

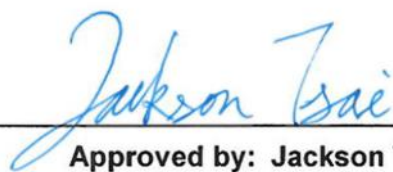


FCC Radio Test Report

FCC ID : 2BAFM-HU223
Equipment : Wireless Charger
Brand Name : Humane
Model Name : HU0223
Applicant : Humane, Inc.
969 Folsom Street San Francisco,
CA 94107 United States
Manufacturer : Humane, Inc.
969 Folsom Street San Francisco,
CA 94107 United States
Standard : 47 CFR FCC Part 15, Subpart C

The product was received on Apr. 27, 2023, and testing was started from May 05, 2023 and completed on May 07, 2023. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



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PHOTOGRAPHS OF EUT V01	

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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.209	Transmitter Radiated Emissions	PASS	-
3.3	15.215(c)	Emission Bandwidth	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

None

Reviewed by: Ben Tseng

Report Producer: Michelle Tsai



1 General Description

1.1 Information

1.1.1 General Information

Wireless Power Transfer General Information			
Frequency Range	Modulation	Operating Freq. (kHz)	Field Strength (dBuV/m)
112-290 kHz	ASK	181.1	61.65
Power Transfer Method	Output power from each primary coil	That may have multiple primary coils	Operating Method
Magnetic induction and only single primary coil	≤ 15W	No	directly contact
Note 1: Field strength performed peak level at 3m.			

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	-	-	Loop	N/A

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From AC Adapter/Host System/Battery
Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.:
☐	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.:
☐	Other:

1.1.4 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
☒	Operated normally mode for worst duty cycle
☐	Operated test mode for worst duty cycle
Test Signal Duty Cycle (x)	
☒	100%

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF:

- ♦ KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.) TEL: 886-3-327-3456 FAX: 886-3-327-0973			
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Lego Lin	23.4~25.3°C / 51~ 54%	06/May/2023
RF Conducted	TH01-HY	Vivi Jiang	22.2~23.4°C / 50~52%	07/May/2023
Radiated	03CH03-HY	Lego Lin	24.5~26.5°C / 50~65%	05/May/2023~06/May/2023
☐ Wen 33rd. St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: 886-3-318-0787 FAX: 886-3-318-0287			
Test site Designation No. TW0008 with FCC.				

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Transmitter Radiated Emissions	4.8 dB	Confidence levels of 95%
Receiver Radiated Emissions	4.8 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	2.30 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software	N/A
----------------------	-----

Note: The EUT transmits RF signal continuously by itself.

Mode	Power Setting
WPC	default

2.2 The Worst Case Configuration

Mode	Field Strength (dBuV/m at 3 m)	Charger Frequencies (kHz)
WPC	61.65	181.1

Note.1: Wireless charger were performed all charging conditions including variable loading and non-charging operation, the worst mode is full charging loading.

Note.2: Wireless charger frequencies are variable frequency range (112-290 kHz) and depend on charging loading.

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
	Adapter + Charge Pad Mode

The Worst Case Mode for Following Conformance Tests			
Tests Item	Transmitter Radiated Emissions, Emission Bandwidth		
Test Condition	Radiated measurement		
Operating Mode	CTX		
1	Adapter + Charge Pad Mode		
2	Wireless Charger Mode		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT		V	

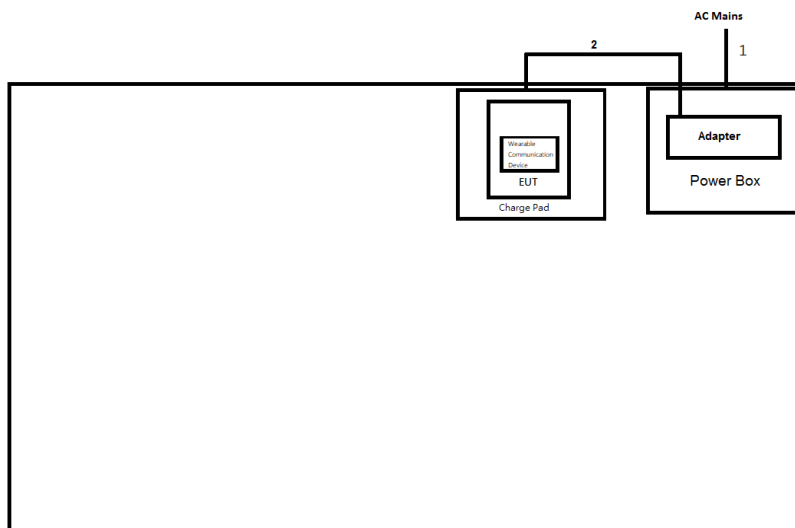
2.4 Accessories

Accessories				
AC Adapter	Brand Name	Humane	Model Name	HU0423
	Power Rating	I/P: 100 - 240V, 50-60Hz 0.3A, O/P: 5.0 V, 1.5A, 7.5W		
Battery	Brand Name	Li-Shen	Model Name	DAKP442929SA
	Power Rating	3.87Vdc, 463mAh	Type	Li-ion
Charge Pad	Brand Name	Humane	Model Name	HU0323
	Power Rating	I/P: 5V, 1.5A, O/P: 5V, 1.5A		
USB Cable	Brand Name	Humane	Model Name	HU0523
	Signal Line	1.2 meter, Braiding Cable, With back shield		
Wearable Communication Device	Brand Name	Humane	Model Name	HU0123

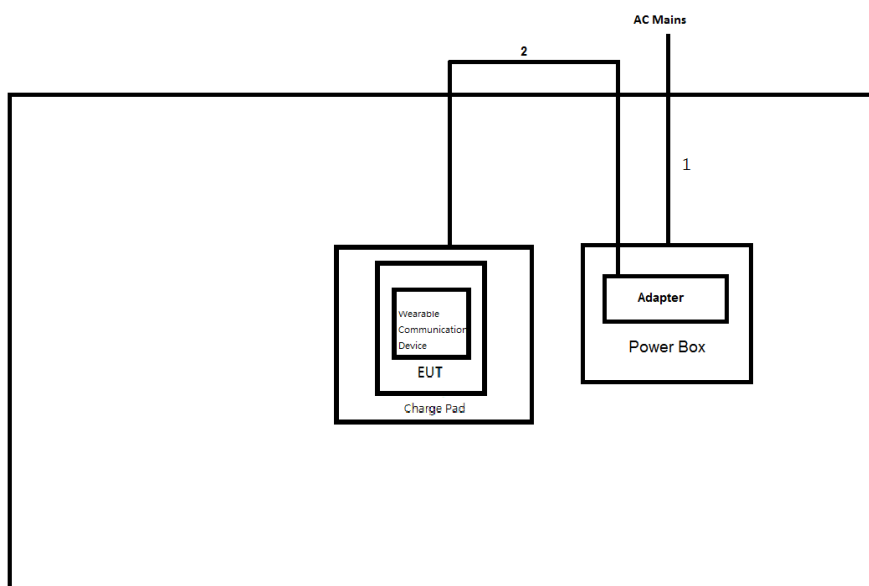
Reminder: Regarding to more detail and other information, please refer to user manual.

