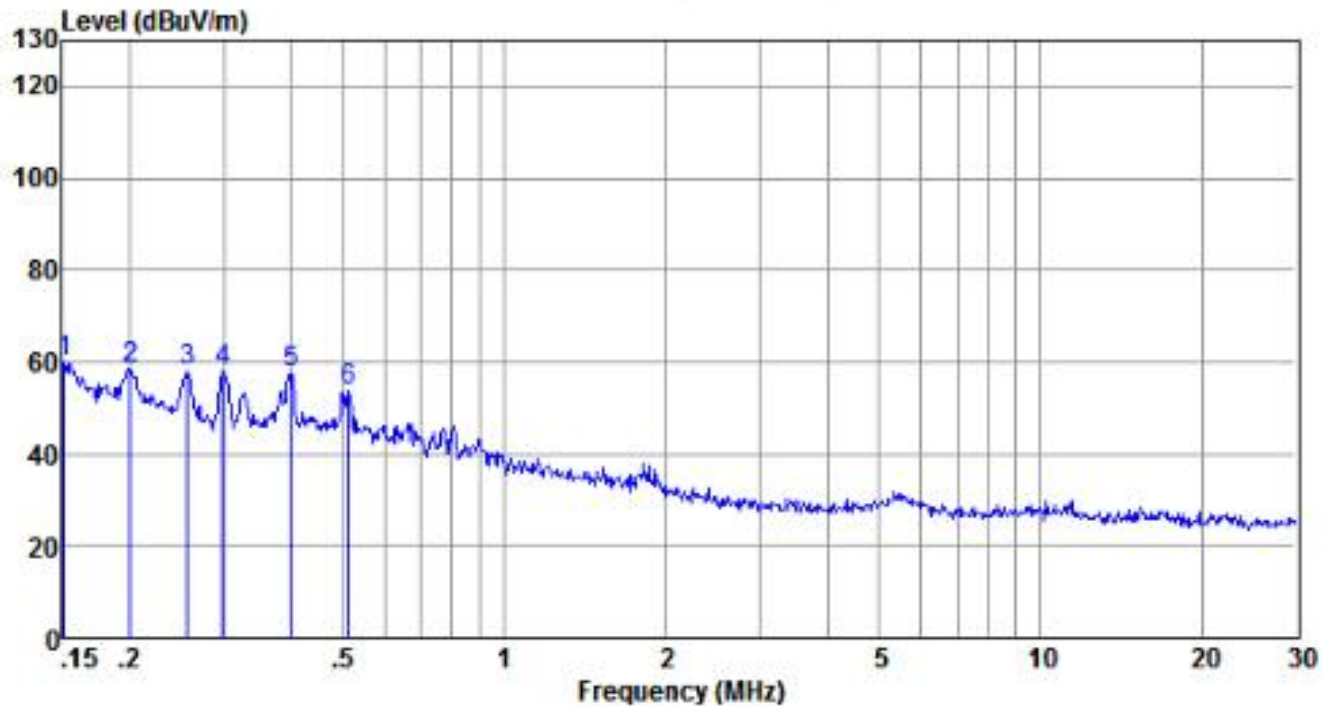
Operating mode

9KHz – 150KHz



9KHz-150KHz								
Frequency (MHz)	Measured Level@3m (dBμV/m)	H _{3m} Measured Level (dBμA/m)	C ₃ Factor (dB)	H _{10m} Result (dBμA/m)	Limit (dBμA/m)	Margin (dB)	Result	Antenna Pole (H/V)
0.0396	36.12	-15.38	31.40	-46.78	20.57	-67.35	Pass	H
0.0734	39.34	-12.16	31.40	-43.56	17.89	-61.45	Pass	
0.0999	52.30	0.80	31.40	-30.60	16.55	-47.15	Pass	
0.1153	44.08	-7.42	31.40	-38.82	15.92	-54.74	Pass	
0.1280	70.33	18.83	31.40	-12.57	15.47	-28.04	Pass	
0.1459	60.97	9.47	31.40	-21.93	14.90	-36.83	Pass	

