

FCC Radio Test Report

FCC ID : 2APXNLACC1161
Equipment : 10W Qi Wireless Car Charger
Brand Name : onn.
Model Name : WIABLK100008847
Applicant : ASAP Technology(Jiangxi) Co., Ltd.
Ji'an Industrial Park, Ji'an, Jiangxi, 343100 China
Manufacturer : ASAP Technology(JiangXi)Co., Ltd.
Ji'an Industrial Park, Ji'an, Jiangxi, 343100 China
Standard : 47 CFR FCC Part 15, Subpart C

The product was received on Feb. 21, 2023, and testing was started from Feb. 27, 2023 and completed on Mar. 15, 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



History of this test report

Report No.	Version	Description	Issued Date
FR321334AW	01	Initial issue of report	Apr. 07, 2023
FR321334AW	02	FCC ID was Modified. (This report is the latest version replacing for the report issued on Apr. 07, 2023).	Apr. 13, 2023



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: Amber Chiu



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)
111-148 kHz	FSK	127.567	87.78
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	Client directly contact

Note 1: Field strength performed peak level at 3m.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	3L Electronic	13705-T0X0016R-00	Coil antenna	N/A

1.1.3 EUT Information

Operational Condition	
EUT Power Type	From DC Power supply
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.:
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.:
<input type="checkbox"/>	Other:

1.1.4 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
<input checked="" type="checkbox"/>	Operated normally mode for worst duty cycle
<input type="checkbox"/>	Operated test mode for worst duty cycle
Test Signal Duty Cycle (x)	
<input checked="" type="checkbox"/>	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				
<input checked="" type="checkbox"/>	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	Wayne Chiu	22.3~23.5°C / 54~57%	04/Mar/2023
RF Conducted	TH01-HY	Vivi Jiang	22.2~23.7°C / 50~53%	27/Feb/2023
Radiated (below 30MHz)	03CH03-HY	Edward Wang	16.6~18.3°C / 55~59%	01/Mar/2023
Radiated (above 30MHz)	03CH03-HY	Edward Wang	17~20°C / 56~59%	15/Mar/2023
<input type="checkbox"/>	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%
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 Version	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	87.78	127.567

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 (111-148 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
	DC power supply

The Worst Case Mode for Following Conformance Tests			
Tests Item	Transmitter Radiated Emissions, Emission Bandwidth		
Test Condition	Radiated measurement		
Operating Mode	CTX		
	DC power supply		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		



2.4 Accessories

Accessories				
Car charger	Brand Name	ASAP	Model Name	WIABLK100008847
	Power Rating	I/P: DC 12- DC 24Vac, 3 A, O/P1: 5 Vdc, 3 A, 9 Vdc, 2A, 12 Vdc, 1.5 A ; O/P2: 5 Vdc, 2.4 A		
	Power Cord	0.9 meter, shielded cable, w/o ferrite core		

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

2.5 Support Equipment

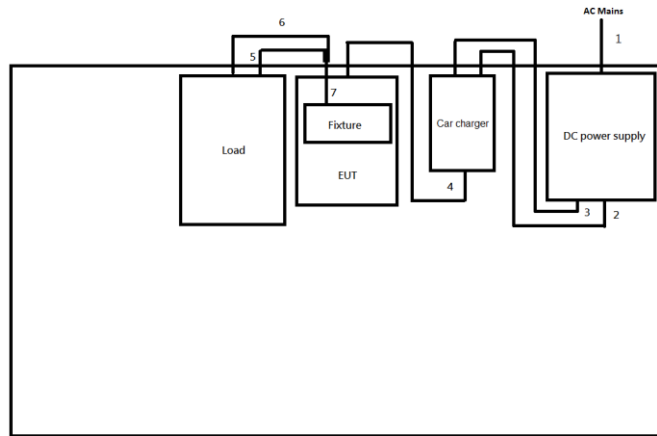
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	Fixture	ASAP	A1	-	-
3	AC Power cable	Power Sync	TPCMRN0018	-	-
4	Load	Sporton	Sporton	-	-
5	DC Power cable*2	MiSUMi	WTN1228-RED	-	-
6	DC Power cable*2	MiSUMi	WTN1228-BLACK	-	-

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	Fixture	ASAP	A1	-	-
3	Load	Sporton	Sporton	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	Fixture	ASAP	A1	-	-
3	AC Power cable	Power Sync	TPCMRN0018	-	-
4	Load	Sporton	Sporton	-	-
5	DC Power cable*2	MiSUMi	WTN1228-RED	-	-
6	DC Power cable*2	MiSUMi	WTN1228-BLACK	-	-

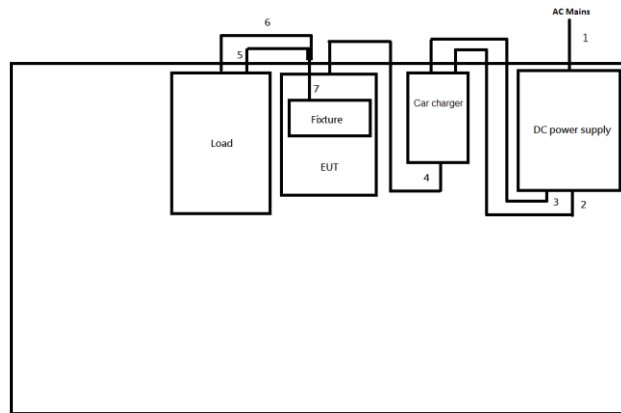
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC power cable	No	1.0	-
3	DC power cable	No	1.0	-
4	Car charger cable	Yes	0.9	-
5	DC power cable	No	1.0	-
6	DC power cable	No	1.0	-
7	Fixture cable	No	0.2	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC power cable	No	1.0	-
3	DC power cable	No	1.0	-
4	Car charger cable	Yes	0.9	-
5	DC power cable	No	1.0	-
6	DC power cable	No	1.0	-
7	Fixture cable	No	0.3	-

