

Test Report No.: Prüfbericht-Nr.:	US21M1DT.002 Rev.: 02	Order No.: Auftrags-Nr.:	P00330713 234174392	Page 1 of 38 Seite 1 von 38
Client Reference No.: Kunden-Referenz-Nr.:	2241340	Order date: Auftragsdatum:	6/22/2021	
Client: Auftraggeber:	Oasis Charger Corp. 1 Technology Drive Tolland CT, 06084			
Test item: Prüfgegenstand:	Juicebar EV Charger			
Identification/ Type No.: Bezeichnung / Typ-Nr.	JB3.0-321/322/401/402/481/482/801			
Order content: Auftrags-Inhalt:	Radio Test Report			
Test specification: Prüfgrundlage:	FCC CFR 47 Part 15.225:2021; RSS-210 Issue 10:2019			
Date of sample receipt: Wareneingangsdatum:	8/6/2021	See Test Setup Exhibit		
Test sample No.: Prüfmuster-Nr.:	JB3.0-2-000460T			
Testing period: Prüfzeitraum:	8/9/2021- 8/11/2021			
Testing laboratory: Prüflaboratorium:	TUV Rheinland of North America 710 Resende Road, Building 199 Webster, NY 14580			
Test result*: Prüfergebnis*:	Pass			
tested by: Alexander Sowinski geprüft von:		authorized by: Richard Decker genehmigt von:		
Date: 2/3/2022 Datum:		Issue Date: 2/3/2022 Ausstellungsdatum:		
Position / Stellung:	Expert	Position / Stellung:	Expert	
Others / Sonstiges:				
Condition of the test item at delivery: Zustand des Prüfgegenstandes bei Anlieferung:		Test sample complete and undamaged		
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested * Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet				
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. 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.				

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Remarks
Anmerkungen

1	The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request. <i>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i>
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3	Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. <i>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</i>
4	The test results contained in this report refer exclusively to the product(s) presented for testing. No liability may be assumed for models or products not referred to herein. This test report may not be published or duplicated in part without permission of the testing body. This test report by itself does not constitute authorization for the use of any TÜV Rheinland test mark. The report must not be used by the client to claim product certification, approval, or endorsement by A2LA.
5	TÜV Rheinland testing laboratories apply the Zero Guard Band rule unless otherwise required by the accreditation, standard, or requested by the customer as part of the quotation. For the Zero Guard Band rule, the measurement uncertainty is not considered and will also not be declared in the test report. Should the measurement uncertainty be used to provide guard band, these values will be declared in the test report.
6	Radio Test Report. The above product was found to be Compliant to the above test standard(s).

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Product description
Produktbeschreibung

1	Product details: <i>Produktdetails:</i>	The Juicebar is an electric vehicle supply equipment (EVSE) with RFID / NFC payment options.
2	Dimensions / Weight: <i>Maße / Gewicht:</i>	87 cm x 33 cm x 33 cm / 41 kg
3	Operating elements: <i>Bedienelemente:</i>	RFID: 13.56 MHz AC mains 110 – 250 VAC, 60 Hz, 0-80 A
4	Equipment / Accessories: <i>Ausstattung / Zubehör:</i>	None.
5	Used materials: <i>Verwendete Materialien:</i>	NA
6	Other: <i>Sonstiges:</i>	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
7	Test sample obtaining: <i>Prüfmusterbereitstellung:</i>	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others:

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Revisions

Date mm/dd/yy	Name	Page Number of Change	Describe Change
11/04/2021	Rev.:01	N/A	Original Document
02/03/2022	Rev.:02	All	Corrected FCC ID

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General Information

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1.1 Scope

This report is intended to document the status of conformance based on the results of testing performed on the Juicebar EV Charger, Model Number: JB3.0-321/322/401/402/481/482/801, manufactured by Oasis Charger Corp. This report only applies to the specific samples tested under the stated test conditions. It is the responsibility of the manufacturer to assure that additional production units of this model are manufactured with identical or EMI equivalent electrical and mechanical components.

1.2 Purpose

Testing was performed to evaluate the radio performance of the EUT (Equipment Under Test) in accordance with the applicable requirements, procedures, and criteria defined in the application of regulations and application of standards listed in this report. This report demonstrates the compliance of the RFID module transmitting in the 13.56MHz band with the test standards FCC 15.225:2021 and RSS-210 Issue 10.