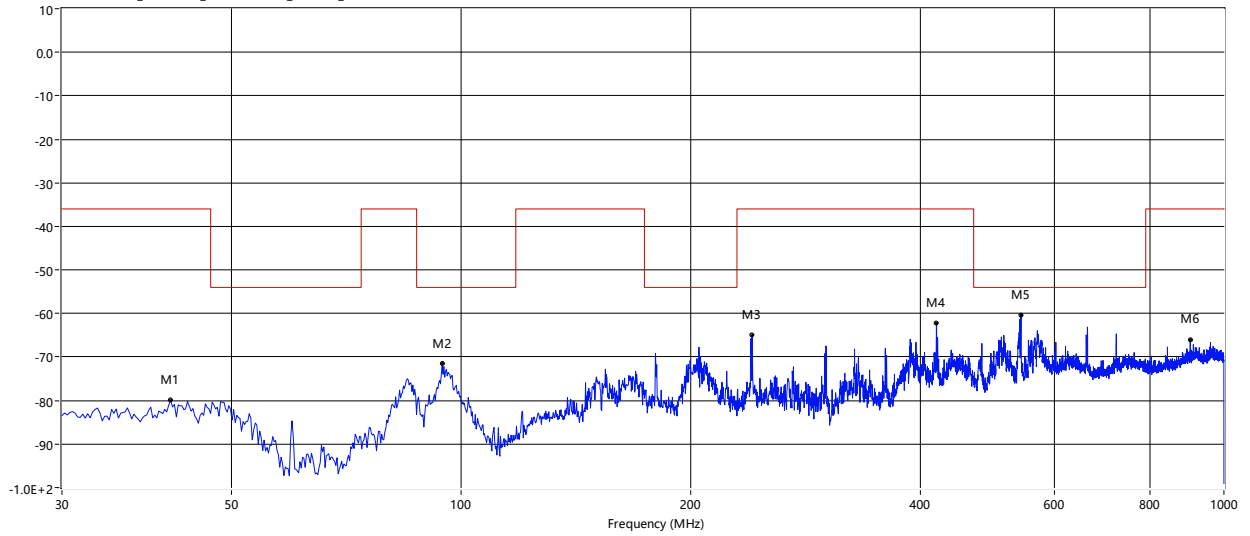
150KHz – 30MHz



150KHz-30MHz								
Frequency (MHz)	Measured Level@3m (dBμV/m)	H _{3m} Measured Level (dBμA/m)	C ₃ Factor (dB)	H _{10m} Result (dBμA/m)	Limit (dBμA/m)	Margin (dB)	Result	Antenna Pole (H/V)
0.1508	60.20	8.70	31.40	-22.70	14.76	-37.46	Pass	H
0.2007	58.70	7.20	31.40	-24.20	13.52	-37.72	Pass	
0.2562	57.92	6.42	31.40	-24.98	12.46	-37.44	Pass	
0.2987	57.86	6.36	31.40	-25.04	11.79	-36.83	Pass	
0.3997	57.80	6.30	31.40	-25.10	10.53	-35.63	Pass	
0.5128	53.63	2.13	31.40	-29.27	9.44	-38.71	Pass	

30MHz -1GHz Horizontal

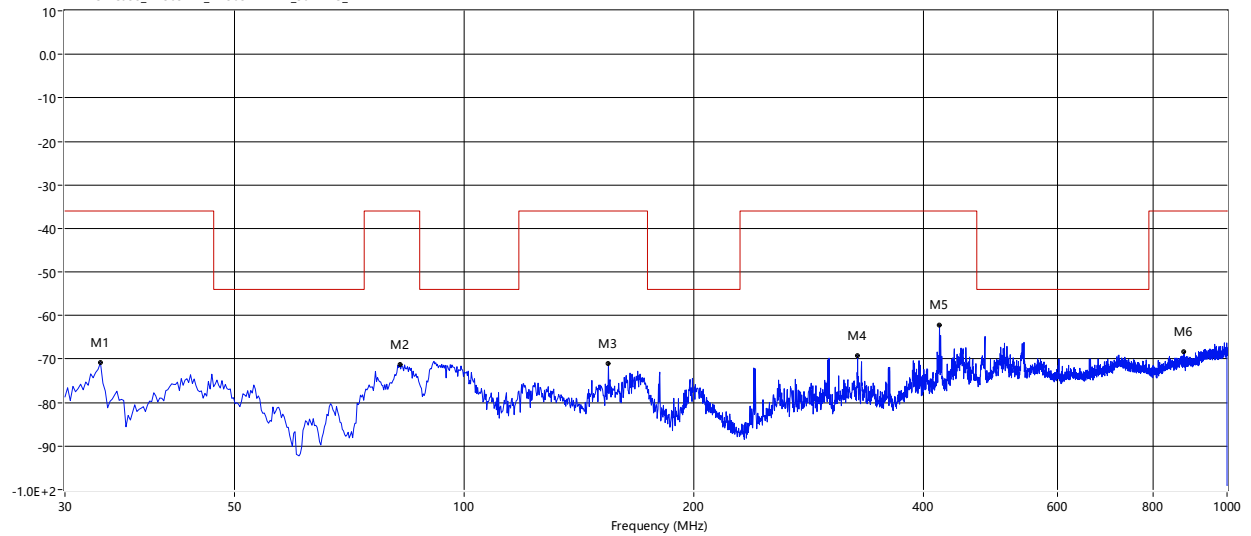
RSE-EN RX-TX TEST Case_EN303417_EN303 417-TX_30M-1G_H



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
41.640	-79.90	-5.47	-36.0	-43.90	36.20	Horizontal	Vertical	Pass
94.505	-71.51	-14.26	-54.0	-17.51	56.30	Horizontal	Vertical	Pass
240.732	-64.98	-1.98	-36.0	-28.98	106.90	Horizontal	Vertical	Pass
419.940	-62.15	2.23	-36.0	-26.15	319.40	Horizontal	Vertical	Pass
541.918	-60.34	2.92	-54.0	-6.34	137.40	Horizontal	Vertical	Pass
903.485	-65.94	8.96	-36.0	-29.94	110.60	Horizontal	Vertical	Pass