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

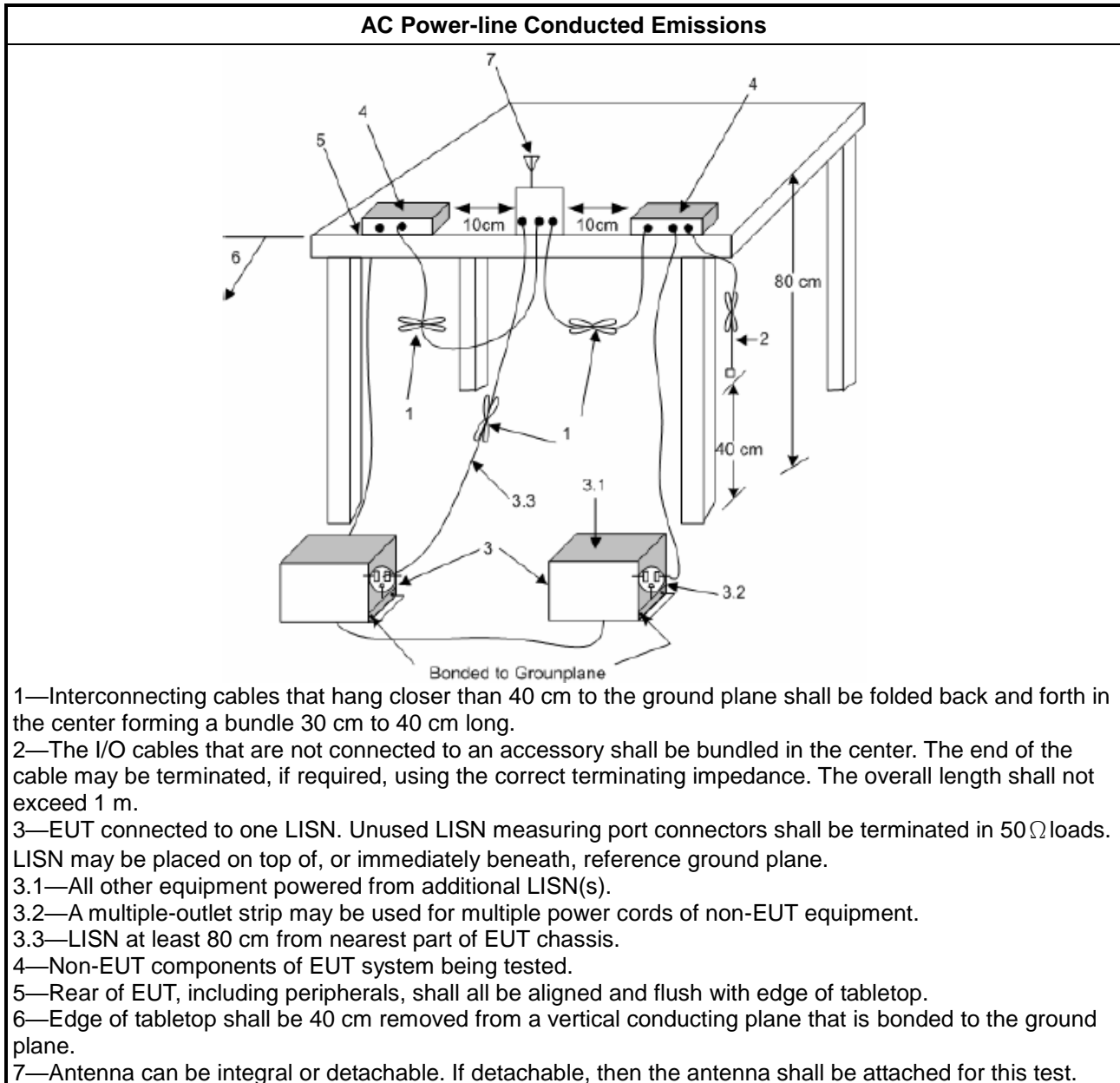
Test Method	
<input checked="" type="checkbox"/>	Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.
<input checked="" type="checkbox"/>	If AC conducted emissions fall in operating band, then following below test method confirm final result.
<input type="checkbox"/>	Accept measurements 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.
<input checked="" type="checkbox"/>	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

