

Prüfbericht-Nr.: <i>Test report no.:</i>	CN21FM34 001	Auftrags-Nr.: <i>Order no.:</i>	168334402	Seite 1 von 36 <i>Page 1 of 36</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2021-09-06	
Auftraggeber: <i>Client:</i>	ASAP Technology(Jiangxi) Co., Ltd. No.5, Shuguang Rd, West Zone, Ji'an County Industrial Park, Ji'an, Jiangxi 343100 China			
Prüfgegenstand: <i>Test item:</i>	Magnetic Wireless Charger			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	LACA179, NS-MQM10W22W, BE-MQM10W22W, NS-MQM10W22WC, NS-MQM10Wxxxxxx, BE-MQM10Wxxxxxx, MD-MQM10Wxxxxxx("x"=0-9,A-Z,a-z,- or blank, for market purpose only). (Trademark: INSIGNIA, MODAL, Bestbuy Essential, Platinum)			
Auftrags-Inhalt: <i>Order content:</i>	Type test			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart C Section 15.215			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2021-09-07	Refer to photos document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003123454			
Prüfzeitraum: <i>Testing period:</i>	2021-09-09 – 2021-09-29			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	genehmigt von: <i>authorized by:</i>			
Datum: <i>Date:</i> 2021-10-26	 Signed by: Alex Lan		 Signed by: Winnie Hou	
Stellung / Position	Senior Project Engineer	Ausstellungsdatum: <i>Issue date:</i> 2021-10-26		
Stellung / Position		Department Manager		
Sonstiges / Other:	FCC ID: 2APXNLACA179			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>			
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 20dB BANDWIDTH

RESULT: Pass

5.1.3 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.4 CONDUCTED EMISSIONS

RESULT: Pass

5.1.5 RADIATED EMISSION

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huangguan Road Middle, Longhua District, Shenzhen 518110, China

FCC Registration No.: CN1260

IC Registration No.: 25069 and the CAB identifier is CN0078.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Shenzhen) Co., Ltd.

Radio Spectrum Testing				
Description	Manufacturer	Model	Serial No.	Cal. Until
Signal Analyzer	Rohde & Schwarz	FSV 40	101441	2022-08-09
OSP	Rohde & Schwarz	OSP 150	101017	2021-12-20
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	Rohde & Schwarz	WMS32 (V10.40.10)	N/A	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing				
Description	Manufacturer	Model	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Signal Analyzer	R&S	FSV 40	101439	2022-08-09
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2022-08-09
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2022-08-09
Amplifier	R&S	SCU-18F	180070	2022-08-09
Amplifier	R&S	SCU40A	100475	2022-08-09
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-08
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-08
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-08
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-09-13
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A

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Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Conducted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102428	2022-08-10
Artificial Mains Network	R&S	ENV216	102333	2022-08-10
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A
Radiated Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
3m SAC	ETS-Lindgren	SAC3	CT001632-Q1362	2024-04-26
EMI Test Receiver	R&S	ESR7	102111	2021-12-16
Horn Antenna	R&S	HF907	102706	2022-08-07
Preamplifier (1-18GHz)	FIT	SCU-18F	180077	2022-08-13
Active magnetic loop antenna	SCHWARZBECK	FMZB1519B	00080	2021-08-30
Trilog-Broadband antenna	SCHWARZBECK	VULB9168	0945	2022-12-12
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Test	Parameters	Expanded uncertainty (U_{lab})	Expanded uncertainty (U_{cisp})
Conducted Emission	Level accuracy (9kHz to 150kHz)	± 3.70 dB	± 3.8 dB
	(150kHz to 30MHz)	± 3.30 dB	± 3.4 dB
Radiated Emission (3m SAC)	Level accuracy (30MHz to 1000MHz)	± 4.52 dB	± 6.3 dB
	Level accuracy (above 1000MHz)	± 4.37 dB	N/A

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huangguan Road Middle, Longhua District, Shenzhen 518110, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The device is a Magnetic Wireless Charger.

According to the declaration of the applicant, the electrical circuit design, PCB layout and components used are identical for all models, only the model number and enclosure are different.

This product has two different enclosure: plastic and metal.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Magnetic Wireless Charger
Type Designation	LACA179, NS-MQM10W22W, BE-MQM10W22W, NS-MQM10W22WC, NS-MQM10Wxxxxxx, BE-MQM10Wxxxxxx, MD-MQM10Wxxxxxx("x"=0-9,A-Z,a-z,- or blank, for market purpose only).
Trademark	INSIGNIA, MODAL, Bestbuy Essential, Platinum
FCC ID	2APXNLACA179
Input Voltage	DC 5V, 3A or DC 9V, 2.22A via AC/DC Adapter
Test Voltage	AC 120V, 60Hz
AC/DC Adapter	Model: LACA162 Rating Input: AC 100-240V, 50/60Hz, 0.5A Rating Output: DC 5V, 3A or DC 9V, 2.22A
Technical Specification of WPT	
Operating Frequency	111-205KHz
Modulation	FSK
Antenna Type	Induction Coil Antenna
Antenna Gain	0 dBi
Antenna number	1
Wireless Charger output power	Max. 10W

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless charging
- B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- ID Label and Location Info

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5&6. All testing were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests of Radio Spectrum were applied on model NS-MQM10W22W with two different enclosure.

4.3 Special Accessories and Auxiliary Equipment

Table 3: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Mobile Phone	Apple	iphone 12	n/a	n/a

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 30MHz)

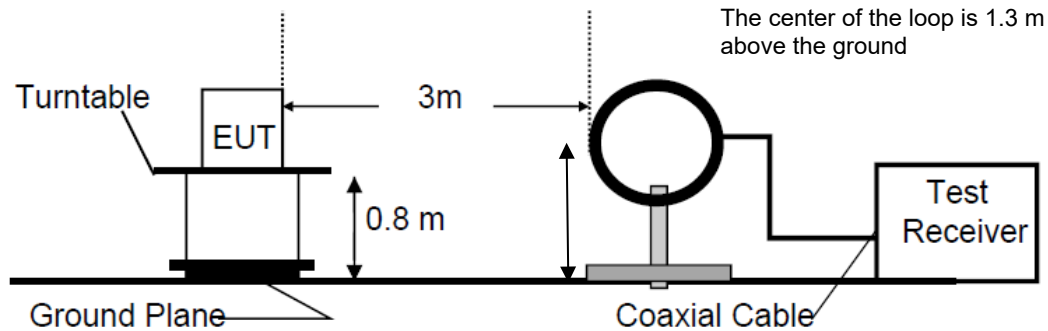


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

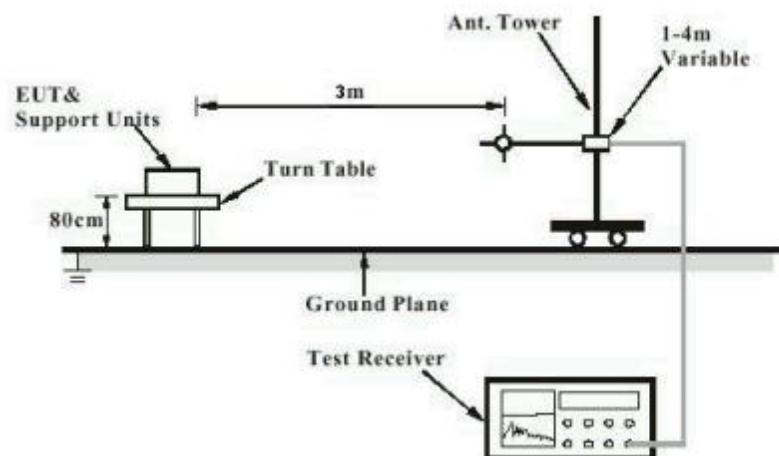
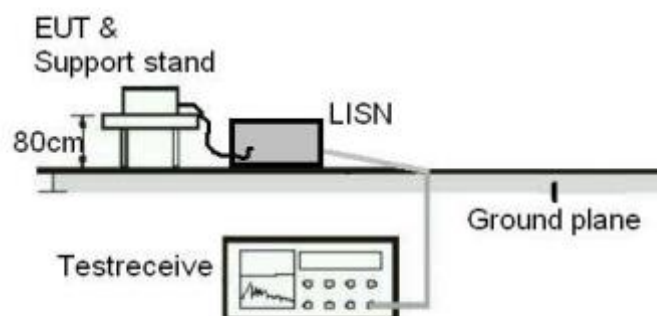