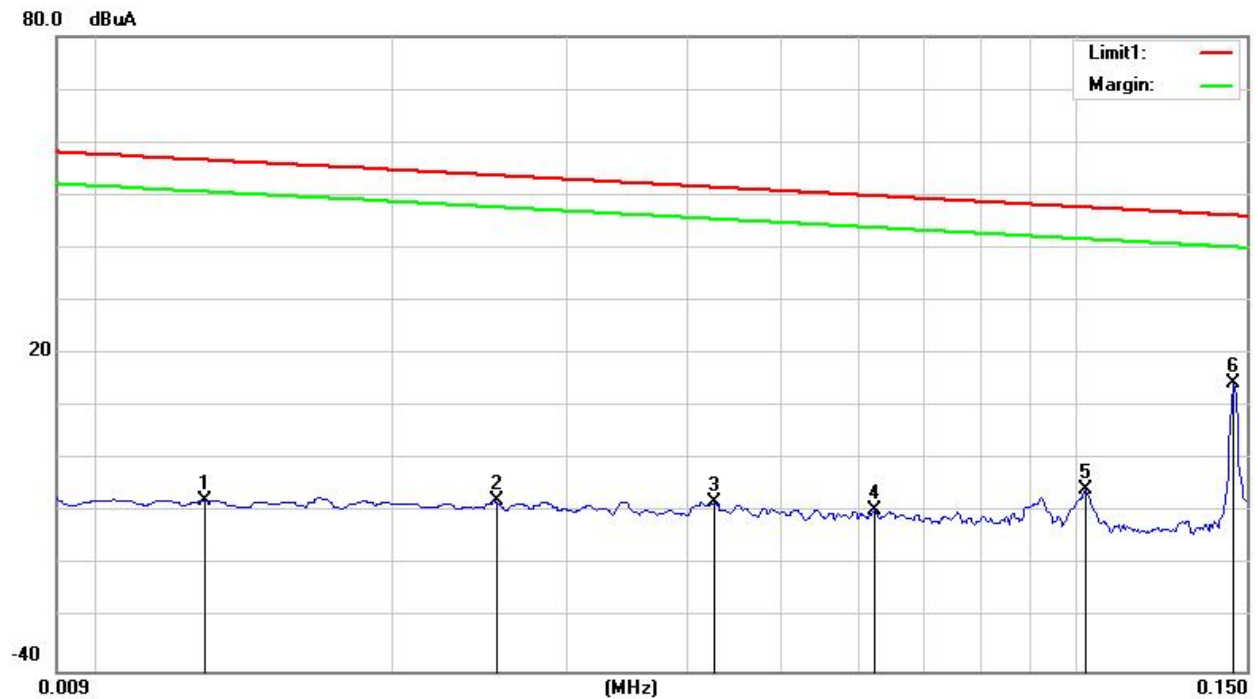
Vertical

RSE-EN RX-TX TEST Case_EN303417_EN303 417-TX_30M-1G_V



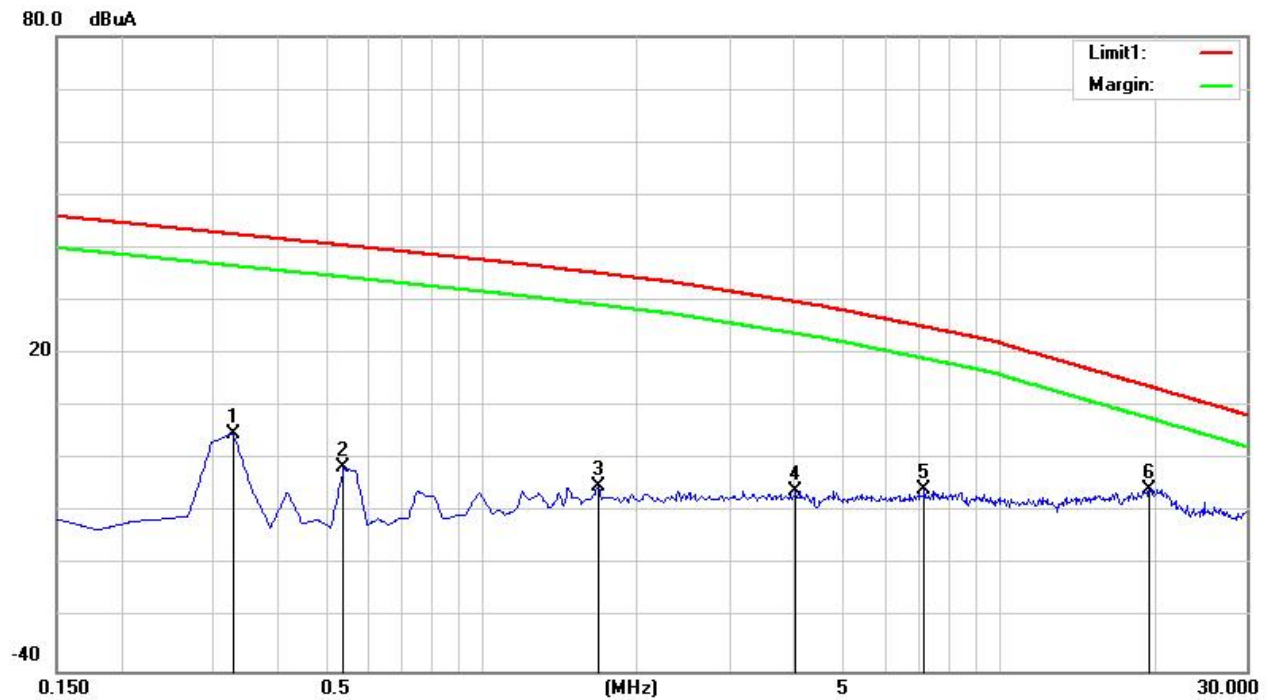
Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
33.395	-70.84	-8.31	-36.0	-34.84	357.40	Vertical	Vertical	Pass
82.380	-71.23	-13.74	-36.0	-35.23	360.00	Vertical	Vertical	Pass
154.645	-71.05	-3.52	-36.0	-35.05	321.20	Vertical	Vertical	Pass
328.033	-69.25	-2.33	-36.0	-33.25	317.80	Vertical	Vertical	Pass
419.940	-62.31	1.26	-36.0	-26.31	51.40	Vertical	Vertical	Pass
878.265	-68.33	8.24	-36.0	-32.33	277.30	Vertical	Vertical	Pass

Mode 3/4
9KHz – 150KHz



No.	Frequency (KHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.0126	-27.25	19.58	-7.38	56.68	-64.06	peak
2	0.0253	-27.87	19.99	-7.29	53.73	-61.02	peak
3	0.047	-27.79	19.65	-8.37	51.46	-59.83	peak
4	0.0625	-28.75	19.16	-9.56	49.83	-59.39	peak
5	0.1026	-23.37	17.60	-5.73	47.68	-53.41	peak
6	0.1473	-3.12	17.51	17.27	46.16	-28.89	peak