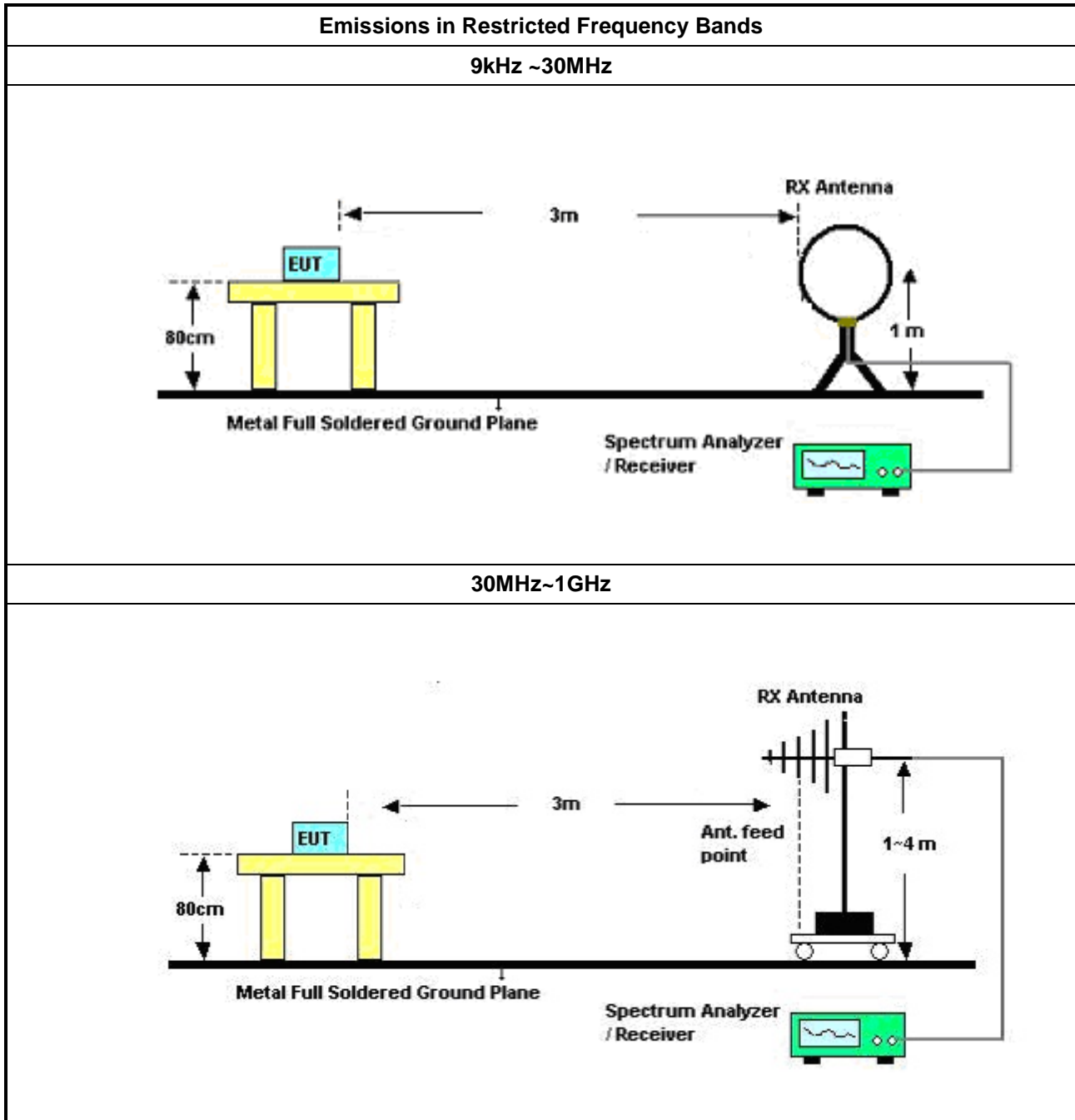
Test Method	
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1 GHz and test distance is 3m.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz the frequency bands 9-90 kHz, 110-490 kHz measurements employing an average detector and other below 30MHz measurements employing a CISPR quasi-peak detector. Test distance is 3 m.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	The results shall be by using the square of an inverse linear distance extrapolation factor (40 dB/decade).
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	The any unwanted emissions level shall not exceed the fundamental emission level.
<input checked="" type="checkbox"/>	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
<input checked="" type="checkbox"/>	KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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

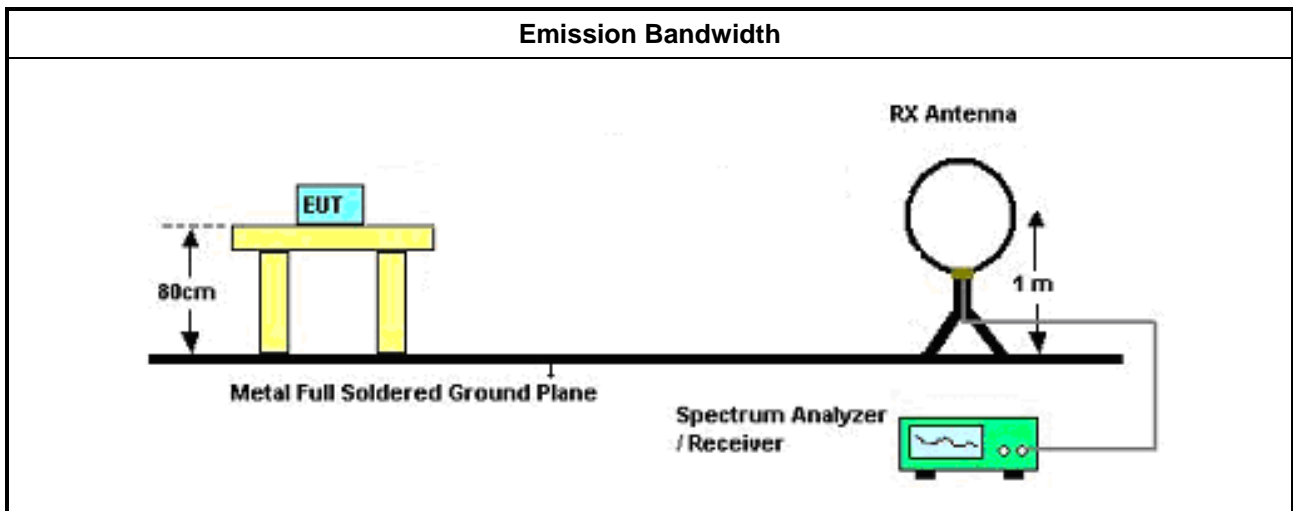
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> 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.
<input checked="" type="checkbox"/> 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	01/Apr/2022	31/Mar/2023
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	HP	8447D	2944A08033	10kHz~1.3GHz	08/Apr/2022	07/Apr/2023
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMC1	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	MY37335/4+CB021-1+CB021-2	30MHz~1GHz	22/Mar/2022	21/Mar/2023
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	18/Mar/2022	17/Mar/2023
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	30/May/2022	29/May/2023
Software	Sporton	SENSE-NFC	V5.11	-	NCR	NCR