2.5 Test Setup Diagram

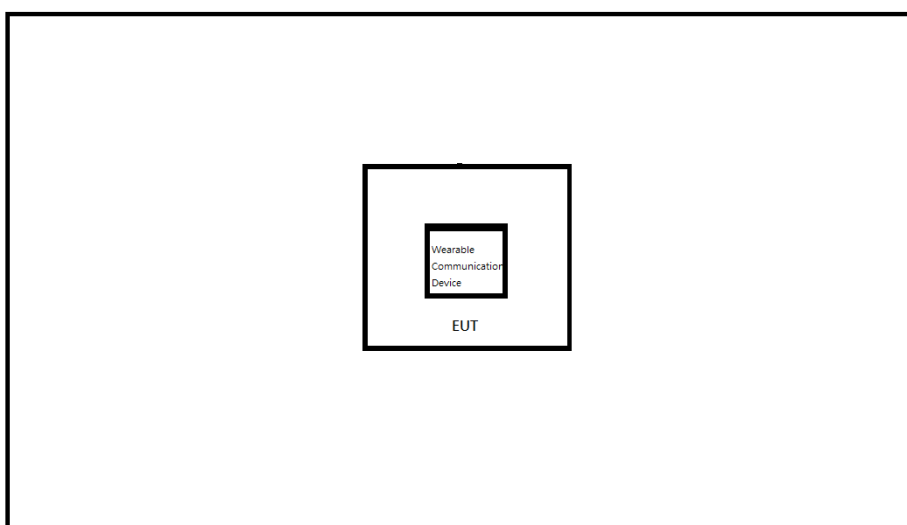
Test Setup Diagram – AC Line Conducted Emission Test (Adapter + Charge Pad Mode)



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB Cable	Yes	1.2	-

Test Setup Diagram - Radiated Test (Adapter + Charge Pad Mode)


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	USB Cable	Yes	1.2	-

Test Setup Diagram - Radiated Test (Wireless Charger Mode)


3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

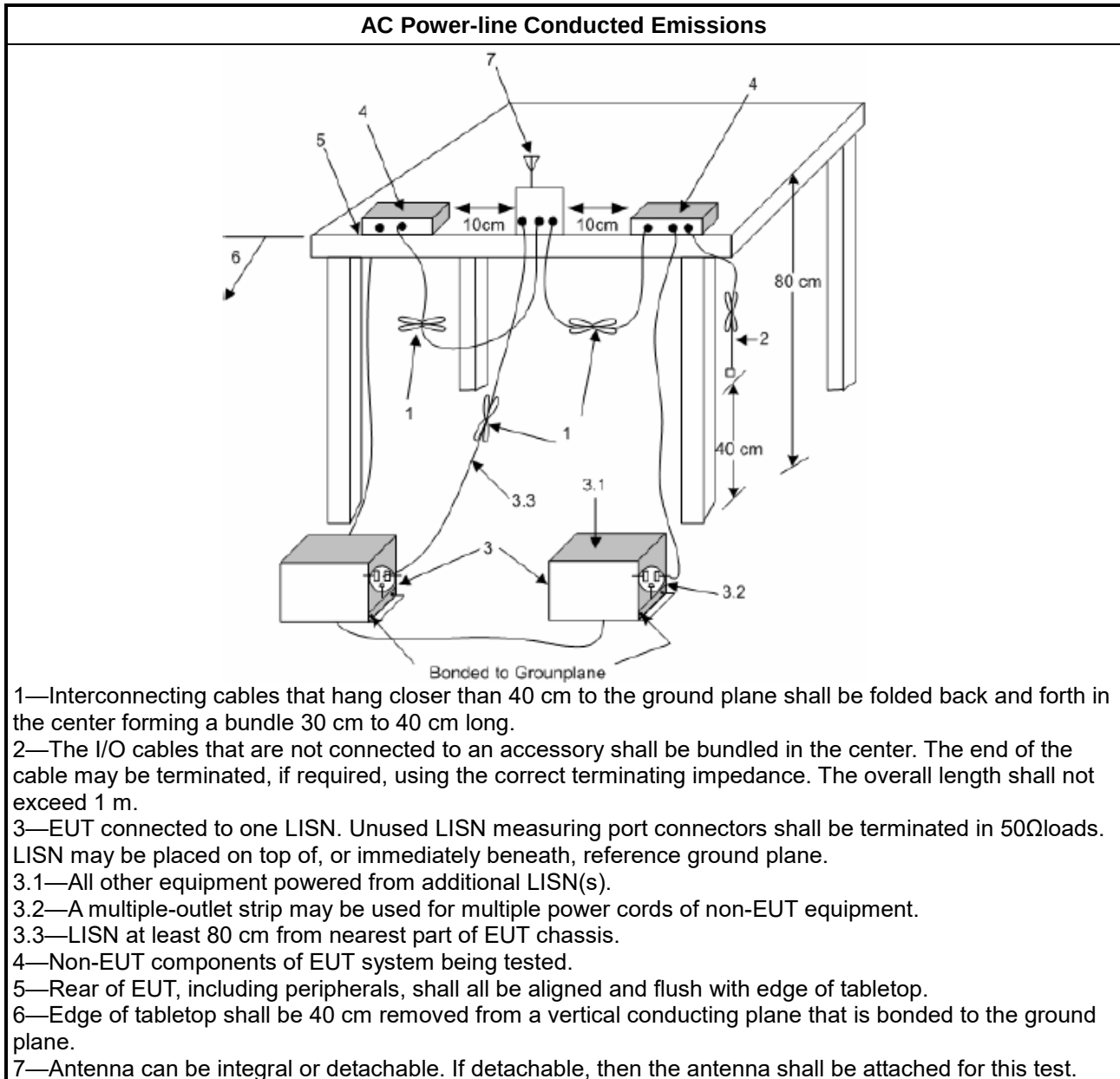
Test Method	
☒	Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.
☒	If AC conducted emissions fall in operating band, then following below test method confirm final result.
☐	Accept measurements done with a suitable dummy load replacing the antenna under the following conditions: (1) Perform the AC line conducted tests with the antenna connected to determine compliance with FCC 15.207 limits outside the transmitter's fundamental emission band; (2) Retest with a dummy load to determine compliance with FCC 15.207 limits within the transmitter's fundamental emission band.
☒	For a device with a permanent antenna operating at or below 30 MHz, accept measurements done with a suitable dummy load, in lieu of the permanent antenna under the following conditions: (1) Perform the AC line conducted tests with the permanent antenna to determine compliance with the FCC 15.207 limits outside the transmitter's fundamental emission band; (2) Retest with a dummy load in lieu of the permanent antenna to determine compliance with the FCC 15.207 limits within the transmitter's fundamental emission band.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Transmitter Radiated Emissions

3.2.1 Transmitter Radiated Emissions Limit

Transmitter Radiated Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: the frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 1GHz measurements employing a CISPR quasi-peak detector.