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, and the antenna is permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

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5.1.2 20dB Bandwidth

RESULT:

Pass

Test Specification

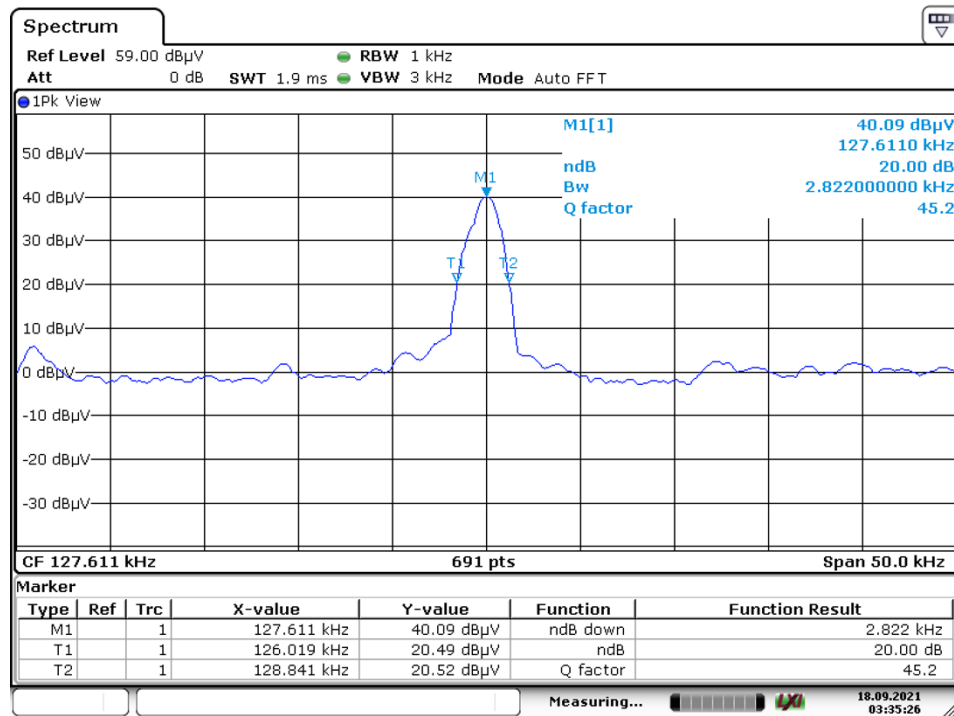
Test standard : FCC Part 15.215(c)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 2021-09-09 to 2021-09-18
Input voltage : 120Vac, 60Hz
Operation mode : A
Ambient temperature : 23 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

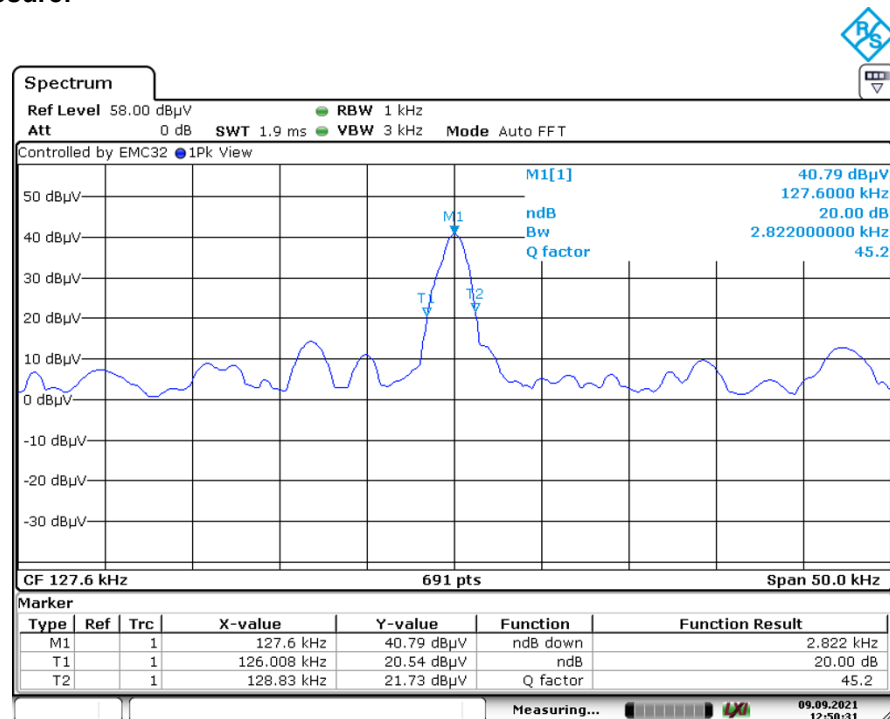
For details refer to following test result.

For Plastic enclosure:



Date: 18.SEP.2021 03:35:26

For Metal enclosure:



Date: 9.SEP.2021 12:50:31

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5.1.3 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.209 & 15.205
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2021-09-09 to 2021-09-29
Input voltage	: 120Vac, 60Hz
Operation mode	: A
Ambient temperature	: 23 °C
Relative humidity	: 45 %
Atmospheric pressure	: 101 kPa

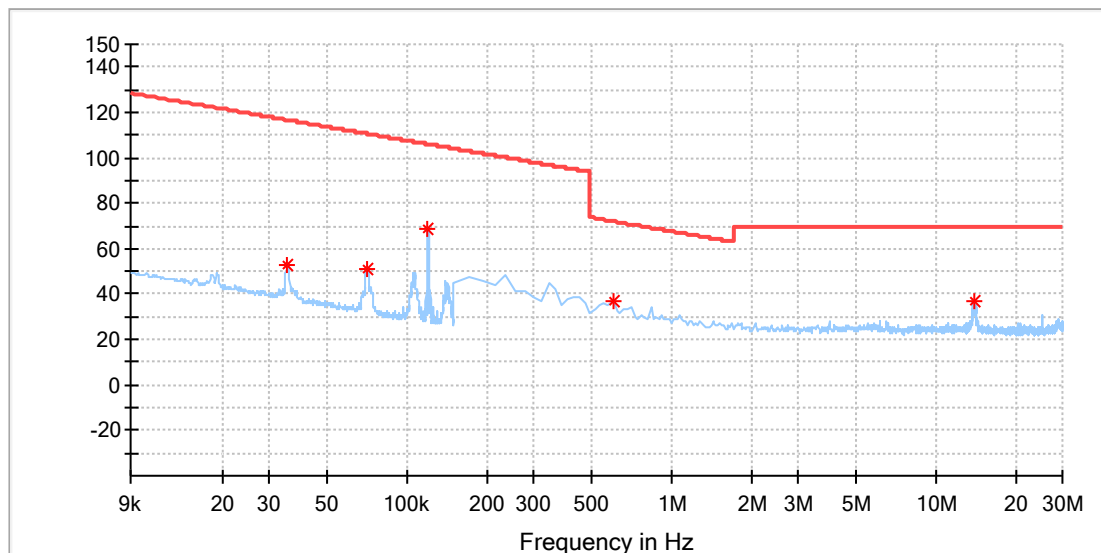
Refer to following test plots for details of test result.