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1.3 Summary of Test Results

Applicant:	Oasis Charger Corp. 1 Technology Drive Tolland CT, 06084	Tel:	860-308-2054	Contact:	Anne Ryan
		Fax:	--	e-mail:	aryan@gyre9.com
Description:	Juicebar EV Charger	Test Voltage/Freq.:	120V 60Hz		
Model Number:	JB3.0-321/322/401/402/481/482/801				
Serial Number:	JB3.0-2-000460T	Test Engineer:	Alexander Sowinski		
Standards	Description	Severity Level or Limit		Criteria	Test Result
FCC CFR 47 Part 15.225:2021; RSS-210 Issue 10:2019 Product Family Standard Emissions	Emissions Requirements for License Exempt Radio Equipment	See Basic Standards Below		See Below	Complies
FCC 15.225(a-d), RSS-210(B.6.a)	Transmitter Spurious Emissions + TX Field Strength	Class B, 9 kHz - 30 MHz Class B, 30 - 1000 MHz		Limit	Complies
FCC 15.207(a), RSS-210(8.8)	Conducted Emissions	Class B, 150 kHz - 30 MHz		Limit	Complies
FCC 15.225(e), RSS-210(B.6.b)	Frequency Stability	Error < 100 ppm		Limit	Complies
RSS-Gen 6.7 Issue 5:2018	Occupied Bandwidth	Report Value		None	Complies

2 Laboratory Information

2.1 Accreditations & Endorsements

TUV Rheinland of North America located at, 710 Resende Road Webster, NY 14580 is accredited by the commission for performing testing services for the general public on a fee basis. This laboratory test facilities have been fully described in reports submitted to and accepted by the FCC (Registration No 5253). The laboratory scope of accreditation includes: Title 47 CFR Part 15, and 18. The accreditation is updated every 3 years.

2.1.1 ILAC/A2LA

This is a program which is administered under the auspices of A2LA accredited. The laboratory has been assessed and accredited in accordance with ISO Standard 17025:2017 (Certificate Number: 3331.08). The scope of laboratory accreditation includes emission and immunity testing. The accreditation is updated annually.

2.1.2 VCCI

VCCI Accredited test lab. Registration numbers A-0329.

2.1.3 Industry Canada

(Registration No.: 482B-1) The 10 meter Semi-Anechoic chamber has been accepted by Industry Canada to perform testing to 3 and to 10m, based on the test procedures described in ANSI C63.4-2014.

2.1.4 BSMI

Registration No.: SL2-IN-E-1159R. The BSMI accreditation was obtained by NIST MRA with the BSMI.

2.1.5 Korea

(Designation No.: US0192). Recognized by National Radio Research Agency (RRA) as an accredited Conformity Assessment Body (CAB) under the terms for Korea Phase I of the APEC TEL.

2.2 Test Software

- 1) CIGUI 32 Version 1.4 for California Instruments AC power source
- 2) TILE version 4.1.B
- 3) TILE 7 version 7.1.3.24
- 4) Voltech PM 6000 Firmware 1.22.07RC6, Software IEC61000-3 for PM6000 Release 1.24.12
- 5) California Instruments AC power source MXHCL
- 6) Rohde & Schwarz EMI Measurement software EMC32 version 8.54.0
- 7) TEMA 3000 version 4.1.2
- 8) TILE version 3.4.k.28

2.3 Measurement Uncertainty

Two types of measurement uncertainty are expressed in this report, per *ISO Guide To The Expression Of Uncertainty In Measurement*, 1st Edition, 1995.

The Combined Standard Uncertainty is the standard uncertainty of the result of a measurement when that result is obtained from the values of a number of other quantities, equal to the positive square root of a sum of terms, the terms being the variances or co-variances of these other quantities weighted according to how the measurement result varies with changes in these quantities. The term standard uncertainty is the result of a measurement expressed as a standard deviation.

The Expanded Uncertainty defines an interval about the result of a measurement that may be expected to encompass a large fraction of the distribution of values that could reasonably be attributed to the measurand. The fraction may be viewed as the coverage probability or level of confidence of the interval.