3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

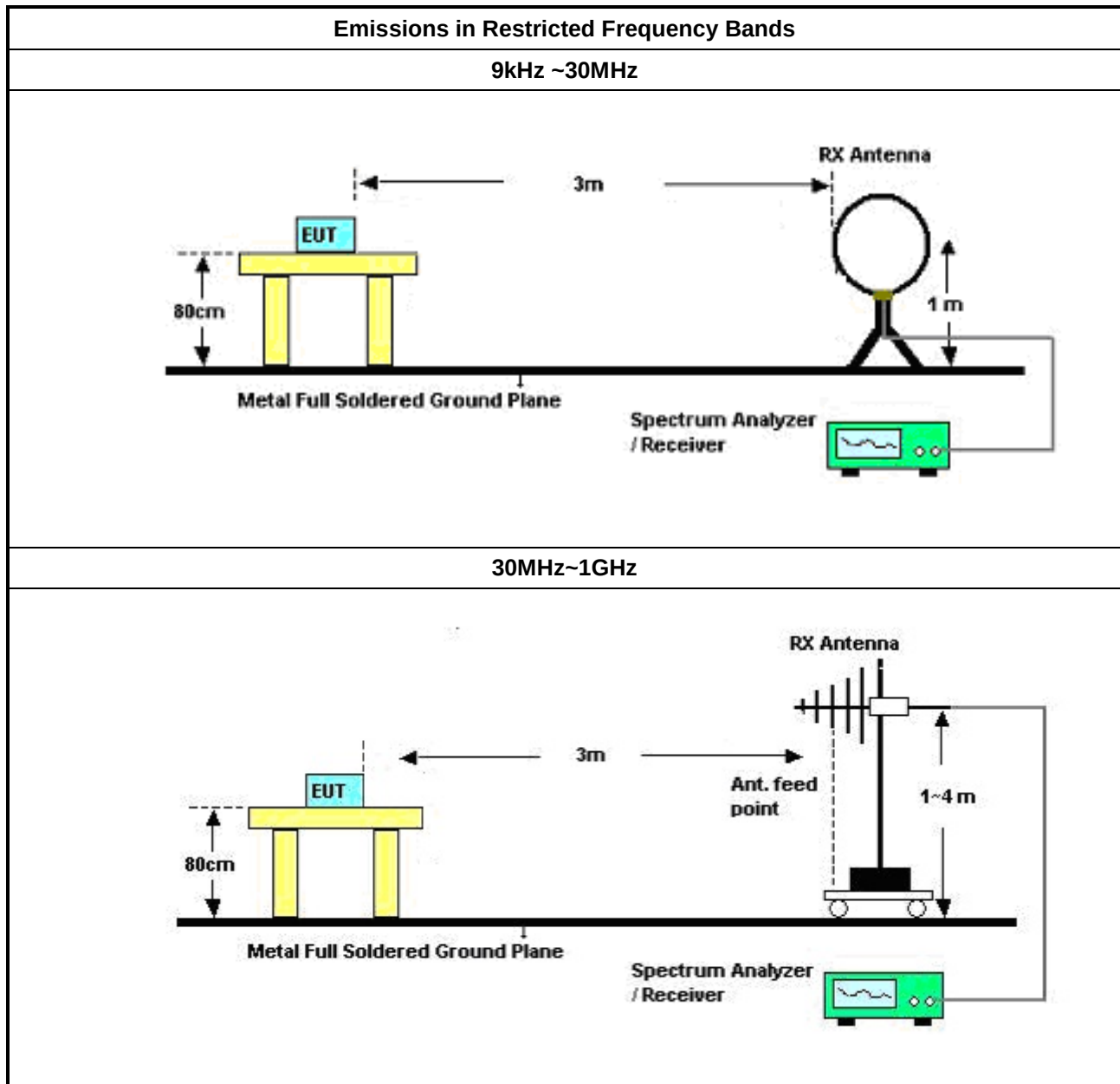
Test Method	
☒	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1 GHz and test distance is 3m.
☒	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz the frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 30MHz measurements employing a CISPR quasi-peak detector. Test distance is 3 m.
☒	At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the requirements; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be following below methods.
☐	The results shall be extrapolated to the specified distance by making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor.
☒	The results shall be by using the square of an inverse linear distance extrapolation factor (40 dB/decade).
☒	For radiated measurement. Loop antenna was rotated about the horizontal and vertical axis and the equipment to be measured and the test antenna shall be oriented to obtain the maximum emitted field strength level.
☒	The any unwanted emissions level shall not exceed the fundamental emission level.
☒	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
☒	KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
☒	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
☒	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

3.2.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.2.5 Test Setup



3.2.6 Transmitter Radiated Emissions (Below 30MHz)

Refer as Appendix B

3.2.7 Transmitter Radiated Emissions (Above 30MHz)

Refer as Appendix B

3.3 Emission Bandwidth

3.3.1 Emission Bandwidth Limit

Emission Bandwidth Limit
N/A

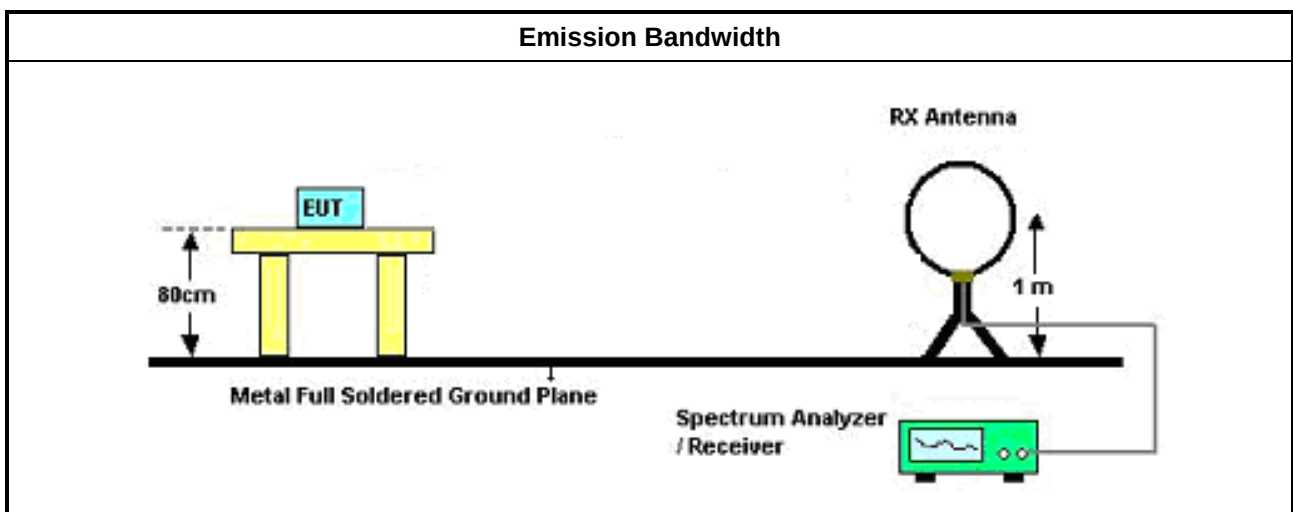
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method
☒ Because the measured signal is CW or CW-like adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.
☒ For radiated measurement. Loop antenna was rotated about the horizontal and vertical axis and the equipment to be measured and the test antenna shall be oriented to obtain the maximum emitted field strength level.