For Plastic enclosure:

EUT Information

EUT Name:	Magnetic Wireless Charger
Model:	NS-MQM10W22W
Test Mode:	Charging
Test Voltage::	AC 120V/60Hz
Remark:	Temp 23 Humi:45%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

Level in dB μ V/m



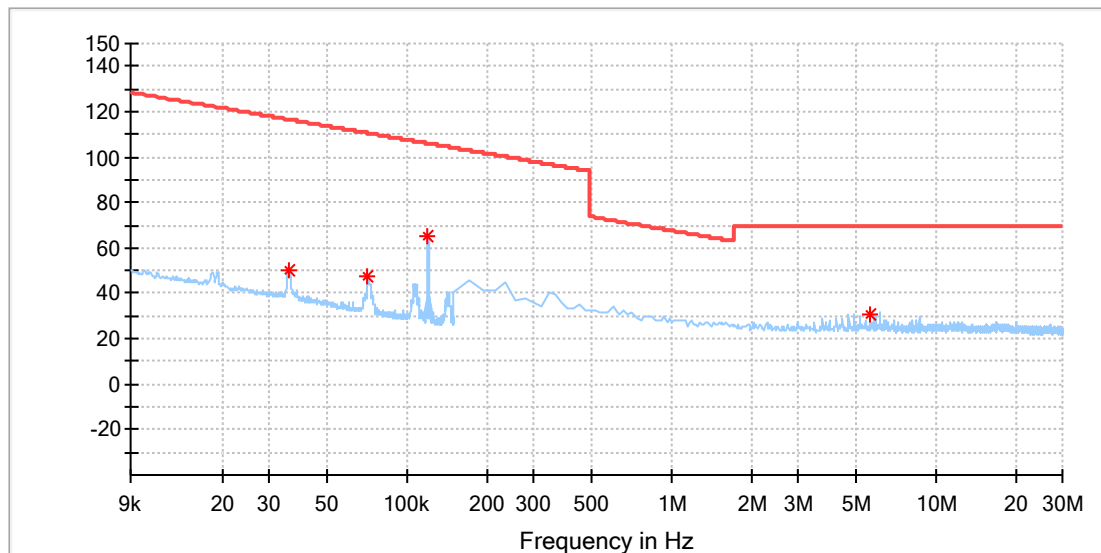
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.035085	52.96	116.69	63.73	100.0	X	325.0	20.1
0.070033	51.27	110.69	59.42	100.0	X	325.0	20.1
0.119987	69.07	106.02	36.94	100.0	X	54.0	20.1
0.597750	36.77	72.08	35.31	100.0	X	107.0	20.1
13.923643	36.52	69.50	32.98	100.0	X	80.0	20.5

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 23 Humi:45%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



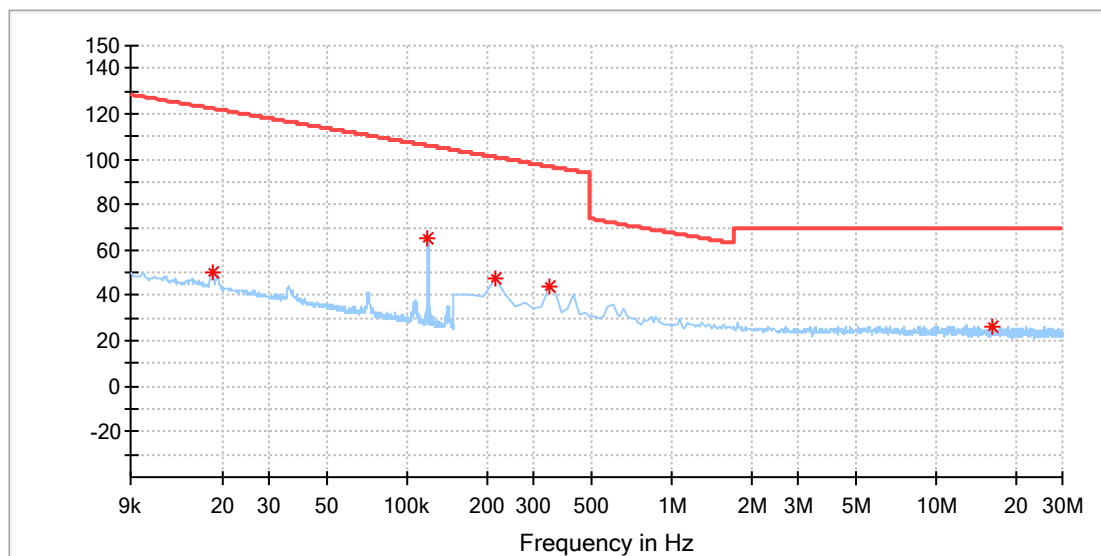
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.035589	50.13	116.57	66.43	100.0	Y	276.0	20.1
0.070939	47.64	110.58	62.93	100.0	Y	276.0	20.1
0.119987	64.77	106.02	41.24	100.0	Y	326.0	20.1
5.629607	30.70	69.50	38.80	100.0	Y	10.0	20.3

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 23 Humi:45%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



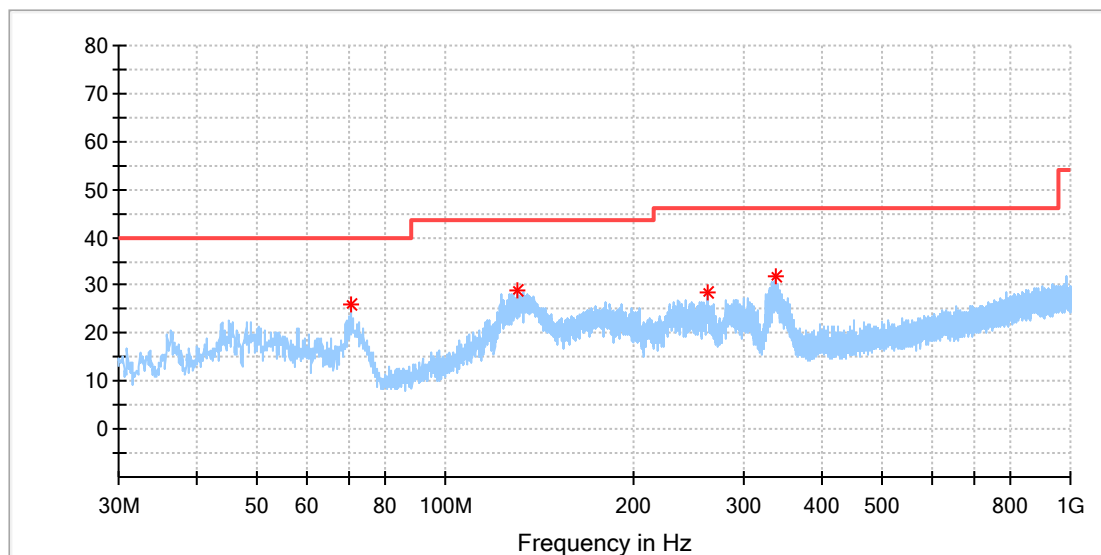
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.018366	49.91	122.31	72.40	100.0	Z	204.0	20.1
0.119987	64.83	106.02	41.18	100.0	Z	77.0	20.1
0.213964	47.51	100.99	53.48	100.0	Z	307.0	20.1
0.341893	44.27	96.92	52.65	100.0	Z	105.0	20.1
16.183714	26.18	69.50	43.32	100.0	Z	256.0	20.5

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 23 Humi:45%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