NCR: No Calibration Required



Summary

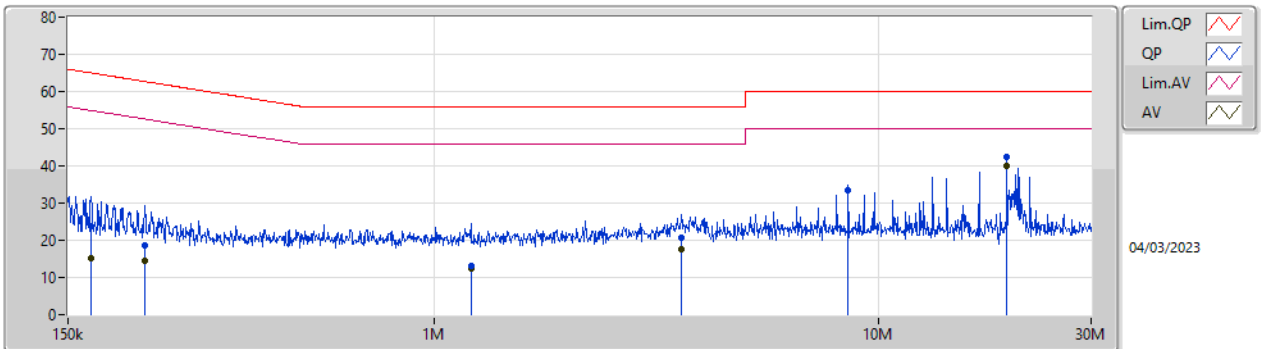
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	19.398M	40.14	50.00	-9.86	Line



Result

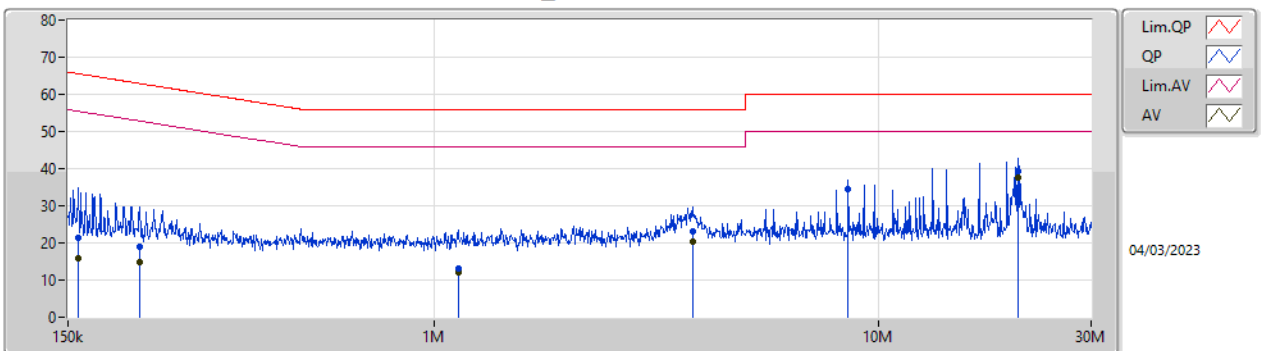
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	169.084k	23.69	65.01	-41.32	Line	-
Mode 1	Pass	AV	169.084k	15.31	55.01	-39.70	Line	-
Mode 1	Pass	QP	222.704k	18.72	62.71	-43.99	Line	-
Mode 1	Pass	AV	222.704k	14.58	52.71	-38.13	Line	-
Mode 1	Pass	QP	1.21M	13.12	56.00	-42.88	Line	-
Mode 1	Pass	AV	1.21M	12.25	46.00	-33.75	Line	-
Mode 1	Pass	QP	3.599M	20.55	56.00	-35.45	Line	-
Mode 1	Pass	AV	3.599M	17.58	46.00	-28.42	Line	-
Mode 1	Pass	QP	8.523M	33.54	60.00	-26.46	Line	-
Mode 1	Pass	AV	8.523M	33.46	50.00	-16.54	Line	-
Mode 1	Pass	QP	19.398M	42.27	60.00	-17.73	Line	-
Mode 1	Pass	AV	19.398M	40.14	50.00	-9.86	Line	-
Mode 1	Pass	QP	158.622k	21.50	65.54	-44.04	Neutral	-
Mode 1	Pass	AV	158.622k	15.92	55.54	-39.62	Neutral	-
Mode 1	Pass	QP	217.434k	19.08	62.92	-43.84	Neutral	-
Mode 1	Pass	AV	217.434k	14.98	52.92	-37.94	Neutral	-
Mode 1	Pass	QP	1.131M	13.18	56.00	-42.82	Neutral	-
Mode 1	Pass	AV	1.131M	12.22	46.00	-33.78	Neutral	-
Mode 1	Pass	QP	3.805M	23.05	56.00	-32.95	Neutral	-
Mode 1	Pass	AV	3.805M	20.26	46.00	-25.74	Neutral	-
Mode 1	Pass	QP	8.523M	34.60	60.00	-25.40	Neutral	-
Mode 1	Pass	AV	8.523M	34.58	50.00	-15.42	Neutral	-
Mode 1	Pass	QP	20.513M	39.27	60.00	-20.73	Neutral	-
Mode 1	Pass	AV	20.513M	37.57	50.00	-12.43	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	169.084k	23.69	65.01	-41.32	19.61	Line	-	4.08	9.65	0.03	9.93
AV	169.084k	15.31	55.01	-39.70	19.61	Line	-	-4.30	9.65	0.03	9.93
QP	222.704k	18.72	62.71	-43.99	19.61	Line	-	-0.89	9.65	0.03	9.93
AV	222.704k	14.58	52.71	-38.13	19.61	Line	-	-5.03	9.65	0.03	9.93
QP	1.21M	13.12	56.00	-42.88	19.66	Line	-	-6.54	9.66	0.06	9.94
AV	1.21M	12.25	46.00	-33.75	19.66	Line	-	-7.41	9.66	0.06	9.94
QP	3.599M	20.55	56.00	-35.45	19.75	Line	-	0.80	9.70	0.12	9.93
AV	3.599M	17.58	46.00	-28.42	19.75	Line	-	-2.17	9.70	0.12	9.93
QP	8.523M	33.54	60.00	-26.46	19.90	Line	-	13.64	9.78	0.17	9.95
AV	8.523M	33.46	50.00	-16.54	19.90	Line	-	13.56	9.78	0.17	9.95
QP	19.398M	42.27	60.00	-17.73	20.03	Line	-	22.24	9.79	0.27	9.97
AV	19.398M	40.14	50.00	-9.86	20.03	Line	-	20.11	9.79	0.27	9.97