3.3.4 Test Setup



3.3.5 Test Result of Emission Bandwidth

Refer as Appendix C

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer / Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR	102051	9kHz ~ 3.6GHz	13/May/2022	12/May/2023
Two-Line V-Network	R&S	ENV 216	100003	9kHz ~ 30MHz	16/Feb/2023	15/Feb/2024
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	28/Feb/2023	27/Feb/2024
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	25/Oct/2022	24/Oct/2023
Software	Sporton	SENSE-EMI	V5.10.8.7	-	NCR	NCR

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer / Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	10/Apr/2023	09/Apr/2024
SENSE-NFC	Sporton	V5.11.0	N/A	N/A	N/A	N/A

Instrument for Radiated Test

Instrument	Manufacturer / Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	01/Aug/2022	31/Jul/2023
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	26/Oct/2022	25/Oct/2023
Amplifier	Aglient	8447D	2944A08033	10kHz~1.3GHz	07/Apr/2023	06/Apr/2024
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMC	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	16/Oct/2022	15/Oct/2023
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	13/Jun/2022	12/Jun/2023
RF Cable-R03m	Jye Bao	RG142	03CH03-cable-02	30MHz~1GHz	25/Mar/2023	24/Mar/2024
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	23/Mar/2023	22/Mar/2024
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	30/May/2022	29/May/2023
SENSE-303417	Sporton	V5.10.4	N/A	N/A	N/A	N/A



Conducted Emissions at Powerline

Appendix A

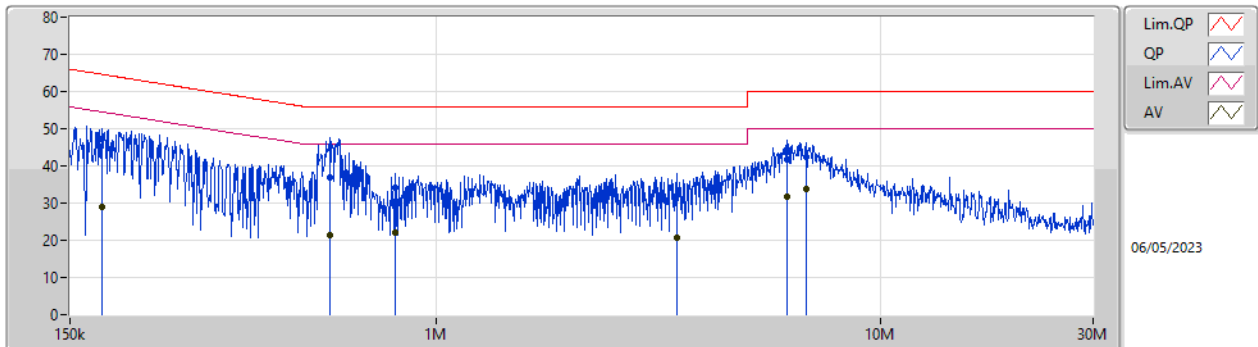
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	6.789M	33.68	50.00	-16.32	Line

Result

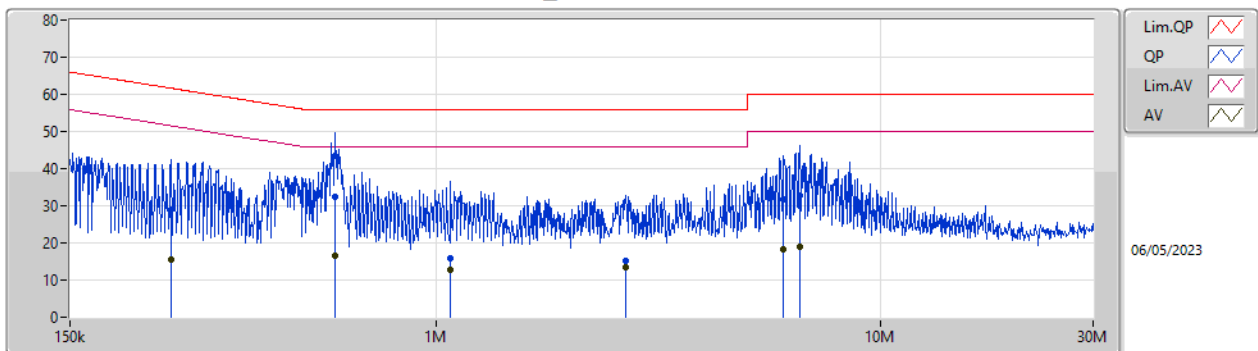
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	176.674k	47.11	64.64	-17.53	Line	-
Mode 1	Pass	AV	176.674k	29.12	54.64	-25.52	Line	-
Mode 1	Pass	QP	575.907k	36.79	56.00	-19.21	Line	-
Mode 1	Pass	AV	575.907k	21.31	46.00	-24.69	Line	-
Mode 1	Pass	QP	808.571k	34.21	56.00	-21.79	Line	-
Mode 1	Pass	AV	808.571k	22.04	46.00	-23.96	Line	-
Mode 1	Pass	QP	3.485M	32.07	56.00	-23.93	Line	-
Mode 1	Pass	AV	3.485M	20.78	46.00	-25.22	Line	-
Mode 1	Pass	QP	6.168M	41.66	60.00	-18.34	Line	-
Mode 1	Pass	AV	6.168M	31.75	50.00	-18.25	Line	-
Mode 1	Pass	QP	6.789M	42.50	60.00	-17.50	Line	-
Mode 1	Pass	AV	6.789M	33.68	50.00	-16.32	Line	-
Mode 1	Pass	QP	254.063k	28.80	61.62	-32.82	Neutral	-
Mode 1	Pass	AV	254.063k	15.53	51.62	-36.09	Neutral	-
Mode 1	Pass	QP	592.227k	32.25	56.00	-23.75	Neutral	-
Mode 1	Pass	AV	592.227k	16.52	46.00	-29.48	Neutral	-
Mode 1	Pass	QP	1.078M	15.93	56.00	-40.07	Neutral	-
Mode 1	Pass	AV	1.078M	12.66	46.00	-33.34	Neutral	-
Mode 1	Pass	QP	2.667M	15.11	56.00	-40.89	Neutral	-
Mode 1	Pass	AV	2.667M	13.48	46.00	-32.52	Neutral	-
Mode 1	Pass	QP	6.047M	31.82	60.00	-28.18	Neutral	-
Mode 1	Pass	AV	6.047M	18.43	50.00	-31.57	Neutral	-
Mode 1	Pass	QP	6.575M	32.91	60.00	-27.09	Neutral	-
Mode 1	Pass	AV	6.575M	18.85	50.00	-31.15	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	176.674k	47.11	64.64	-17.53	19.61	Line	-	27.50	9.65	0.03	9.93			
AV	176.674k	29.12	54.64	-25.52	19.61	Line	-	9.51	9.65	0.03	9.93			
QP	575.907k	36.79	56.00	-19.21	19.63	Line	-	17.16	9.64	0.04	9.95			
AV	575.907k	21.31	46.00	-24.69	19.63	Line	-	1.68	9.64	0.04	9.95			
QP	808.571k	34.21	56.00	-21.79	19.64	Line	-	14.57	9.65	0.05	9.94			
AV	808.571k	22.04	46.00	-23.96	19.64	Line	-	2.40	9.65	0.05	9.94			
QP	3.485M	32.07	56.00	-23.93	19.75	Line	-	12.32	9.70	0.12	9.93			
AV	3.485M	20.78	46.00	-25.22	19.75	Line	-	1.03	9.70	0.12	9.93			
QP	6.168M	41.66	60.00	-18.34	19.84	Line	-	21.82	9.75	0.15	9.94			
AV	6.168M	31.75	50.00	-18.25	19.84	Line	-	11.91	9.75	0.15	9.94			
QP	6.789M	42.50	60.00	-17.50	19.87	Line	-	22.63	9.76	0.16	9.95			
AV	6.789M	33.68	50.00	-16.32	19.87	Line	-	13.81	9.76	0.16	9.95			