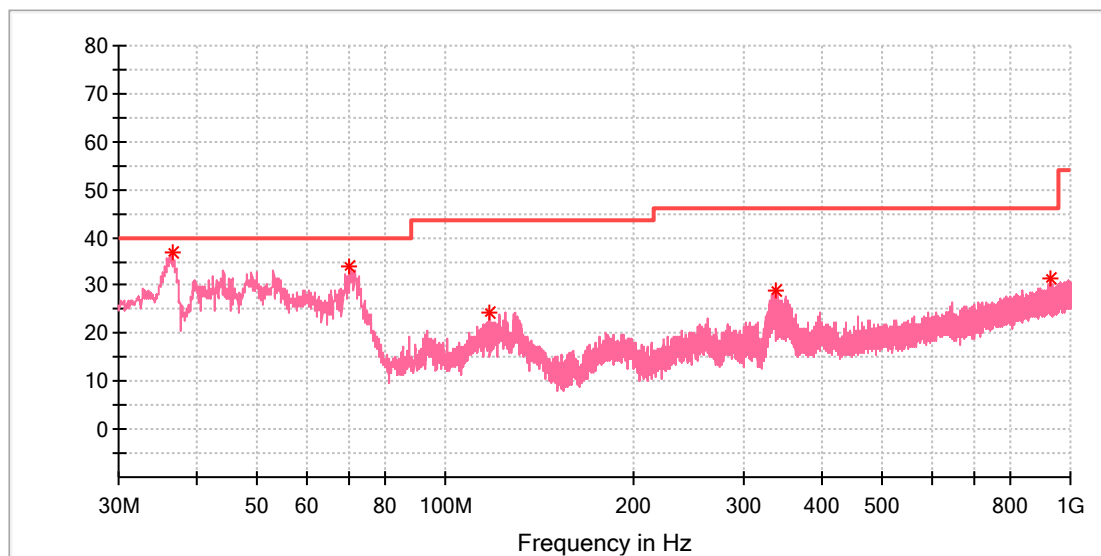
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
70.740000	25.80	40.00	14.20	100.0	H	255.0	-22.1
130.055500	28.78	43.50	14.72	100.0	H	339.0	-21.9
262.557500	28.48	46.00	17.52	100.0	H	255.0	-17.0
336.956500	31.80	46.00	14.20	100.0	H	330.0	-15.1

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 23 Humi:45%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dBµV/m



Critical_Freqs

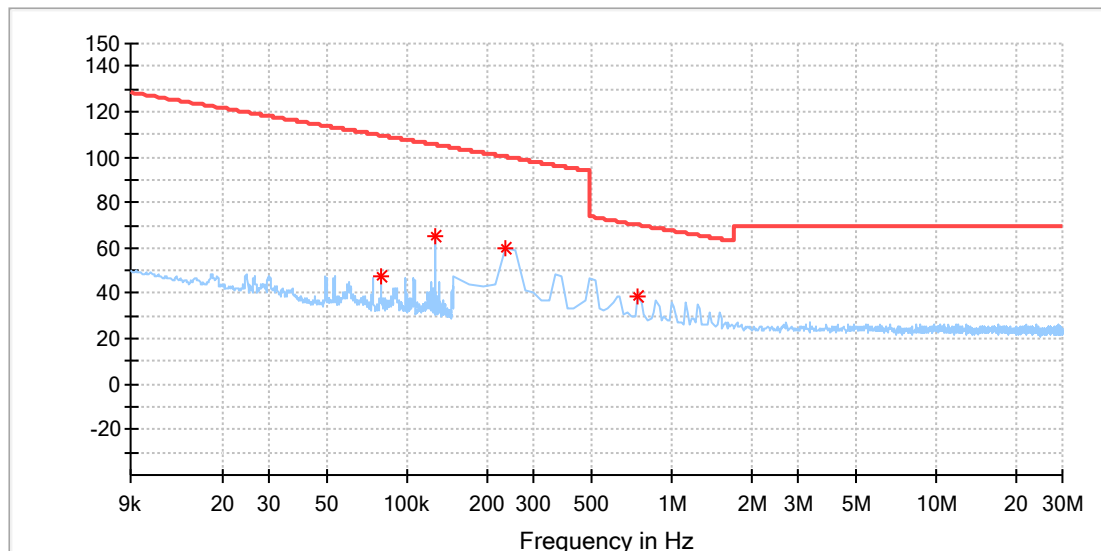
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.547500	36.97	40.00	3.03	100.0	V	283.0	-21.4
70.303500	34.00	40.00	6.00	100.0	V	36.0	-21.9
117.348500	24.41	43.50	19.09	100.0	V	7.0	-20.2
337.441500	28.90	46.00	17.10	100.0	V	72.0	-15.1
931.324000	31.30	46.00	14.70	100.0	V	178.0	-4.7

For Metal enclosure:

EUT Information

EUT Name:	Magnetic Wireless Charger
Model:	NS-MQM10W22W
Test Mode:	Charging
Test Voltage::	AC 120V/60Hz
Remark:	Temp 24 Humi:47%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

Level in dB μ V/m



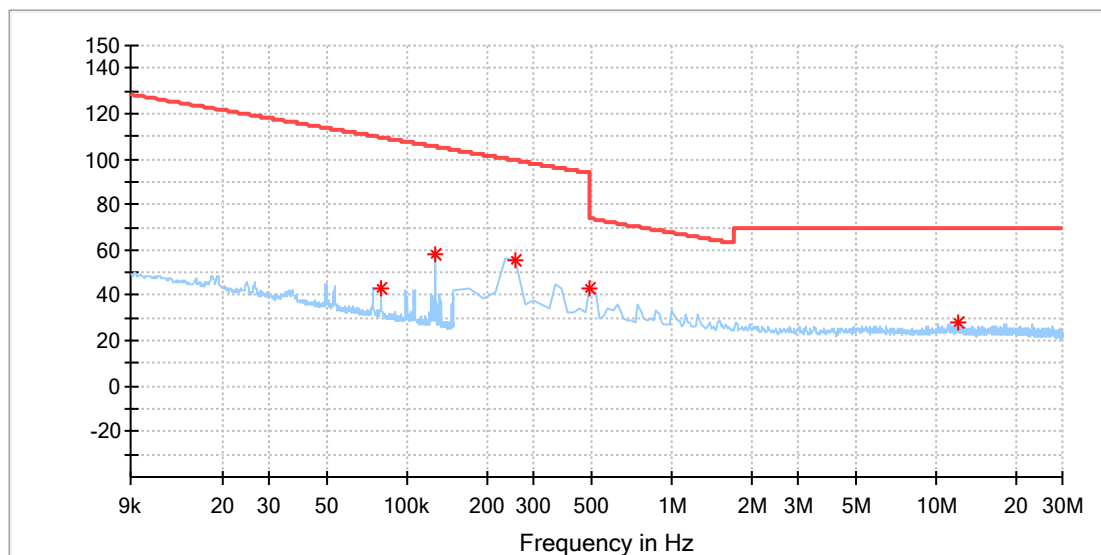
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.079399	47.34	109.60	62.26	100.0	X	278.0	20.1
0.127641	64.93	105.48	40.55	100.0	X	177.0	20.1
0.235286	59.58	100.17	40.59	100.0	X	285.0	20.1
0.747000	38.47	70.15	31.68	100.0	X	84.0	20.1

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 24 Humi:47%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