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	158.622k	21.50	65.54	-44.04	19.59	Neutral	-	1.91	9.63	0.03	9.93
AV	158.622k	15.92	55.54	-39.62	19.59	Neutral	-	-3.67	9.63	0.03	9.93
QP	217.434k	19.08	62.92	-43.84	19.58	Neutral	-	-0.50	9.62	0.03	9.93
AV	217.434k	14.98	52.92	-37.94	19.58	Neutral	-	-4.60	9.62	0.03	9.93
QP	1.131M	13.18	56.00	-42.82	19.65	Neutral	-	-6.47	9.65	0.06	9.94
AV	1.131M	12.22	46.00	-33.78	19.65	Neutral	-	-7.43	9.65	0.06	9.94
QP	3.805M	23.05	56.00	-32.95	19.74	Neutral	-	3.31	9.68	0.13	9.93
AV	3.805M	20.26	46.00	-25.74	19.74	Neutral	-	0.52	9.68	0.13	9.93
QP	8.523M	34.60	60.00	-25.40	19.91	Neutral	-	14.69	9.79	0.17	9.95
AV	8.523M	34.58	50.00	-15.42	19.91	Neutral	-	14.67	9.79	0.17	9.95
QP	20.513M	39.27	60.00	-20.73	20.20	Neutral	-	19.07	9.96	0.27	9.97
AV	20.513M	37.57	50.00	-12.43	20.20	Neutral	-	17.37	9.96	0.27	9.97



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
WPT	-	-	-	-	-	-	-	-	-	-	-
100-300kHz	Pass	PK	2.299M	54.19	69.50	-15.31	19.94	3	Horizontal	0	1.00