2.3.1 Sample Calculation – radiated & conducted emissions

The field strength is calculated by subtracting the Amplifier Gain and adding the Cable Loss and Antenna Correction Factor to the measured reading. The basic equation is as follows:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{RAW} - \text{AMP} + \text{CBL} + \text{ACF}$$

Where: RAW = Measured level before correction (dB μ V)

AMP = Amplifier Gain (dB)

CBL = Cable Loss (dB)

ACF = Antenna Correction Factor (dB/m)

$$\mu\text{V/m} = 10^{\frac{\text{dB}\mu\text{V} / \text{m}}{20}}$$

Sample radiated emissions calculation @ 30 MHz

Measurement +Antenna Factor–Amplifier Gain+Cable loss=Radiated Emissions (dB μ V/m)

$$25 \text{ dB}\mu\text{V/m} + 17.5 \text{ dB} - 20 \text{ dB} + 1.0 \text{ dB} = 23.5 \text{ dB}\mu\text{V/m}$$

2.3.2 Measurement Uncertainty Emissions

Per CISPR 16-4-2	Ulab	Ucisp
Radiated Disturbance @ 10m		
30 MHz – 1,000 MHz	4.57 dB	5.2 dB
Radiated Disturbance @ 3m		
1.0 GHz – 6.0 GHz	5.18 dB	5.2 dB
6.0 GHz – 18.0 GHz	5.48 dB	5.5 dB
18.0 GHz – 26.5 GHz	5.21 dB	
26.5 GHz – 40.0 GHz	4.99 dB	
Conducted Disturbance @ Mains Terminals		
150 kHz – 30 MHz	2.62 dB	3.6 dB
Disturbance Power		
30 MHz – 300 MHz	3.88 dB	4.5 dB

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Measurement Uncertainty Emissions

The estimated combined standard uncertainty for radiated emissions measurements is ± 4.57 dB	Per CISPR16-4-2 Method
The estimated combined standard uncertainty for radiated emissions measurements from 1 GHz to 6 GHz is ± 5.18 dB	Per CISPR16-4-2 Method
The estimated combined standard uncertainty for radiated emissions measurements from 6 GHz to 18 GHz is ± 5.48 dB	Per CISPR16-4-2 Method
The estimated combined standard uncertainty for conducted emissions measurements is ± 2.62 dB.	Per CISPR16-4-2 Method

Expanded measurement uncertainty numbers are shown in the tables above. Compliance criteria are not based on measurement uncertainty.

2.4 Calibration Traceability

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Measurement method complies with ANSI/NCSL Z540-1-1994 and ISO Standard ISO IEC 17025:2017. Equipment calibration records are kept on file at the test facility.

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2.5 Measurement Equipment Identification

Equip.	Description	Model	Manufacturer	Page	1 of 1
				Last Date MM/DD/YYYY	Due Date MM/DD/YYYY
G1701077	SunAR JB6 Antenna	JB6	SunAR	04/30/2020	04/30/2022
G1701081	Fluke Multimeter 87 V 39760226	87 V	Fluke	04/09/2021	04/09/2022
G1701082	Temperature/Humidity/Barometer	68000-49	Control Company	02/12/2021	06/12/2023
G1701083	Microtronics BRC50703-01	BRC50703-01	Microtronics	03/30/2021	03/30/2022
G1701084	Microtronics BRC50704-01	BRC50704-01	Microtronics	03/30/2021	03/30/2022
G1701085	Microtronics BRC50705-01	BRC50705-01	Microtronics	03/30/2021	03/30/2022
G1701086	Microtronics BRM50702	BRM50702	Microtronics	03/30/2021	03/30/2022
G1701089	R&S EMI Receiver ESW44 101880	ESW44	Rohde & Schwarz	04/02/2021	04/02/2022
G1701200	R&S Signal Generator SMR40 100195	SMR40	Rohde & Schwarz	04/02/2021	03/02/2023
G1701552	Antenna Loop	6502	EMCO	05/11/2021	07/11/2022
G1701233	EMCO Horn Antenna 3115 9812-5635	3115	EMCO	02/28/2020	03/28/2022
G1701365	EMCO Horn 3160-10 1180	3160-10	EMCO	08/11/2020	08/11/2022
G1701367	EMCO Horn 3160-09 6707	3160-09	EMCO	08/11/2020	08/11/2022
G1701385	R&S EMI Receiver ESU40 100274	ESU40	Rohde & Schwarz	02/09/2021	02/09/2022
G1701452	RF Path 30-1000MHz	RF Cable Path		05/12/2021	02/12/2023
G1700978	CZS Z-Plus Temperature Chamber	Z-Plus	Cincinnati Sub-Zero	No Cal	No Cal

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3 Product Information

3.1 Test Plan

The EUT product information, test configuration, mode of operation, test types, test procedures, test levels, pass/failure criteria, in this report were carried out per the product test plan located in appendix A of this report.