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	254.063k	28.80	61.62	-32.82	19.59	Neutral	-	9.21	9.62	0.03	9.94			
AV	254.063k	15.53	51.62	-36.09	19.59	Neutral	-	-4.06	9.62	0.03	9.94			
QP	592.227k	32.25	56.00	-23.75	19.63	Neutral	-	12.62	9.64	0.04	9.95			
AV	592.227k	16.52	46.00	-29.48	19.63	Neutral	-	-3.11	9.64	0.04	9.95			
QP	1.078M	15.93	56.00	-40.07	19.64	Neutral	-	-3.71	9.65	0.05	9.94			
AV	1.078M	12.66	46.00	-33.34	19.64	Neutral	-	-6.98	9.65	0.05	9.94			
QP	2.667M	15.11	56.00	-40.89	19.71	Neutral	-	-4.60	9.67	0.10	9.94			
AV	2.667M	13.48	46.00	-32.52	19.71	Neutral	-	-6.23	9.67	0.10	9.94			
QP	6.047M	31.82	60.00	-28.18	19.83	Neutral	-	11.99	9.74	0.15	9.94			
AV	6.047M	18.43	50.00	-31.57	19.83	Neutral	-	-1.40	9.74	0.15	9.94			
QP	6.575M	32.91	60.00	-27.09	19.86	Neutral	-	13.05	9.75	0.16	9.95			
AV	6.575M	18.85	50.00	-31.15	19.86	Neutral	-	-1.01	9.75	0.16	9.95			



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
WPT	-	-	-	-	-	-	-	-	-	-	-
112-290kHz	Pass	PK	926.1k	35.54	68.28	-32.74	20.19	3	Horizontal	0	1.00

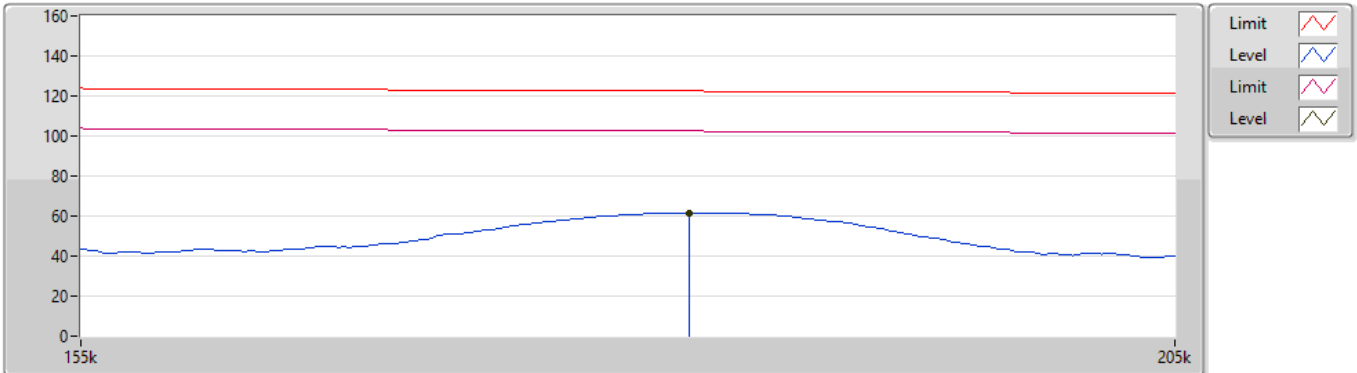
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
112-290kHz	-	-	-	-	-	-	-	-	-	-	-
0.18MHz_Adapter+Charge Pad	Pass	AV	181.1k	61.22	102.44	-41.22	19.99	3	Horizontal	240	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	181.1k	61.65	122.44	-60.79	19.99	3	Horizontal	240	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	41.712k	53.95	135.20	-81.25	20.31	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	29.022k	51.92	138.34	-86.42	21.11	3	Horizontal	300	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	34.38k	53.69	136.88	-83.19	20.71	3	Horizontal	300	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	448.5k	33.13	114.56	-81.43	20.43	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	926.1k	29.94	68.28	-38.34	20.19	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	6.478M	33.26	69.50	-36.24	21.87	3	Horizontal	0	1.00
0.18MHz_Wireless Charger	Pass	AV	180.9k	56.10	102.46	-46.36	19.99	3	Horizontal	60	1.00
0.18MHz_Wireless Charger	Pass	PK	180.9k	56.85	122.46	-65.61	19.99	3	Horizontal	60	1.00
0.18MHz_Wireless Charger	Pass	PK	29.022k	52.75	138.34	-85.59	21.11	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	34.662k	53.01	136.80	-83.79	20.68	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	41.712k	53.56	135.20	-81.64	20.31	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	269.4k	39.19	119.00	-79.81	20.13	3	Horizontal	0	1.00
0.18MHz_Wireless Charger	Pass	PK	926.1k	35.54	68.28	-32.74	20.19	3	Horizontal	0	1.00
0.18MHz_Wireless Charger	Pass	PK	8.15M	36.61	69.50	-32.89	21.97	3	Horizontal	0	1.00

112-290kHz

05/05/2023

0.18MHz_Adapter+Charge Pad

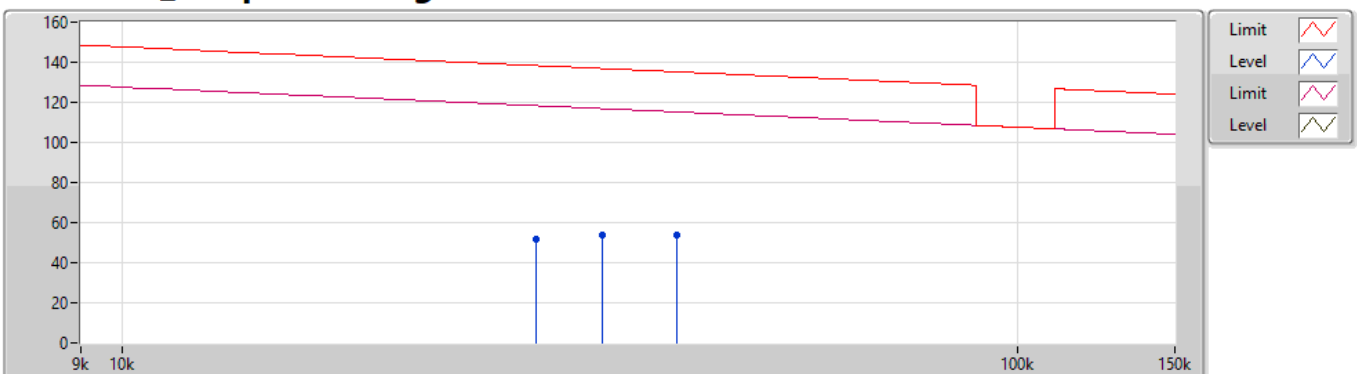


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
AV	181.1k	61.22	102.44	-41.22	19.99	3	Horizontal	240	1.00	41.23	19.94	0.05	-	
PK	181.1k	61.65	122.44	-60.79	19.99	3	Horizontal	240	1.00	41.66	19.94	0.05	-	