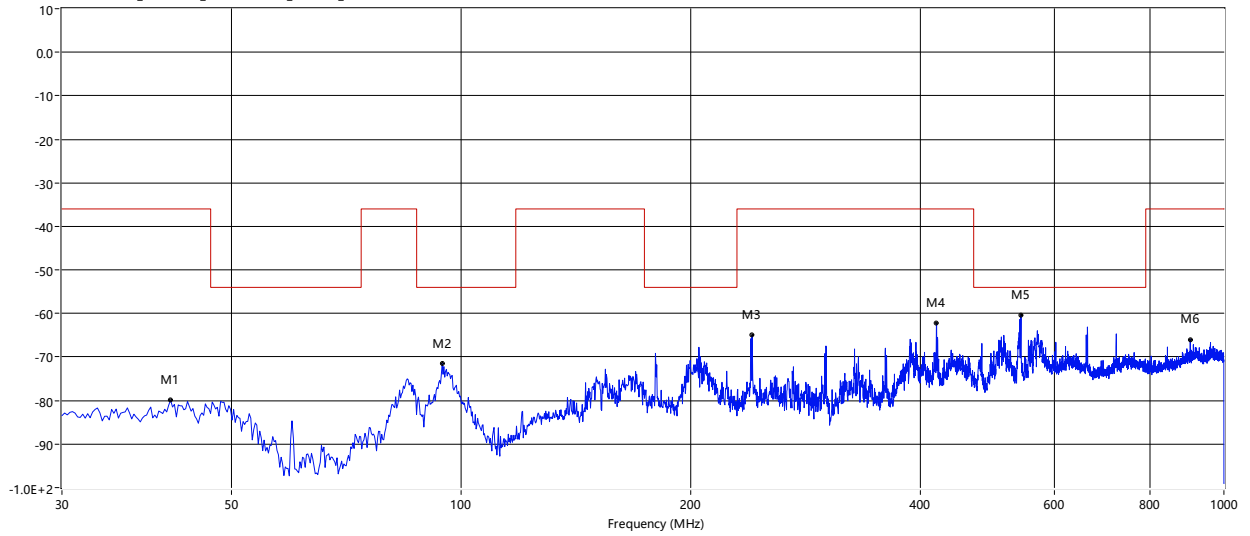
150KHz – 30MHz



No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.3358	-15.16	20.13	4.97	42.62	-38.25	peak
2	0.5297	-21.78	20.22	-1.56	40.49	-41.76	peak
3	1.6735	-25.24	20.33	-4.91	35.22	-39.59	peak
4	4.0305	-26.28	20.40	-5.88	29.81	-35.54	peak
5	7.1762	-26.11	20.37	-5.74	25.08	-30.87	peak
6	19.4394	-27.93	22.38	-5.55	13.80	-18.96	peak

30MHz -1GHz Horizontal

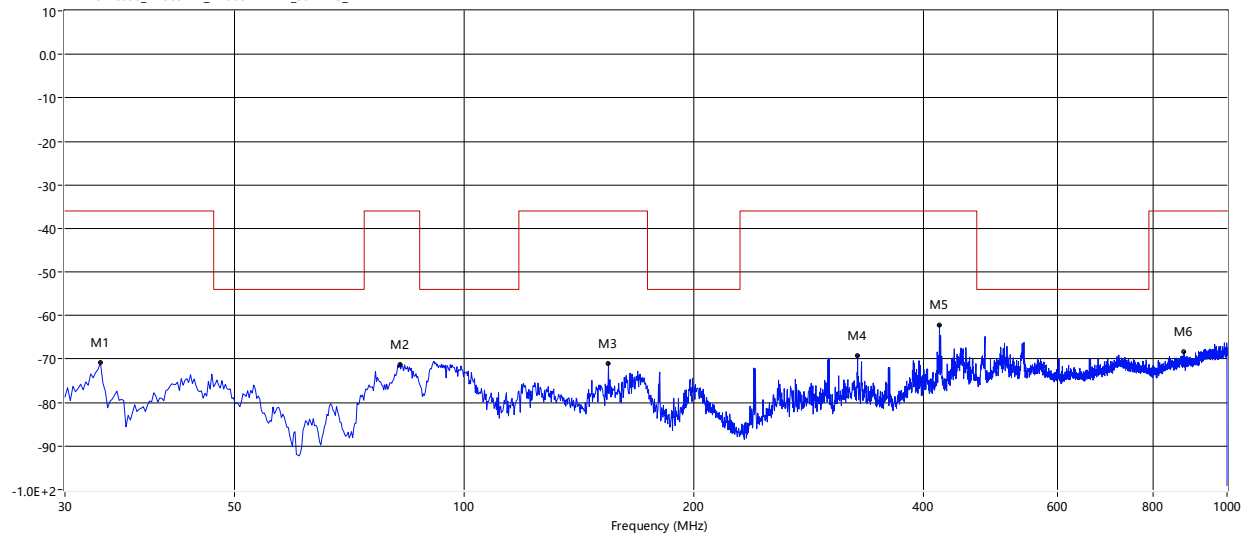
RSE-EN RX-TX TEST Case_EN303417_EN303 417-TX_30M-1G_H



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
41.643	-79.38	-5.47	-36.0	-43.90	35.50	Horizontal	Vertical	Pass
94.528	-71.29	-14.26	-54.0	-17.51	53.78	Horizontal	Vertical	Pass
240.757	-64.73	-1.98	-36.0	-28.98	35.75	Horizontal	Vertical	Pass
419.387	-62.46	2.23	-36.0	-26.15	36.31	Horizontal	Vertical	Pass
541.467	-60.19	2.92	-54.0	-6.34	53.85	Horizontal	Vertical	Pass
903.167	-65.72	8.96	-36.0	-29.94	35.78	Horizontal	Vertical	Pass