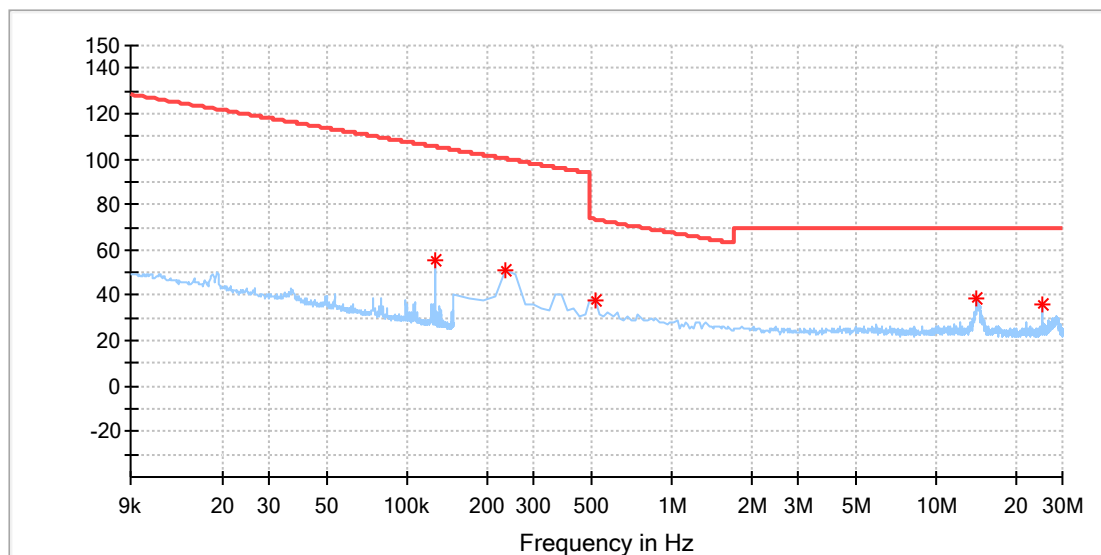
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.079500	42.78	109.59	66.81	100.0	Y	324.0	20.1
0.127641	58.29	105.48	47.19	100.0	Y	275.0	20.1
0.256607	55.53	99.42	43.89	100.0	Y	181.0	20.1
0.491143	43.13	73.78	30.65	100.0	Y	181.0	20.1
12.047357	27.66	69.50	41.84	100.0	Y	354.0	20.4

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 24 Humi:47%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.127641	55.57	105.48	49.91	100.0	Z	201.0	20.1
0.235286	51.04	100.17	49.13	100.0	Z	285.0	20.1
0.512464	37.64	73.41	35.77	100.0	Z	111.0	20.1
14.286107	38.28	69.50	31.22	100.0	Z	333.0	20.5
25.010786	36.02	69.50	33.48	100.0	Z	184.0	20.7

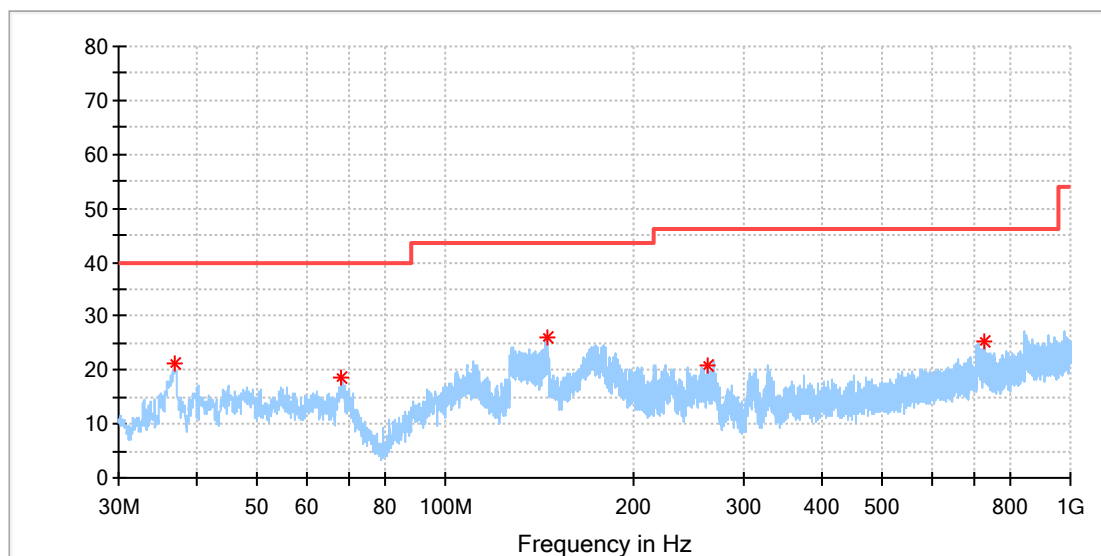
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EUT Information

EUT Name:	Magnetic Wireless Charger
Model:	NS-MQM10W22W
Test Mode:	Charging
Test Voltage::	AC 120V/60Hz
Remark:	Temp 24 Humi:47%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

Level in dB μ V/m



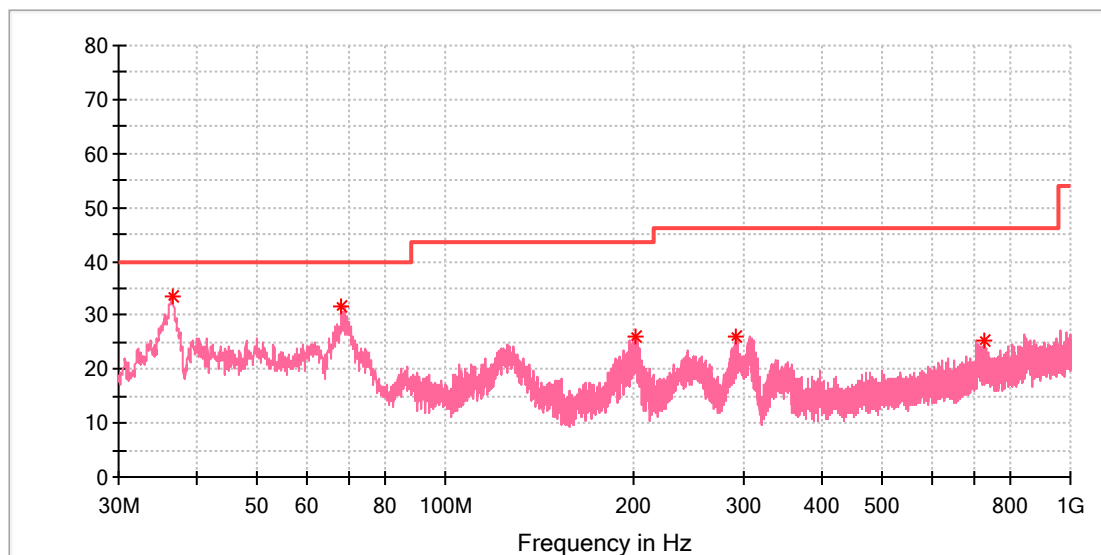
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.864615	21.21	40.00	18.79	100.0	H	253.0	-21.5
68.277692	18.49	40.00	21.51	100.0	H	349.0	-21.5
145.765769	26.06	43.50	17.44	100.0	H	211.0	-22.6
263.247692	20.75	46.00	25.25	100.0	H	314.0	-17.4
729.370000	25.41	46.00	20.59	100.0	H	191.0	-7.9

EUT Information

EUT Name: Magnetic Wireless Charger
 Model: NS-MQM10W22W
 Test Mode: Charging
 Test Voltage:: AC 120V/60Hz
 Remark: Temp 24 Humi:47%
 Test Standard: FCC Part 15C
 Tested By: Kei Zhang
 Reviewed By: Terry Yin

Level in dB μ V/m



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.528846	33.41	40.00	6.59	100.0	V	162.0	-21.6
68.203077	31.61	40.00	8.39	100.0	V	337.0	-21.5
200.831923	25.98	43.50	17.52	100.0	V	271.0	-19.3
292.347692	25.95	46.00	20.05	100.0	V	271.0	-16.8
728.623846	25.48	46.00	20.52	100.0	V	90.0	-7.9

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5.1.4 Conducted emissions

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.207
Basic standard	: ANSI C63.10: 2013
Frequency range	: 150KHz - 30MHz
Classification	: Class B
Limit	FCC Part 15.207 (a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2021-09-14 to 2021-09-18
Input voltage	: 120Vac, 60Hz
Operation mode	: A
Ambient temperature	: 23 °C
Relative humidity	: 48 %
Atmospheric pressure	: 101 kPa