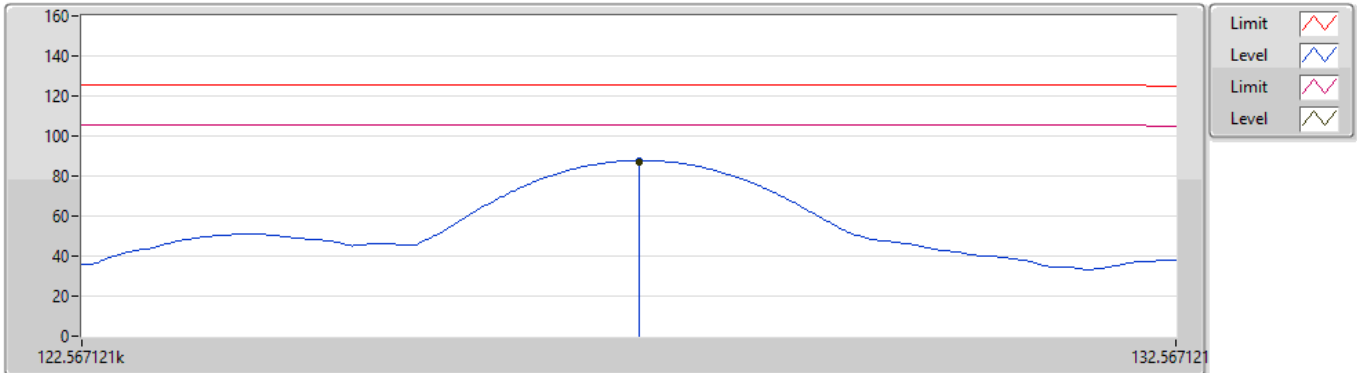
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
100-300kHz	-	-	-	-	-	-	-	-	-	-	-
0.1275MHz_TX	Pass	AV	127.567k	86.73	105.48	-18.75	19.85	3	Horizontal	160	1.00
0.1275MHz_TX	Pass	PK	127.567k	87.78	125.48	-37.70	19.85	3	Horizontal	160	1.00
0.1275MHz_TX	Pass	PK	50.454k	42.65	133.54	-90.89	20.82	3	Horizontal	360	1.00
0.1275MHz_TX	Pass	PK	68.502k	45.00	130.88	-85.88	20.33	3	Horizontal	360	1.00
0.1275MHz_TX	Pass	PK	102.342k	43.60	107.40	-63.80	19.75	3	Horizontal	360	1.00
0.1275MHz_TX	Pass	PK	2.299M	54.19	69.50	-15.31	19.94	3	Horizontal	0	1.00
0.1275MHz_TX	Pass	PK	3.493M	43.89	69.50	-25.61	20.03	3	Horizontal	0	1.00
0.1275MHz_TX	Pass	PK	4.687M	40.24	69.50	-29.26	20.47	3	Horizontal	0	1.00

100-300kHz

01/03/2023

0.1275MHz_TX

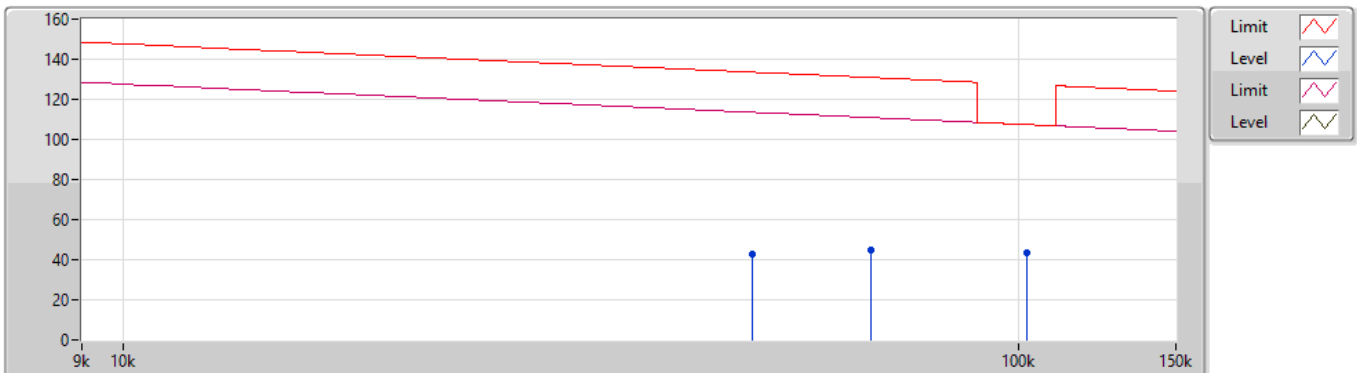


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
AV	127.567k	86.73	105.48	-18.75	19.85	3	Horizontal	160	1.00	66.88	19.81	0.04	-
PK	127.567k	87.78	125.48	-37.70	19.85	3	Horizontal	160	1.00	67.93	19.81	0.04	-

100-300kHz

01/03/2023

0.1275MHz_TX

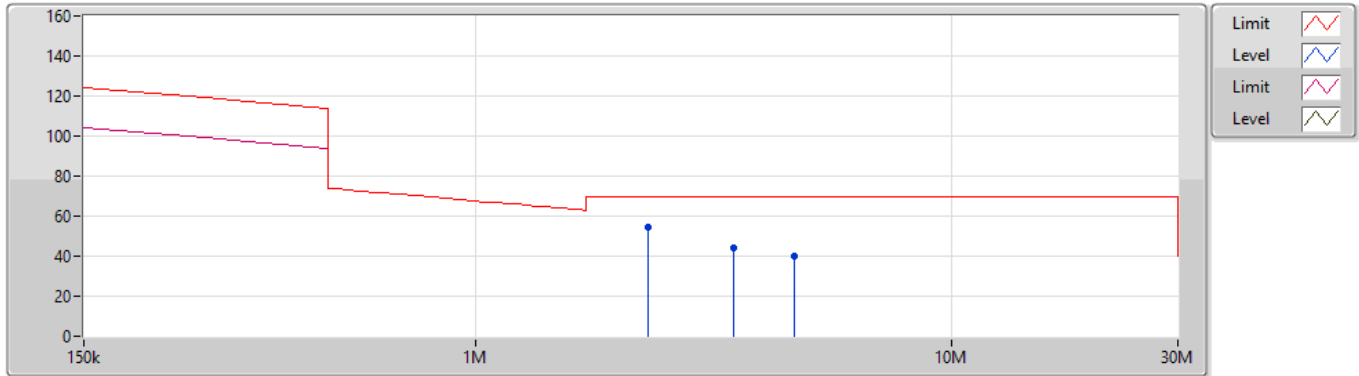


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	50.454k	42.65	133.54	-90.89	20.82	3	Horizontal	360	1.00	21.83	20.79	0.03	-
PK	68.502k	45.00	130.88	-85.88	20.33	3	Horizontal	360	1.00	24.67	20.30	0.03	-
PK	102.342k	43.60	107.40	-63.80	19.75	3	Horizontal	360	1.00	23.85	19.71	0.04	-