Vertical

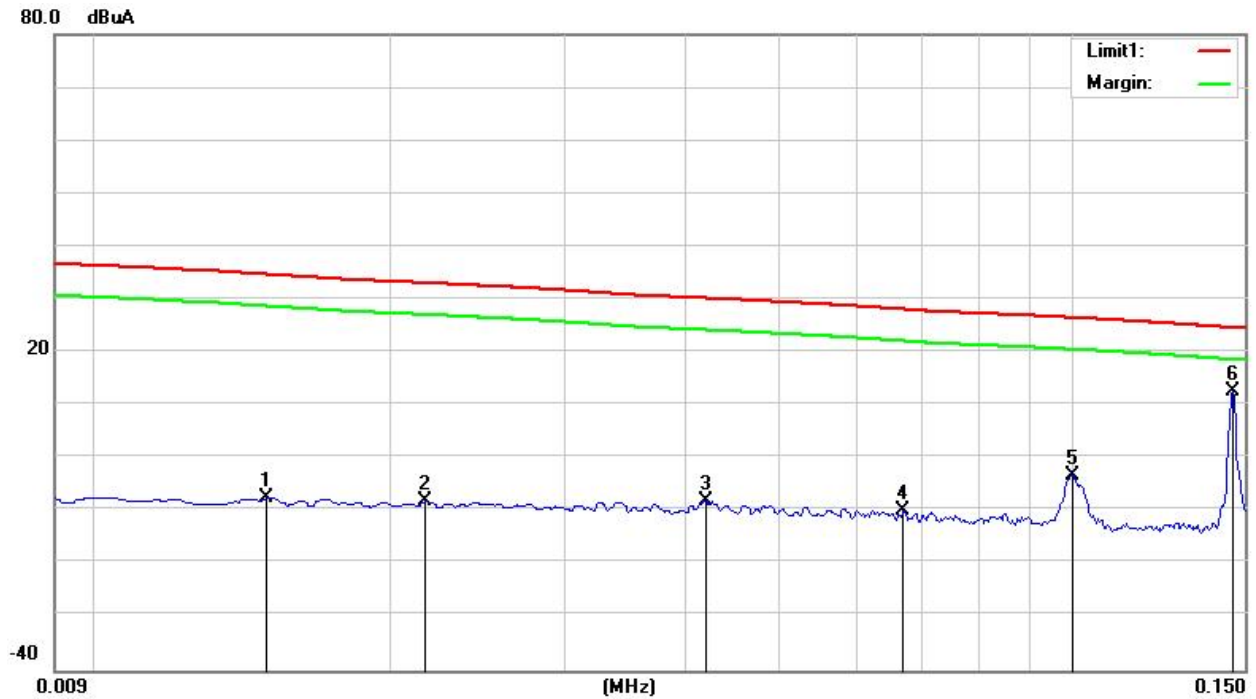
RSE-EN RX-TX TEST Case_EN303417_EN303 417-TX_30M-1G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
33.379	-70.27	-8.31	-36.0	-34.84	35.4	Vertical	Vertical	Pass
83.574	-71.75	-13.74	-36.0	-35.23	36.52	Vertical	Vertical	Pass
154.764	-73.27	-3.52	-36.0	-35.05	38.22	Vertical	Vertical	Pass
328.084	-69.89	-2.33	-36.0	-33.25	36.64	Vertical	Vertical	Pass
419.674	-62.46	1.26	-36.0	-26.31	36.15	Vertical	Vertical	Pass
878.075	-68.26	8.24	-36.0	-32.33	35.93	Vertical	Vertical	Pass

Standby mode

Mode 1
9KHz – 150KHz



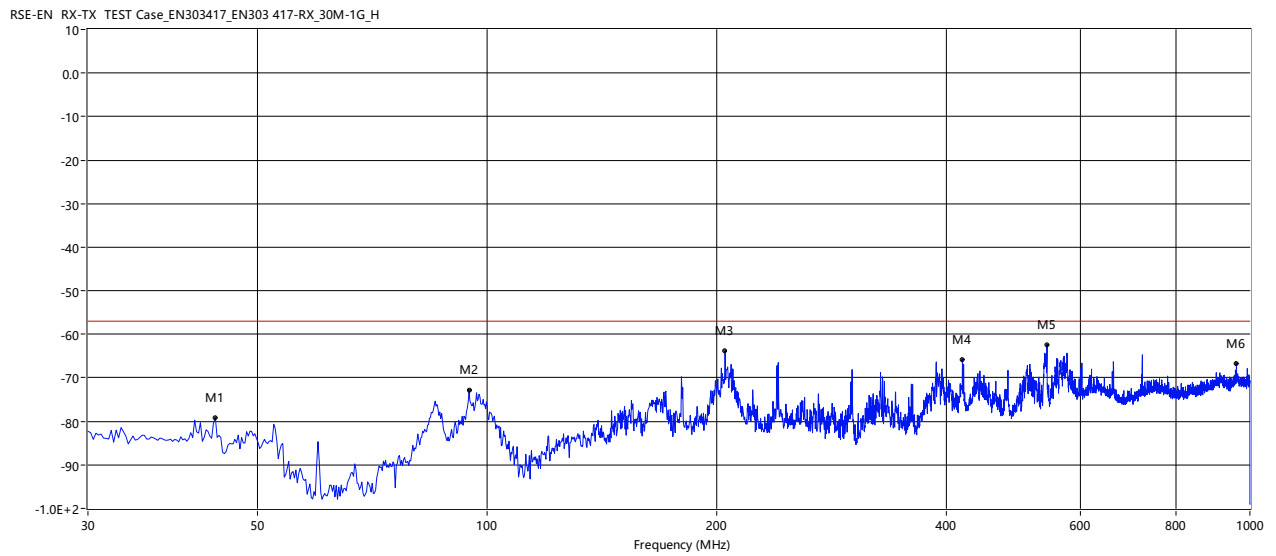
No.	Frequency (KHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.0150	-27.28	19.74	-7.37	34.70	-42.10	peak
2	0.0216	-28.26	20.07	-8.77	33.10	-41.87	peak
3	0.0418	-27.67	19.66	-8.029	30.22	-38.249	peak
4	0.0670	-28.96	19.02	-9.05	28.12	-37.17	peak
5	0.1000	-20.85	17.60	-3.36	26.53	-29.89	peak
6	0.1460	-4.88	17.51	12.45	24.66	-12.21	peak