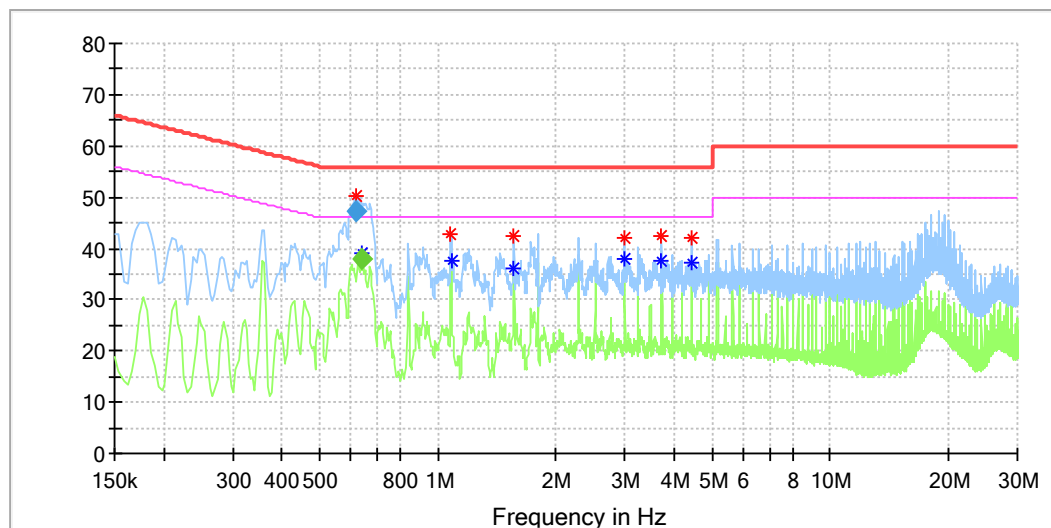
Refer to following test plots for details of test result.

For Plastic enclosure:

EUT Information

EUT Name:	Magnetic Wireless Charger
Order No:	168334402 50
Model:	NS-MQM10W22W
Test mode:	On, charging
Test Voltage:	AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	SR2

Level in dBμV



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.618500	50.09	---	56.00	5.91	L1	10.0
0.637500	---	38.96	46.00	7.04	L1	10.0
1.078000	42.77	---	56.00	13.23	L1	10.0
1.082000	---	37.61	46.00	8.39	L1	10.0
1.562000	---	36.01	46.00	9.99	L1	10.1
1.562000	42.33	---	56.00	13.67	L1	10.1
3.002000	---	37.94	46.00	8.06	L1	10.2
3.002000	42.17	---	56.00	13.83	L1	10.2
3.722000	---	37.47	46.00	8.53	L1	10.2
3.722000	42.34	---	56.00	13.66	L1	10.2
4.442000	---	37.28	46.00	8.72	L1	10.2
4.442000	41.95	---	56.00	14.05	L1	10.2

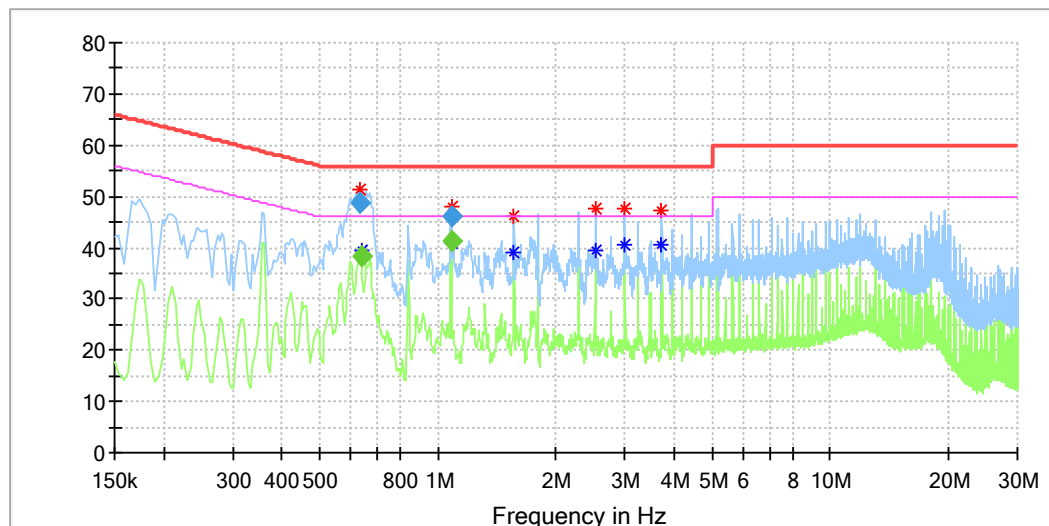
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.618500	47.12	---	56.00	8.88	1000.0	9.000	L1	10.0
0.637500	---	37.88	46.00	8.12	1000.0	9.000	L1	10.0

EUT Information

EUT Name:	Magnetic Wireless Charger
Order No:	168334402 50
Model:	NS-MQM10W22W
Test mode:	On, charging
Test Voltage:	AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	SR2

Level in dBμV



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.633500	51.36	---	56.00	4.64	N	9.8
0.637500	---	39.34	46.00	6.66	N	9.8
1.081500	47.94	---	56.00	8.06	N	9.8
1.081500	---	40.98	46.00	5.02	N	9.8
1.558000	---	39.17	46.00	6.83	N	9.8
1.558000	46.11	---	56.00	9.89	N	9.8
2.518000	47.74	---	56.00	8.26	N	9.9
2.522000	---	39.51	46.00	6.49	N	9.9
3.002000	---	40.52	46.00	5.48	N	9.9
3.002000	47.47	---	56.00	8.53	N	9.9
3.722000	---	40.54	46.00	5.46	N	9.9
3.722000	47.17	---	56.00	8.83	N	9.9

Final Result

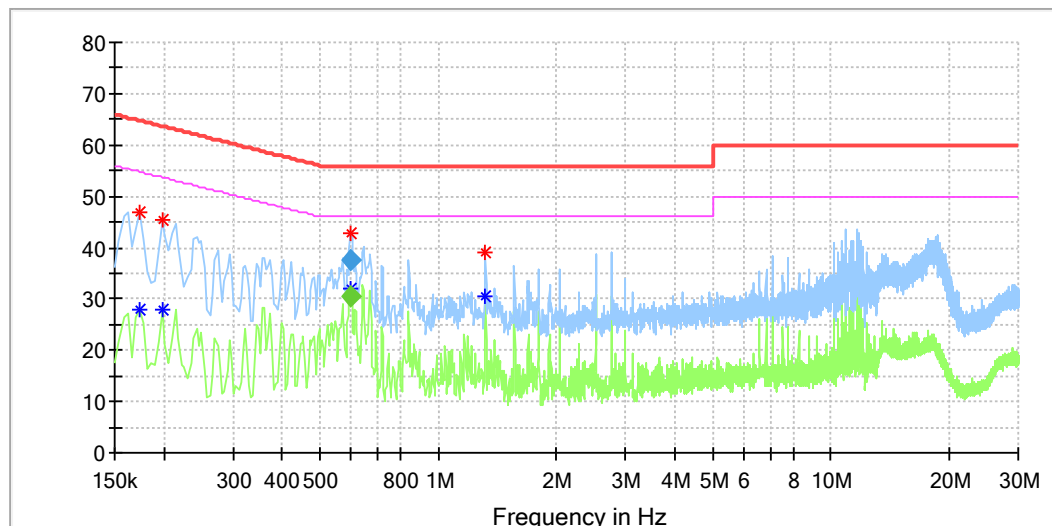
Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.633500	48.66	---	56.00	7.34	1000.0	9.000	N	9.8
0.637500	---	38.24	46.00	7.76	1000.0	9.000	N	9.8
1.081500	---	41.42	46.00	4.58	1000.0	9.000	N	9.8
1.081500	46.23	---	56.00	9.77	1000.0	9.000	N	9.8

For Metal enclosure:

EUT Information

EUT Name: Magnetic Wireless Charger
Order No: 168334402 30_P00420221
Model: NS-MQM10W22W
Test mode: On, charging
Test Voltage: AC 120V/60Hz
Test By: Jianhua Lu
Review By: Gary Chen
Remark: SR2