112-290kHz

05/05/2023

0.18MHz_Adapter+Charge Pad

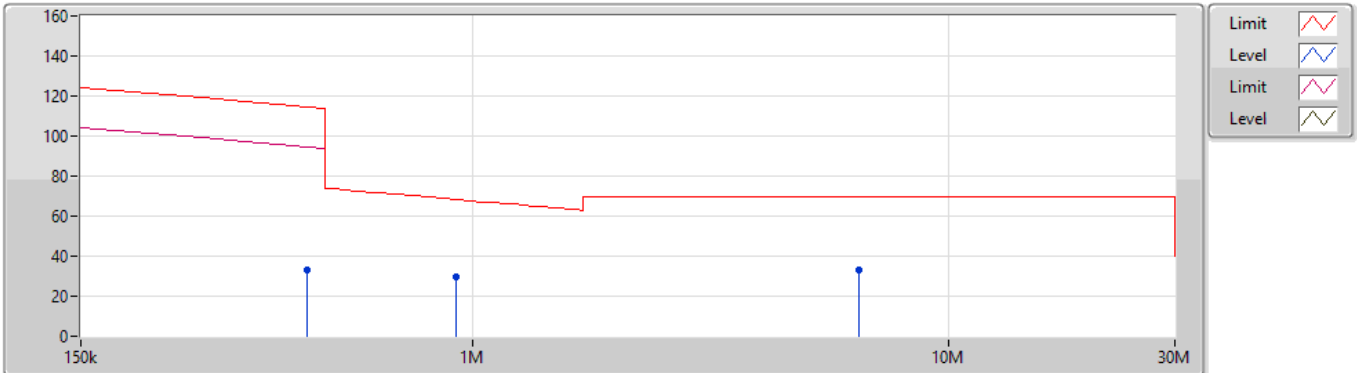


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
PK	41.712k	53.95	135.20	-81.25	20.31	3	Horizontal	0	1.00	33.64	20.27	0.04	-	
PK	29.022k	51.92	138.34	-86.42	21.11	3	Horizontal	300	1.00	30.81	21.08	0.03	-	
PK	34.38k	53.69	136.88	-83.19	20.71	3	Horizontal	300	1.00	32.98	20.68	0.03	-	

112-290kHz

05/05/2023

0.18MHz_Adapter+Charge Pad

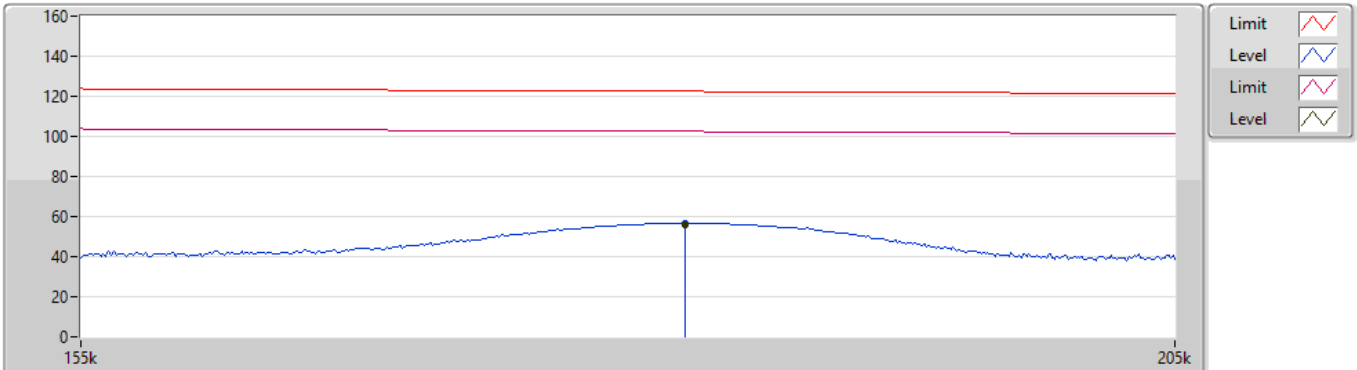


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
PK	448.5k	33.13	114.56	-81.43	20.43	3	Horizontal	0	1.00	12.70	20.35	0.08	-	
PK	926.1k	29.94	68.28	-38.34	20.19	3	Horizontal	0	1.00	9.75	20.07	0.12	-	
PK	6.478M	33.26	69.50	-36.24	21.87	3	Horizontal	0	1.00	11.39	21.55	0.32	-	

112-290kHz

05/05/2023

0.18MHz_Wireless Charger

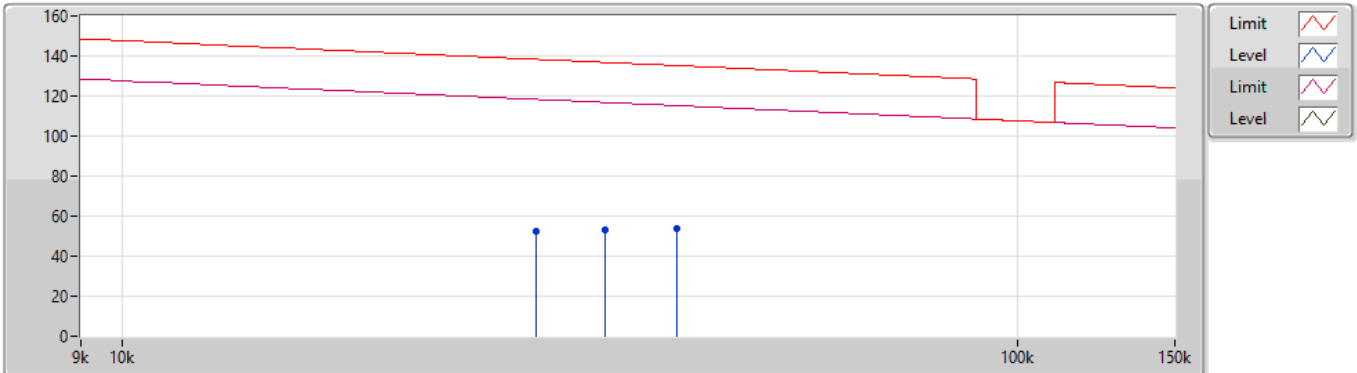


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
AV	180.9k	56.10	102.46	-46.36	19.99	3	Horizontal	60	1.00	36.11	19.94	0.05	-	
PK	180.9k	56.85	122.46	-65.61	19.99	3	Horizontal	60	1.00	36.86	19.94	0.05	-	

112-290kHz

05/05/2023

0.18MHz_Wireless Charger

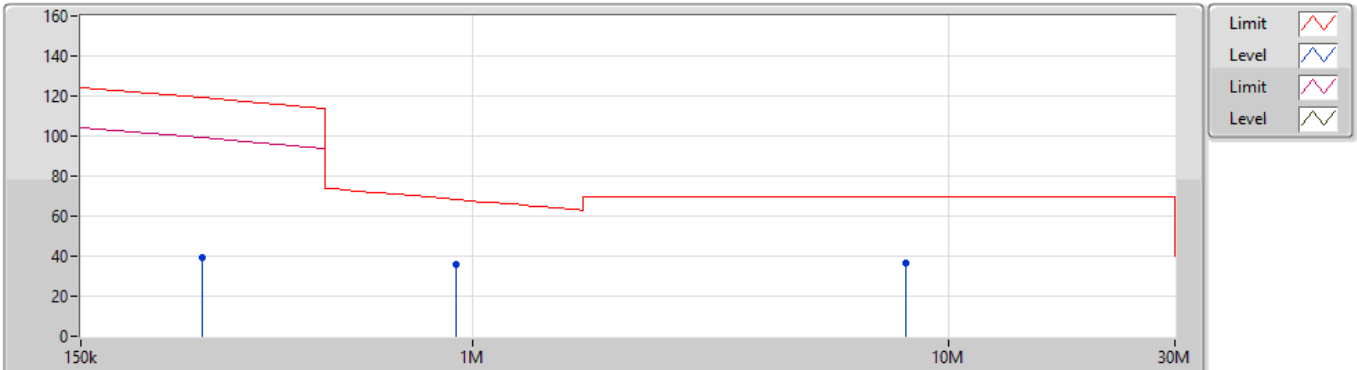


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
PK	29.022k	52.75	138.34	-85.59	21.11	3	Horizontal	360	1.00	31.64	21.08	0.03	-	
PK	34.662k	53.01	136.80	-83.79	20.68	3	Horizontal	360	1.00	32.33	20.65	0.03	-	
PK	41.712k	53.56	135.20	-81.64	20.31	3	Horizontal	360	1.00	33.25	20.27	0.04	-	