150KHz – 30MHz



No.	Frequency (MHz)	Reading (dBuA)	Correct Factor(dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.4187	-25.03	20.17	-4.37	20.34	-24.7	peak
2	1.6843	-27.21	20.26	-6.59	15.20	-21.79	peak
3	1.9937	-26.28	20.36	-5.46	13.66	-19.12	peak
4	4.0901	-26.07	20.41	-4.89	8.46	-13.35	peak
5	8.1354	-26.97	20.32	-7.56	2.94	-10.5	peak
6	13.5228	-28.23	20.98	-6.59	-1.88	-4.71	peak

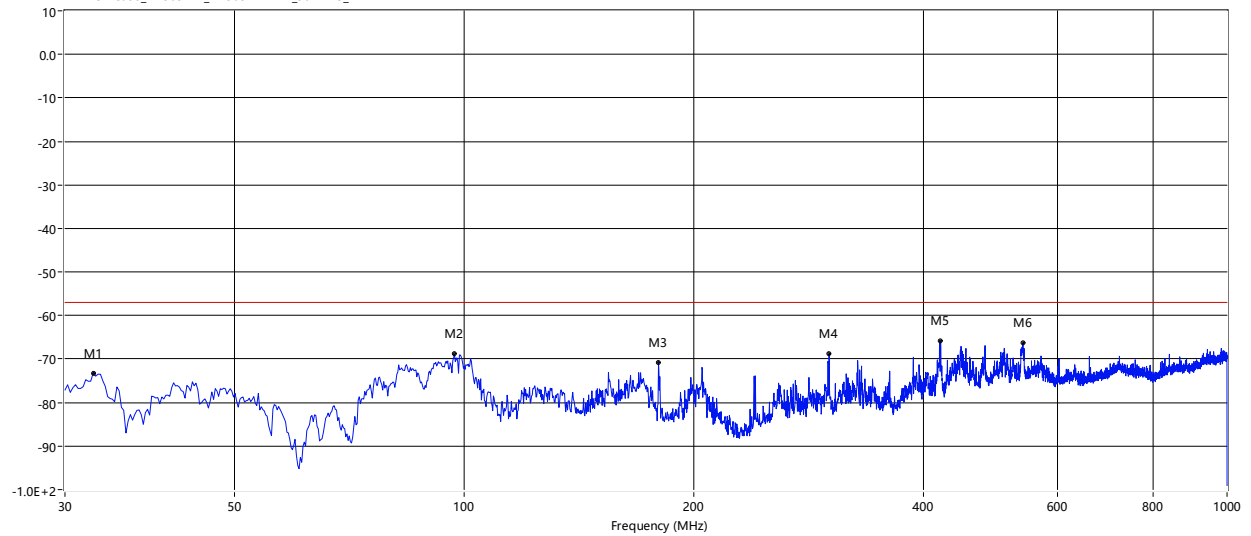
30MHz -1GHz Horizontal



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
44.038	-77.68	-7.28	-57.0	-20.7	89.90	Horizontal	Vertical	Pass
94.739	-74.37	-14.23	-57.0	-17.37	86.60	Horizontal	Vertical	Pass
205.156	-65.49	-11.09	-57.0	-8.49	26.30	Horizontal	Vertical	Pass
419.917	-68.05	2.23	-57.0	-11.05	143.50	Horizontal	Vertical	Pass
541.378	-63.56	2.92	-57.0	-6.56	163.90	Horizontal	Vertical	Pass
960.457	-62.71	9.63	-57.0	-5.71	319.80	Horizontal	Vertical	Pass

Vertical

RSE-EN RX-TX TEST Case_EN303417_EN303 417-RX_30M-1G_V



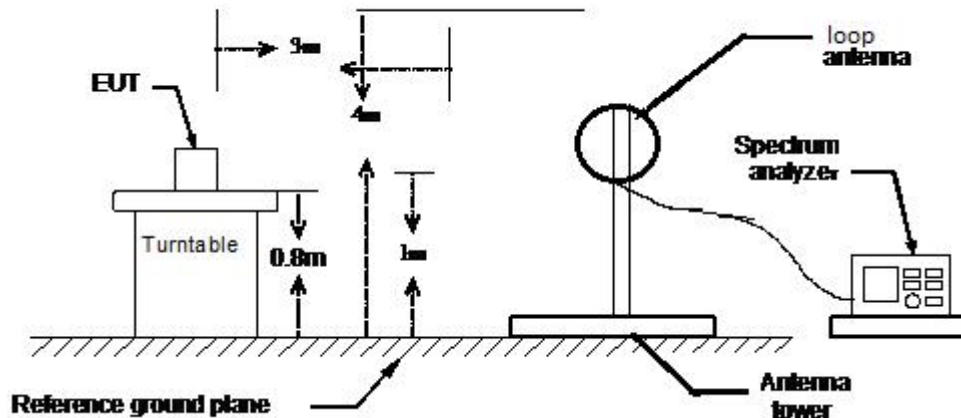
Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
32.689	-71.08	-7.84	-57.0	-14.1	30.90	Vertical	Vertical	Pass
97.176	-69.24	-6.34	-57.0	-12.24	4.40	Vertical	Vertical	Pass
179.873	-62.56	-8.31	-57.0	-5.56	356.40	Vertical	Vertical	Pass
300.863	-66.27	-3.44	-57.0	-9.27	288.80	Vertical	Vertical	Pass
421.375	-64.37	1.25	-57.0	-7.37	34.20	Vertical	Vertical	Pass
539.945	-67.59	5.95	-57.0	-10.59	349.00	Vertical	Vertical	Pass

8. TRANSMITTER OUT OF BAND (OOB) EMISSIONS

8.1 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.