Level in dB μ V



Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Line	Corr. (dB)
0.174000	---	28.08	54.77	26.69	L1	9.9
0.174000	46.74	---	64.77	18.02	L1	9.9
0.198000	---	28.04	53.69	25.66	L1	9.9
0.198000	45.53	---	63.69	18.16	L1	9.9
0.597500	---	31.86	46.00	14.14	L1	10.0
0.601500	42.83	---	56.00	13.17	L1	10.0
1.318000	---	30.69	46.00	15.31	L1	10.1
1.318000	39.17	---	56.00	16.83	L1	10.1

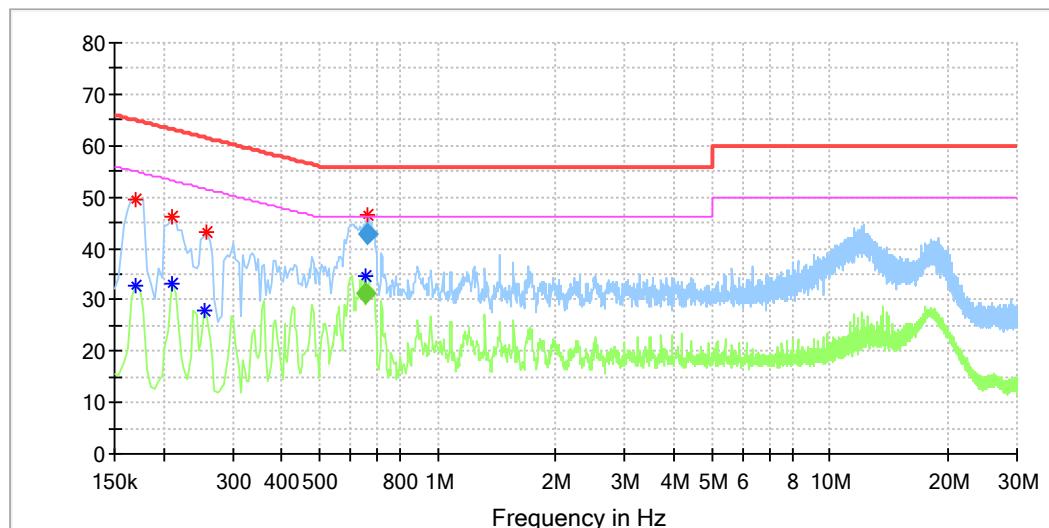
Final Result

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.597500	---	30.44	46.00	15.56	1000.0	9.000	L1	10.0
0.601500	37.67	---	56.00	18.33	1000.0	9.000	L1	10.0

EUT Information

EUT Name: Magnetic Wireless Charger
 Order No: 168334402 30_P00420221
 Model: NS-MQM10W22W
 Test mode: On, charging
 Test Voltage: AC 120V/60Hz
 Test By: Jianhua Lu
 Review By: Gary Chen
 Remark: SR2

Level in dBμV



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.170000	---	32.91	54.96	22.05	N	9.8
0.170000	49.63	---	64.96	15.33	N	9.8
0.210000	---	33.29	53.21	19.92	N	9.8
0.210000	46.13	---	63.21	17.07	N	9.8
0.254000	---	27.83	51.63	23.79	N	9.8
0.258000	43.04	---	61.50	18.45	N	9.8
0.654500	---	34.58	46.00	11.42	N	9.8
0.665500	46.38	---	56.00	9.62	N	9.8

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.654500	---	31.12	46.00	14.88	1000.0	9.000	N	9.8
0.665500	42.70	---	56.00	13.30	1000.0	9.000	N	9.8

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5.1.5 Radiated Emission

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.209
Basic standard	: ANSI C63.4: 2014
Frequency range	: 30 - 1000MHz *
Limits	: Refer to 15.209(a)
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2021-09-13 to 2021-09-18
Input voltage	: DC 5V via USB port
Operation mode	: A
Ambient temperature	: 22 °C
Relative humidity	: 52 %
Atmospheric pressure	: 101 kPa

Refer to following test plots for details of test result.

Remark: *- The highest frequency of internal sources of EUT is less than 108MHz, the measurement shall only be made up to 1GHz.

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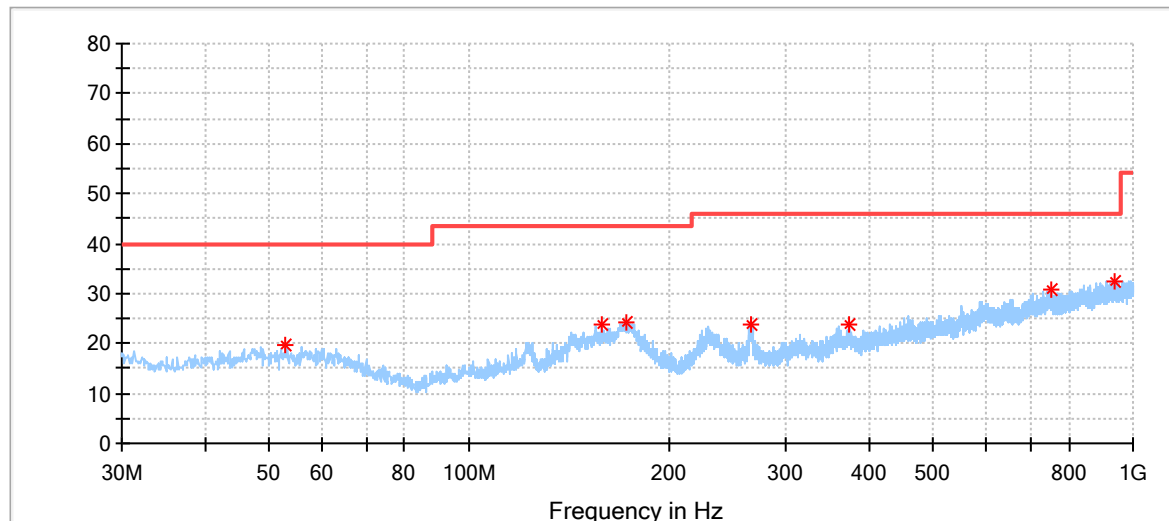
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For Plastic enclosure:

EUT Information

EUT Name:	Magnetic Wireless Charger
Order No:	168334402 50
Model:	NS-MQM10W22W
Test mode:	On, charging
Test Voltage:	AC AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	3m Chamber

Level in dB μ V/m



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
52.892000	19.53	40.00	20.47	100.0	H	210.0	20.9
158.234000	23.69	43.50	19.81	200.0	H	353.0	21.6
172.590000	24.38	43.50	19.12	200.0	H	353.0	21.1
265.904000	23.80	46.00	22.20	100.0	H	215.0	20.4
372.798000	23.85	46.00	22.15	100.0	H	68.0	22.8
754.687000	30.78	46.00	15.22	200.0	H	10.0	30.2
936.756000	32.51	46.00	13.49	200.0	H	348.0	32.2