100-300kHz

01/03/2023

0.1275MHz_TX



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	2.299M	54.19	69.50	-15.31	19.94	3	Horizontal	0	1.00	34.25	19.77	0.17	-
PK	3.493M	43.89	69.50	-25.61	20.03	3	Horizontal	0	1.00	23.86	19.81	0.22	-
PK	4.687M	40.24	69.50	-29.26	20.47	3	Horizontal	0	1.00	19.77	20.21	0.26	-



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
WPT	-	-	-	-	-	-	-	-	-	-	-	-
100-300kHz	Pass	QP	157.7M	38.55	43.50	-4.95	-9.89	3	Horizontal	319	2.18	-



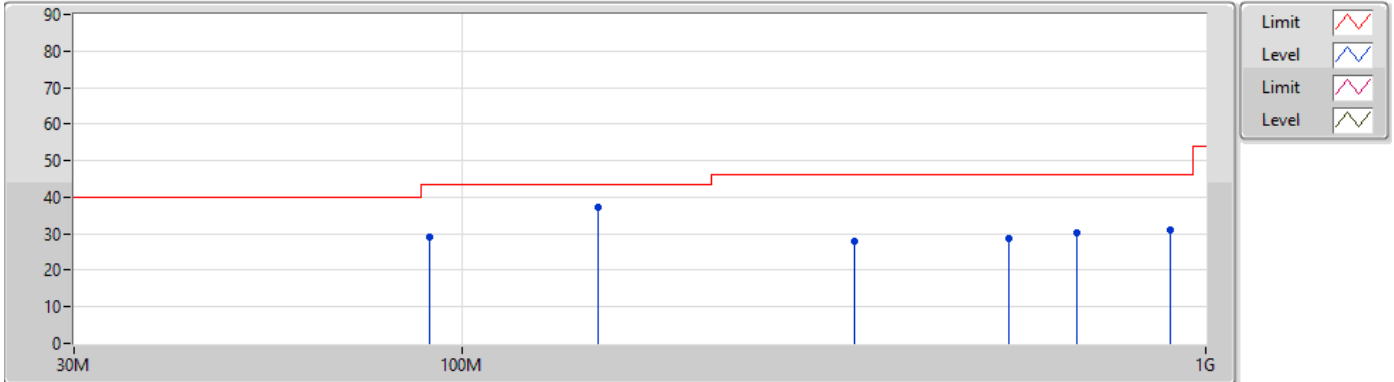
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
100-300kHz	-	-	-	-	-	-	-	-	-	-	-	-
0.1275MHz_TX	Pass	PK	90.14M	29.19	43.50	-14.31	-11.52	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	152.22M	37.27	43.50	-6.23	-9.64	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	336.52M	27.83	46.00	-18.17	-4.75	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	544.1M	28.64	46.00	-17.36	0.51	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	672.14M	30.09	46.00	-15.91	0.91	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	897.18M	31.05	46.00	-14.95	3.43	3	Vertical	0	0.99	-
0.1275MHz_TX	Pass	PK	80.44M	33.48	40.00	-6.52	-13.82	3	Horizontal	0	0.99	-
0.1275MHz_TX	Pass	PK	330.7M	35.82	46.00	-10.18	-4.85	3	Horizontal	0	0.99	-
0.1275MHz_TX	Pass	PK	472.32M	27.00	46.00	-19.00	-1.28	3	Horizontal	0	0.99	-
0.1275MHz_TX	Pass	PK	639.16M	29.57	46.00	-16.43	0.61	3	Horizontal	0	0.99	-
0.1275MHz_TX	Pass	PK	899.12M	32.31	46.00	-13.69	3.43	3	Horizontal	0	0.99	-
0.1275MHz_TX	Pass	QP	157.7M	38.55	43.50	-4.95	-9.89	3	Horizontal	319	2.18	-