8.2 TEST CONFIGURATION



8.3 TEST PROCEDURE

1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.2 for the measurement method.

8.4 TEST RESULT

Mode 1

Out of Band emission	F_{SL}	F_L	F_H	F_{SH}
Operation Frequency (KHz)	133.75	147.58	147.750	157.750
Reading (dB μ A)	30.612	39.216	39.323	29.825
limit (dB μ A/m)	68.135	68.800	26.600	69.367
Result	Pass	Pass	Pass	Pass

Mode 2

Out of Band emission	F _{SL}	F _L	F _H	F _{SH}
Operation Frequency (KHz)	108.35	118.35	124.850	134.850
Reading (dBμA)	10.117	29.126	29.235	9.327
limit (dBμA/m)	96.419	97.338	26.700	97.749
Result	Pass	Pass	Pass	Pass

Mode 3/4

Out of Band emission	F _{SL}	F _L	F _H	F _{SH}
Operation Frequency (KHz)	110.30	120.30	132.650	142.650
Reading (dBμA)	-14.938	11.873	17.283	-13.278
limit (dBμA/m)	96.742	97.606	26.700	98.022
Result	Pass	Pass	Pass	Pass

9. WPT SYSTEM UNWANTED CONDUCTED EMISSIONS

9.1 LIMIT

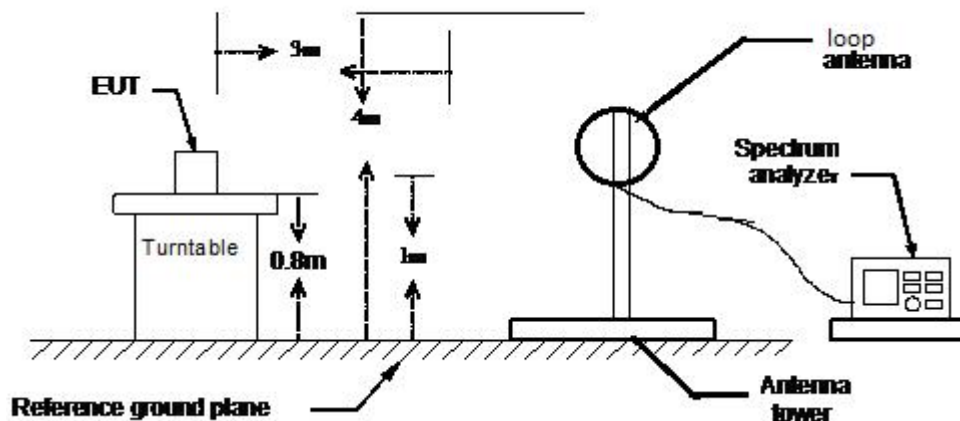
The common mode current (ICM) between 1 MHz and 30 MHz shall not exceed the following limit:

$$I_{CM} = 47 - 8 \times \log(f) \text{ dB}\mu\text{A}$$

NOTE: f is the frequency in MHz.

9.2 TEST CONFIGURATION

Below 30MHz



9.3 TEST PROCEDURE

1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.2 for the measurement method.

9.4 TEST RESULT

Note: Not applicable.

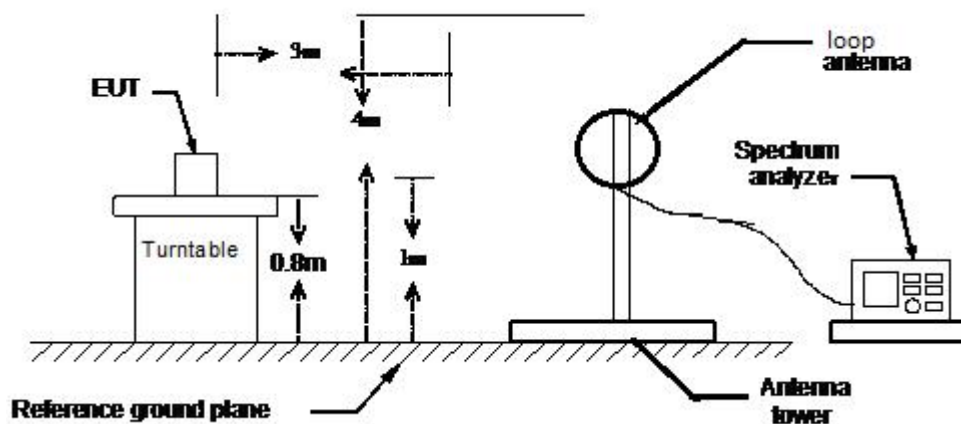
10. RECEIVER BLOCKING

10.1 LIMIT

Table 6: Receiver blocking limits

	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)	$f = f_c \pm 10 \times F$ (see note)
Signal level field strength at the EUT	72 dB μ A/m	72 dB μ A/m	82 dB μ A/m
NOTE: F = OFR see clause 4.3.3.			

10.2 TEST CONFIGURATION



10.3 TEST PROCEDURE

1. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 5 for the test conditions.
2. Please refer to ETSI EN 303 417 (V.1.1.1) Sub-clause 6.3 for the measurement method.

10.4 TEST RESULT

Note: Only show the worst case in the report.