112-290kHz

05/05/2023

0.18MHz_Wireless Charger



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	
PK	269.4k	39.19	119.00	-79.81	20.13	3	Horizontal	0	1.00	19.06	20.07	0.06	-	
PK	926.1k	35.54	68.28	-32.74	20.19	3	Horizontal	0	1.00	15.35	20.07	0.12	-	
PK	8.15M	36.61	69.50	-32.89	21.97	3	Horizontal	0	1.00	14.64	21.60	0.37	-	



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
WPT	-	-	-	-	-	-	-	-	-	-	-
112-290kHz	Pass	PK	43.58M	36.83	40.00	-3.17	-10.58	3	Vertical	0	1.00

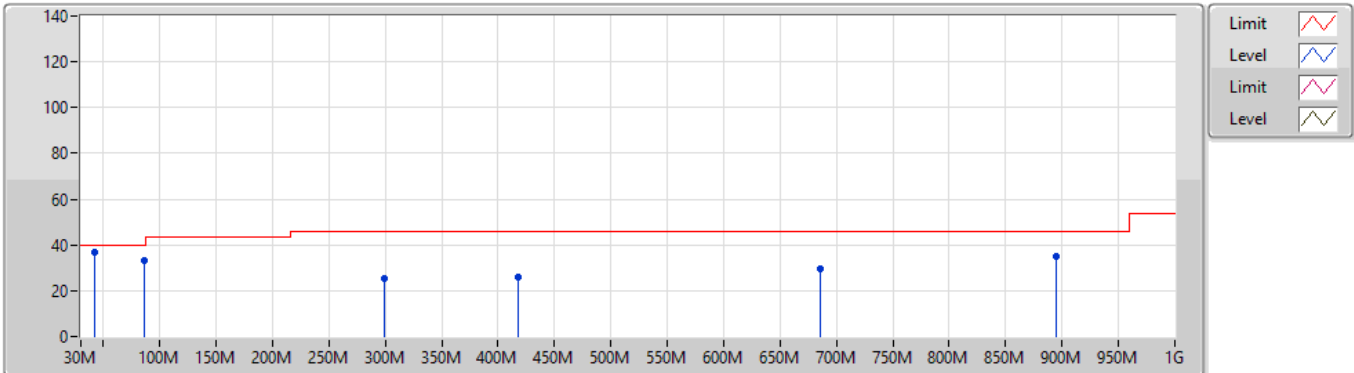
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
112-290kHz	-	-	-	-	-	-	-	-	-	-	-
0.18MHz_Adapter+Charge Pad	Pass	PK	41.64M	36.66	40.00	-3.34	-9.60	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	86.26M	33.16	40.00	-6.84	-12.43	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	299.66M	25.13	46.00	-20.87	-5.36	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	418M	26.19	46.00	-19.81	-2.14	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	685.72M	29.27	46.00	-16.73	0.97	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	895.24M	34.86	46.00	-11.14	3.45	3	Vertical	360	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	127M	27.55	43.50	-15.95	-8.07	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	171.62M	28.65	43.50	-14.85	-10.08	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	299.66M	29.73	46.00	-16.27	-5.36	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	483.96M	31.85	46.00	-14.15	-1.20	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	763.32M	30.49	46.00	-15.51	2.54	3	Horizontal	0	1.00
0.18MHz_Adapter+Charge Pad	Pass	PK	970.9M	32.98	54.00	-21.02	5.17	3	Horizontal	0	1.00
0.18MHz_Wireless Charger	Pass	PK	43.58M	36.83	40.00	-3.17	-10.58	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	84.32M	29.86	40.00	-10.14	-12.94	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	249.22M	25.40	46.00	-20.60	-6.47	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	491.72M	27.54	46.00	-18.46	-1.19	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	765.26M	31.01	46.00	-14.99	2.56	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	895.24M	33.93	46.00	-12.07	3.45	3	Vertical	0	1.00
0.18MHz_Wireless Charger	Pass	PK	41.64M	27.65	40.00	-12.35	-9.60	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	128.94M	27.00	43.50	-16.50	-8.08	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	299.66M	29.40	46.00	-16.60	-5.36	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	478.14M	29.39	46.00	-16.61	-1.21	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	743.92M	30.67	46.00	-15.33	2.43	3	Horizontal	360	1.00
0.18MHz_Wireless Charger	Pass	PK	949.56M	32.27	46.00	-13.73	4.57	3	Horizontal	360	1.00

112-290kHz

05/05/2023

0.18MHz_Adapter+Charge Pad

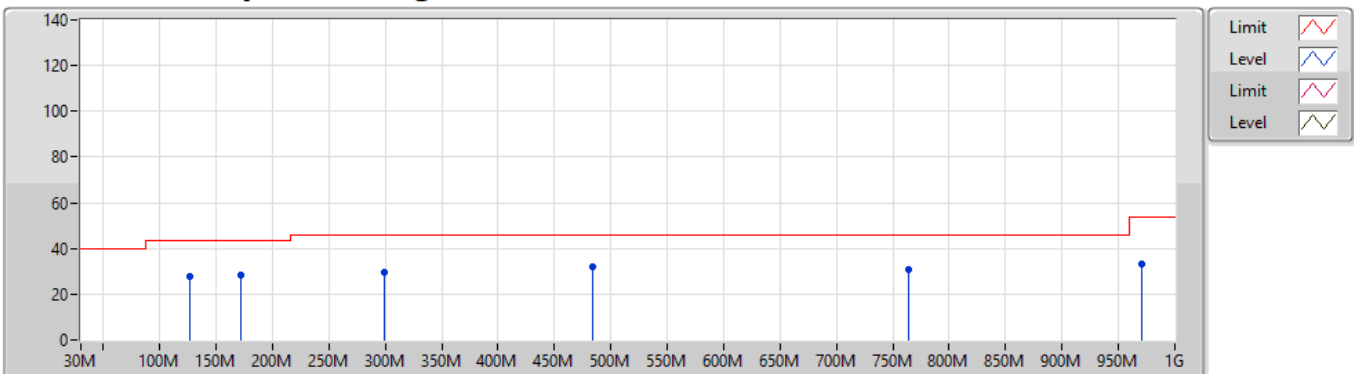


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	41.64M	36.66	40.00	-3.34	-9.60	3	Vertical	360	1.00	46.26	16.87	1.06	27.53
PK	86.26M	33.16	40.00	-6.84	-12.43	3	Vertical	360	1.00	45.59	13.42	1.56	27.41
PK	299.66M	25.13	46.00	-20.87	-5.36	3	Vertical	360	1.00	30.49	18.30	2.95	26.61
PK	418M	26.19	46.00	-19.81	-2.14	3	Vertical	360	1.00	28.33	21.68	3.50	27.32
PK	685.72M	29.27	46.00	-16.73	0.97	3	Vertical	360	1.00	28.30	24.31	4.58	27.92
PK	895.24M	34.86	46.00	-11.14	3.45	3	Vertical	360	1.00	31.41	25.75	5.25	27.55