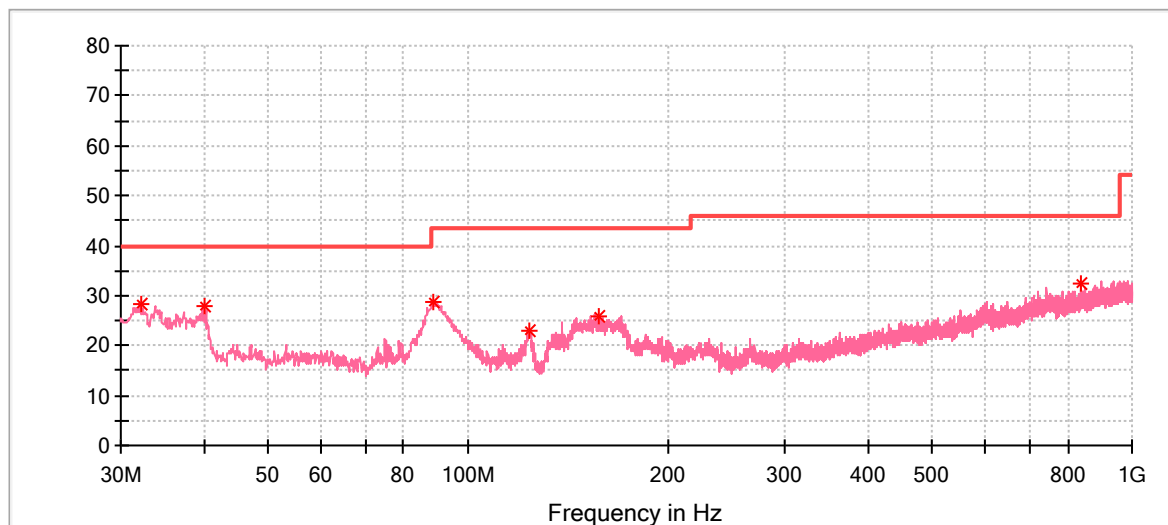
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EUT Information

EUT Name: Magnetic Wireless Charger
 Order No: 168334402 50
 Model: NS-MQM10W22W
 Test mode: On, charging
 Test Voltage: AC AC 120V/60Hz
 Test By: Jianhua Lu
 Review By: Gary Chen
 Remark: 3m Chamber

Level in dB μ V/m



Critical Freqs

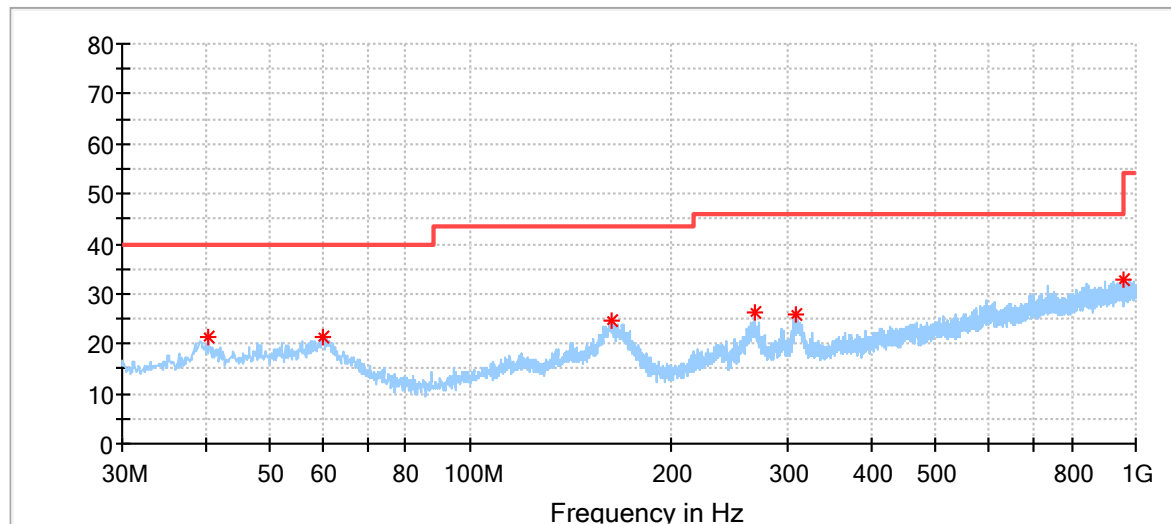
Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.134000	28.23	40.00	11.77	100.0	V	242.0	17.8
40.088000	27.91	40.00	12.09	100.0	V	337.0	19.6
88.976000	28.77	43.50	14.73	100.0	V	0.0	15.3
123.702000	23.14	43.50	20.36	100.0	V	325.0	19.1
157.070000	25.76	43.50	17.74	100.0	V	359.0	21.5
839.853000	32.56	46.00	13.44	200.0	V	316.0	31.3

For Metal enclosure:

EUT Information

EUT Name:	Magnetic Wireless Charger
Order No:	168334402 30_P00420221
Model:	NS-MQM10W22W
Test mode:	On, charging
Test Voltage:	AC AC 120V/60Hz
Test By:	Jianhua Lu
Review By:	Gary Chen
Remark:	3m Chamber

Level in dB μ V/m



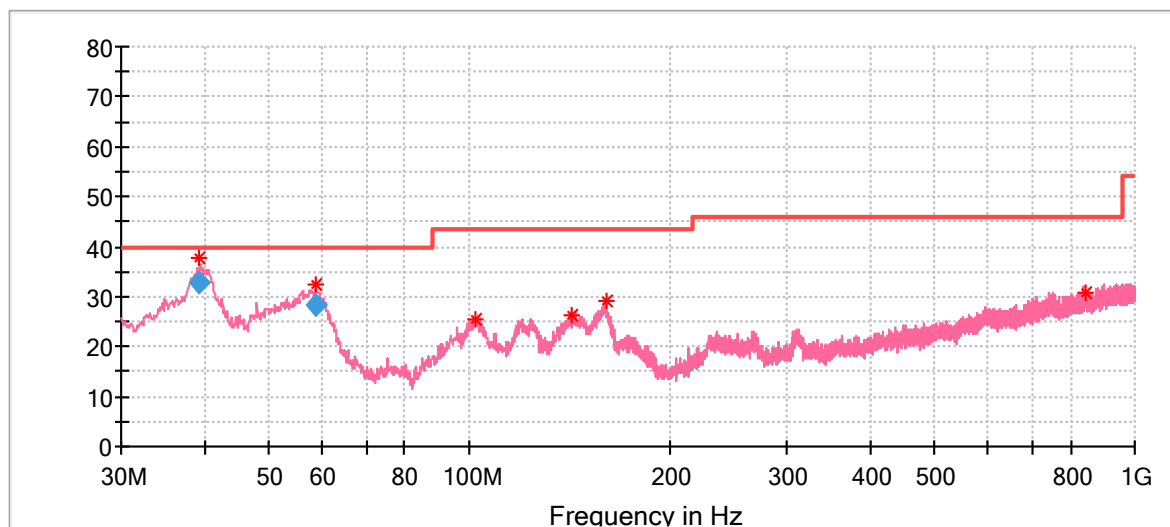
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.379000	21.38	40.00	18.62	200.0	H	50.0	19.6
60.264000	21.15	40.00	18.85	100.0	H	23.0	20.9
162.599000	24.41	43.50	19.09	200.0	H	127.0	21.4
268.329000	26.35	46.00	19.65	100.0	H	267.0	20.4
308.584000	25.81	46.00	20.19	100.0	H	305.0	21.5
956.447000	32.95	46.00	13.06	100.0	H	184.0	31.9

EUT Information

EUT Name: Magnetic Wireless Charger
Order No: 168334402 30_P00420221
Model: NS-MQM10W22W
Test mode: On, charging
Test Voltage: AC AC 120V/60Hz
Test By: Jianhua Lu
Review By: Gary Chen
Remark: 3m Chamber

Level in dB μ V/m



Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.349000	37.94	40.00	2.06	100.0	V	178.0	19.4
58.635000	32.45	40.00	7.55	100.0	V	115.0	21.2
101.974000	25.52	43.50	17.98	100.0	V	107.0	17.3
142.132000	26.34	43.50	17.16	100.0	V	289.0	20.2
160.271000	29.08	43.50	14.42	100.0	V	305.0	21.6
841.987000	30.79	46.00	15.21	200.0	V	228.0	31.2

Final Result

Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
39.349000	32.79	40.00	7.21	1000.0	120.000	100.0	V	178.0	19.4
58.635000	28.34	40.00	11.66	1000.0	120.000	100.0	V	115.0	21.2

6 Photographs of the Test Set-Up

Refer to test photo document.

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