Mode 1

operation frequency (KHz)	In-band signal(dB μ A/m)	OOB signal (dB μ A/m)	Remote-band signal(dB μ A/m)
174.9	72	/	/
171.5	/	72	/
178.3	/	72	/
140.9	/	/	82
208.9	/	/	82
Limit	Input the interference signal can work normally		
result	PASS	PASS	PASS

Note: F=OFR=4KHz

Mode 2

operation frequency (KHz)	In-band signal(dBμA/m)	OOB signal (dBμA/m)	Remote-band signal(dBμA/m)
174.9	72	/	/
171.5	/	72	/
178.3	/	72	/
140.9	/	/	82
208.9	/	/	82
Limit	Input the interference signal can work normally		
result	PASS	PASS	PASS

Note: F=OFR=4KHz

Mode 3

operation frequency (KHz)	In-band signal(dBμA/m)	OOB signal (dBμA/m)	Remote-band signal(dBμA/m)
174.9	72	/	/
171.5	/	72	/
178.3	/	72	/
140.9	/	/	82
208.9	/	/	82
Limit	Input the interference signal can work normally		
result	PASS	PASS	PASS

Note: F=OFR=4KHz

※※※※※ END OF THE REPORT※※※※※



EN62311: TEST Report

Report No: FCS202607176H01

Issued for

Applicant:	Mid Ocean Brands B.V.
Address:	Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong.
Product Name:	Wireless charger
Brand Name:	N/A
Model Name:	MO2281
Series Model:	N/A
Test Standard:	EN 62311:2020 EN 50665:2017
Issued By: Dongguan Funas Testing Technology Co.,Ltd Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan, China Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com E-mail: andy.yue@fcs-lab.com	

**TEST RESULT CERTIFICATION**

Applicant's Name..... : Mid Ocean Brands B.V.
Address..... : Unit 711-716, 7/F., Tower A, 83 King Lam Street,
Cheung Sha Wan, Kowloon, Hong Kong.
Manufacture's Name..... : Mid Ocean Brands B.V.
Address..... : Unit 711-716, 7/F., Tower A, 83 King Lam Street,
Cheung Sha Wan, Kowloon, Hong Kong.

Product Description

Product Name..... : Wireless charger
Brand Name : N/A
Model Name..... : MO2281
Series Model..... : See the first page of the report
Test Standards..... : EN 62311:2020
EN50665:2017

This device described above has been tested by FCS, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of FCS, this document may be altered or revised by FCS, personal only, and shall be noted in the revision of the document.

Date of Test..... :

Date (s) of performance of tests. : July 13, 2026~July 20, 2026

Date of Issue..... : July 20, 2026

Test Result..... : Pass

Tested by :

(orange OuYang)

Reviewed by :

(jayden)

Approved by :

(Jack Wang)



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LIMIT	6
4. TEST PROCEDURE	7
4.1 TEST SETUP	7
5. RESULT	7



1. Testing laboratory

Company Name:	Dongguan Funas Testing Technology Co.,Ltd.
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan, China
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
Laboray Accreditations	
FCC Test Firm Registration Number: 514908 CNAS Number: L15566 Designation number: CN0127 A2LA accreditation number: 5545.01 ISED Number: 25801	



2. GENERAL INFORMATION

Equipment	Wireless charger	
Brand Name	N/A	
Model Name.	MO2281	
Serial Model	See the first page of the report	
Model Difference	N/A	
Product Description	The is a Wireless charger.	
	Operation Frequency	105kHz-205kHz
	Antenna Designation	PCB Antenna
	Antenna Gain(Peak)	0 dBi
	More details of EUT technical specification, please refer to the User's Manual.	
Adapter:	Input :DC 9V 2A, 5V 2A Output: DC 5V 1A, 7.5V 1A, 9V 1.1A, 9V 1.67A Power: Wireless Power: 15 W Max.	
Battery	N/A	
Hardware version number:	V1.0	
Software version number:	V1.0	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

GENERAL DESCRIPTION OF EUT



3.EN 62311 REQUIREMENT

GENERAL INFORMATION

Equipment complying with the requirements for the general public is deemed to comply with therequirements for workers without further testing.

The measurements and calculations to demonstrate equipment compliance shall be made according to EN IEC 62311:2020, Clauses 4 and 5, The general considerations as defined in EN IEC 62311:2020, Clauses 4 and 5 shall apply to all equipment.

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

According to EN IEC 62311:2020, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—
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
400-2 000 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



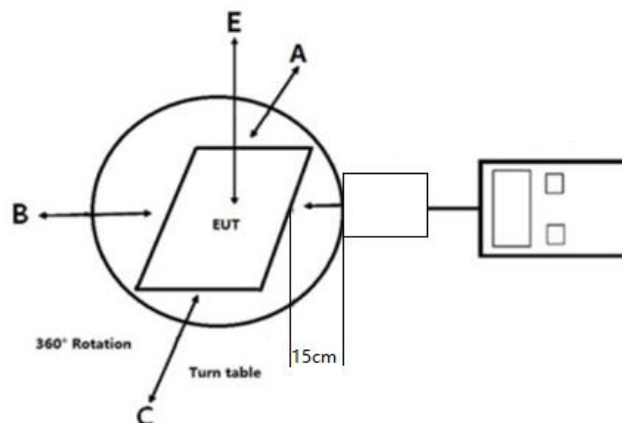
Notes:

1. f as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz, S_{eq} , E^2 , H^2 , and B^2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz, S_{eq} , E^2 , H^2 , and B^2 are to be averaged over any $68/f^{1.05}$ -minute period (f in GHz).
4. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people, annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.

4. TEST PROCEDURE

For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm (Top) and 15 cm (Center). E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm (Top) and 15 cm (Center) measured from the center of the probe(s) to the edge of the device.

4.1 TEST SETUP



5. RESULT

wireless charging

EUT Position	Operating Frequency (KHz)	Distance (cm)	H-field test data (A/m)	H-field Limit (A/m)	Results
Front	127.7	15	0.12	5	PASS
Rear	127.7	15	0.14	5	PASS
Left	127.7	15	0.17	5	PASS
Right	127.7	15	0.15	5	PASS
Top	127.7	15	0.09	5	PASS