112-290kHz

05/05/2023

0.18MHz_Adapter+Charge Pad

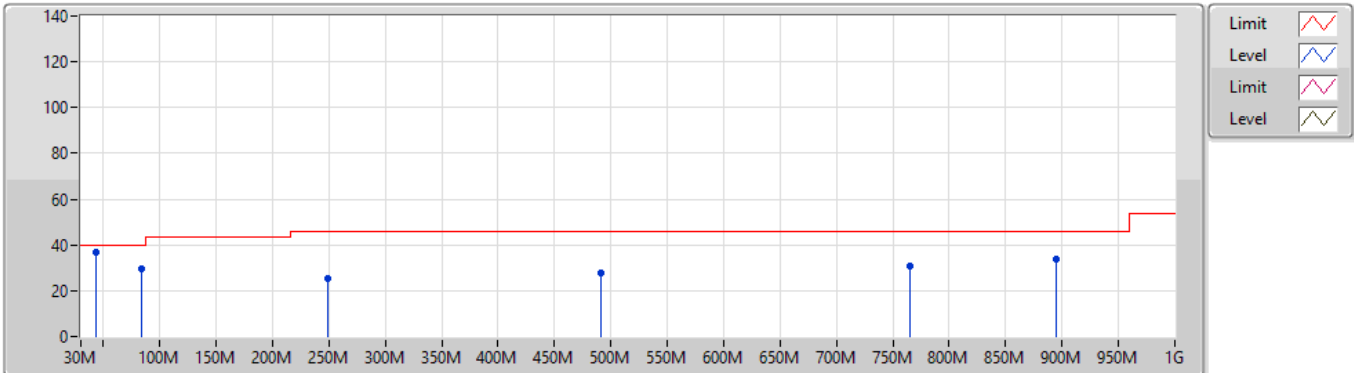


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	127M	27.55	43.50	-15.95	-8.07	3	Horizontal	0	1.00	35.62	17.29	1.89	27.25
PK	171.62M	28.65	43.50	-14.85	-10.08	3	Horizontal	0	1.00	38.73	14.76	2.20	27.04
PK	299.66M	29.73	46.00	-16.27	-5.36	3	Horizontal	0	1.00	35.09	18.30	2.95	26.61
PK	483.96M	31.85	46.00	-14.15	-1.20	3	Horizontal	0	1.00	33.05	22.70	3.80	27.70
PK	763.32M	30.49	46.00	-15.51	2.54	3	Horizontal	0	1.00	27.95	25.45	4.85	27.76
PK	970.9M	32.98	54.00	-21.02	5.17	3	Horizontal	0	1.00	27.81	26.80	5.60	27.23

112-290kHz

05/05/2023

0.18MHz_Wireless Charger

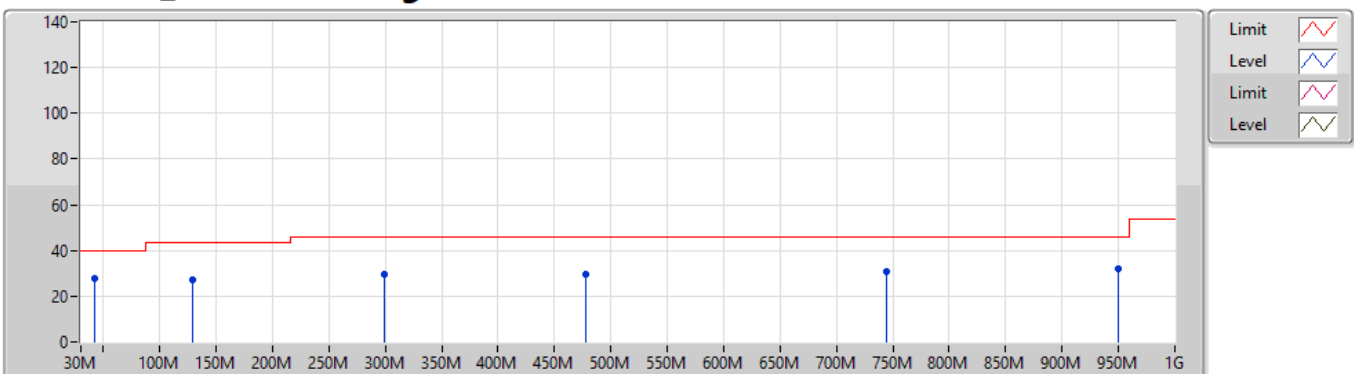


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	43.58M	36.83	40.00	-3.17	-10.58	3	Vertical	0	1.00	47.41	15.85	1.09	27.52
PK	84.32M	29.86	40.00	-10.14	-12.94	3	Vertical	0	1.00	42.80	12.94	1.53	27.41
PK	249.22M	25.40	46.00	-20.60	-6.47	3	Vertical	0	1.00	31.87	17.53	2.68	26.68
PK	491.72M	27.54	46.00	-18.46	-1.19	3	Vertical	0	1.00	28.73	22.72	3.83	27.74
PK	765.26M	31.01	46.00	-14.99	2.56	3	Vertical	0	1.00	28.45	25.46	4.86	27.76
PK	895.24M	33.93	46.00	-12.07	3.45	3	Vertical	0	1.00	30.48	25.75	5.25	27.55

112-290kHz

05/05/2023

0.18MHz_Wireless Charger



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	41.64M	27.65	40.00	-12.35	-9.60	3	Horizontal	360	1.00	37.25	16.87	1.06	27.53
PK	128.94M	27.00	43.50	-16.50	-8.08	3	Horizontal	360	1.00	35.08	17.26	1.90	27.24
PK	299.66M	29.40	46.00	-16.60	-5.36	3	Horizontal	360	1.00	34.76	18.30	2.95	26.61
PK	478.14M	29.39	46.00	-16.61	-1.21	3	Horizontal	360	1.00	30.60	22.70	3.77	27.68
PK	743.92M	30.67	46.00	-15.33	2.43	3	Horizontal	360	1.00	28.24	25.42	4.77	27.76
PK	949.56M	32.27	46.00	-13.73	4.57	3	Horizontal	360	1.00	27.70	26.25	5.60	27.28

Summary

Mode	20dB (Hz)	FI-20dB (Hz)	Fh-20dB (Hz)	OBW (Hz)	Limit (Range)
0.180M	-	-	-	-	-
WPC_Nss1_1TX	2.782k	179.37000k	182.15250k	2.466k	-

Result

Mode	Result	20dB (Hz)	FI-20dB (Hz)	Fh-20dB (Hz)	OBW (Hz)	FI-OBW (Hz)	Fh-OBW (Hz)	Limit (Range)
WPC_Nss1_1TX	-	-	-	-	-	-	-	-
0.18MHz_TnomVnom	Pass	2.782k	179.37000k	182.15250k	2.466k	179.48401k	181.95027k	-

WPC_Nss1_1TX

0.18MHz_TnomVnom

EBW

07/05/2023