100-300kHz

0.1275MHz_TX

15/03/2023

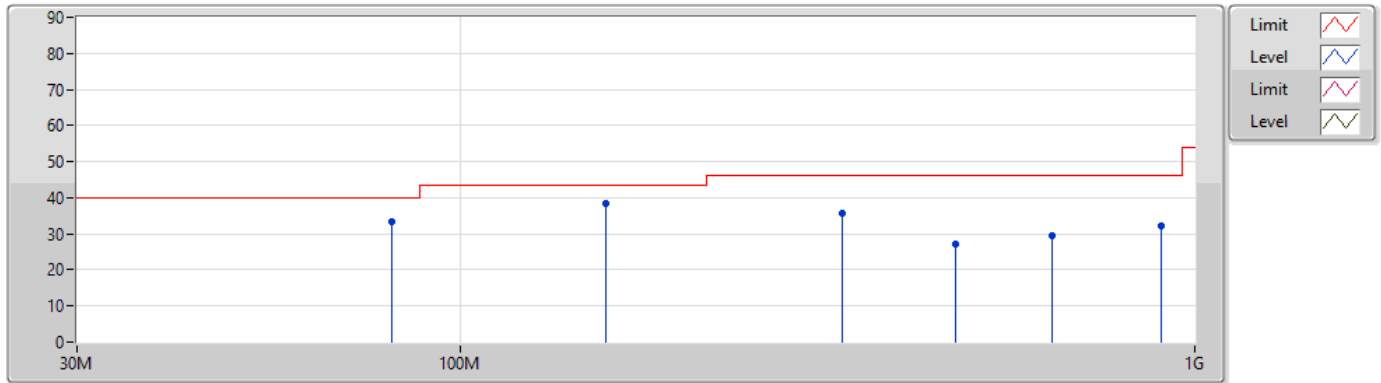


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)	AT (dB)
PK	90.14M	29.19	43.50	-14.31	-11.52	3	Vertical	0	0.99	40.71	14.34	1.54	27.40	0.00
PK	152.22M	37.27	43.50	-6.23	-9.64	3	Vertical	0	0.99	46.91	15.47	2.03	27.14	0.00
PK	336.52M	27.83	46.00	-18.17	-4.75	3	Vertical	0	0.99	32.58	18.96	3.08	26.79	0.00
PK	544.1M	28.64	46.00	-17.36	0.51	3	Vertical	0	0.99	28.13	24.52	3.95	27.96	0.00
PK	672.14M	30.09	46.00	-15.91	0.91	3	Vertical	0	0.99	29.18	24.40	4.47	27.96	0.00
PK	897.18M	31.05	46.00	-14.95	3.43	3	Vertical	0	0.99	27.62	25.74	5.25	27.56	0.00

100-300kHz

15/03/2023

0.1275MHz_TX



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)	AT (dB)
PK	80.44M	33.48	40.00	-6.52	-13.82	3	Horizontal	0	0.99	47.30	12.17	1.45	27.44	0.00
PK	330.7M	35.82	46.00	-10.18	-4.85	3	Horizontal	0	0.99	40.67	18.85	3.06	26.76	0.00
PK	472.32M	27.00	46.00	-19.00	-1.28	3	Horizontal	0	0.99	28.28	22.68	3.69	27.65	0.00
PK	639.16M	29.57	46.00	-16.43	0.61	3	Horizontal	0	0.99	28.96	24.27	4.35	28.01	0.00
PK	899.12M	32.31	46.00	-13.69	3.43	3	Horizontal	0	0.99	28.88	25.73	5.26	27.56	0.00
QP	157.7M	38.55	43.50	-4.95	-9.89	3	Horizontal	319	2.18	48.44	15.17	2.06	27.12	0.00



Summary

Mode	20dB (Hz)	FI-20dB (Hz)	Fh-20dB (Hz)	OBW (Hz)	Limit (Range)
0.12762M	-	-	-	-	-
WPC	2.608k	126.360750k	128.91500k	2.227k	-

Result

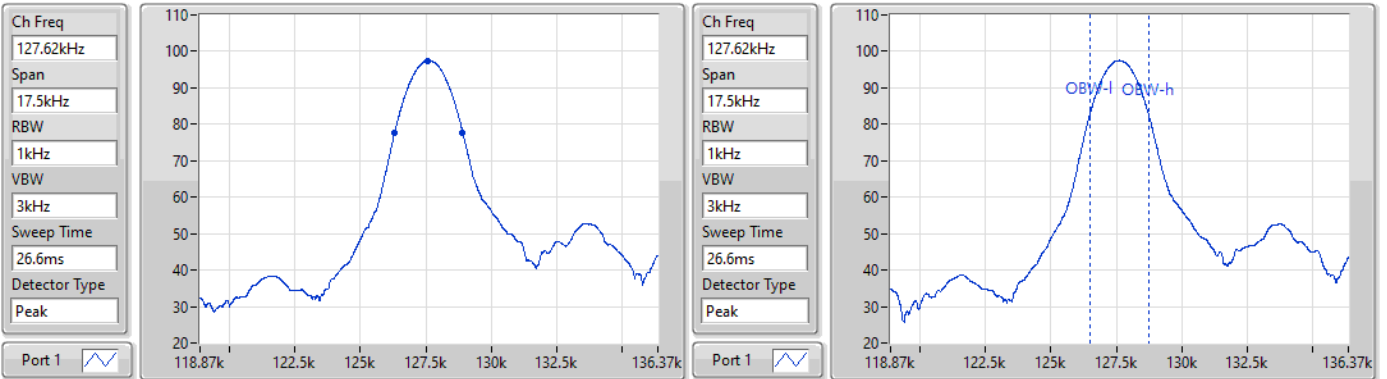
Mode	Result	20dB (Hz)	FI-20dB (Hz)	Fh-20dB (Hz)	OBW (Hz)	FI-OBW (Hz)	Fh-OBW (Hz)	Limit (Range)
WPC	-	-	-	-	-	-	-	-
0.12762MHz_TnomVnom	Pass	2.608k	126.360750k	128.91500k	2.227k	126.50003k	128.72739k	-

WPC_Nss1_1TX

EBW

0.12762MMHz_TnomVnom

27/02/2023



20dB(Hz)	Fl-20dB(Hz)	Fh-20dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Range)
2.608k	126.30750k	128.91500k	2.227k	126.50003k	128.72739k	-