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4 Emissions

4.1 Transmitter Spurious Emissions, Fundamental Field Strength

This test measures the electromagnetic levels of spurious signals generated by the EUT that radiated from the EUT and may affect the performance of other nearby electronic equipment.

4.1.1 Over View of Test

Results	Complies (as tested per this report)					Date	08/10/2021	
Standard	FCC 15.225(a-d), RSS-210(B.6.a)							
Product Model	JB3.0-321/322/401/402/481/482/801				Serial#	JB3.0-2-000460T		
Configuration	See test plan for details.							
Test Set-up	Tested 3 meters semi- anechoic chamber placed on turn-table, see test plans for details.							
EUT Powered By	120V 60Hz	Temp	22 C	Humidity	58%	Pressure	994 mbar	
Frequency Range	9 kHz - 30 MHz @ 3 meters 30 - 1000 MHz @ 3 meters							
Perf. Criteria	Class B (Below Limit)			Perf. Verification		Readings Under Limit		
Mod. to EUT	None			Test Performed By		Alexander Sowinski		

4.1.2 Test Procedure

Radiated emissions tests were performed using the procedures of CISPR 16 and/or ANSI C63.4 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration. Further radiated emission tests were performed per the procedures stated in the other emissions standards listed in this report.

The frequency range 9 kHz – 30 MHz investigated for radiated emissions. No spurious emissions were detected below 150 kHz.

4.1.3 Deviations

There were no deviations from the test methodology listed in the test plan for the radiated emission test.

4.1.4 Final Test

All final radiated emissions measurements were below (in compliance) the limits.

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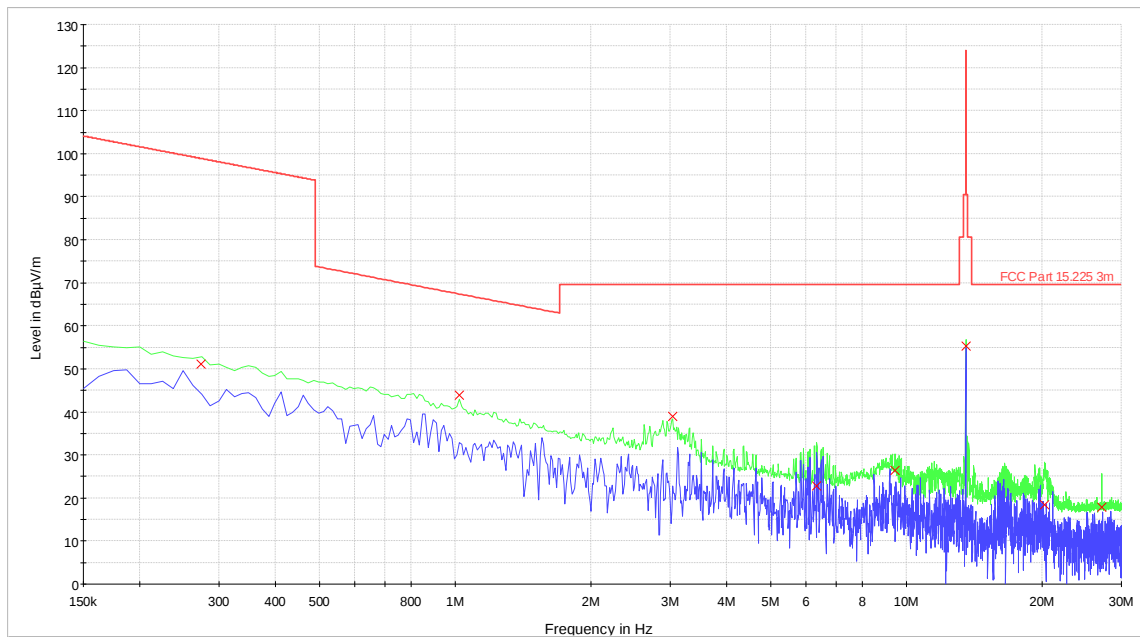
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4.1.5 Final Graphs

NOTES:

**Radiated Emissions 9 kHz – 30 MHz
Perpendicular**



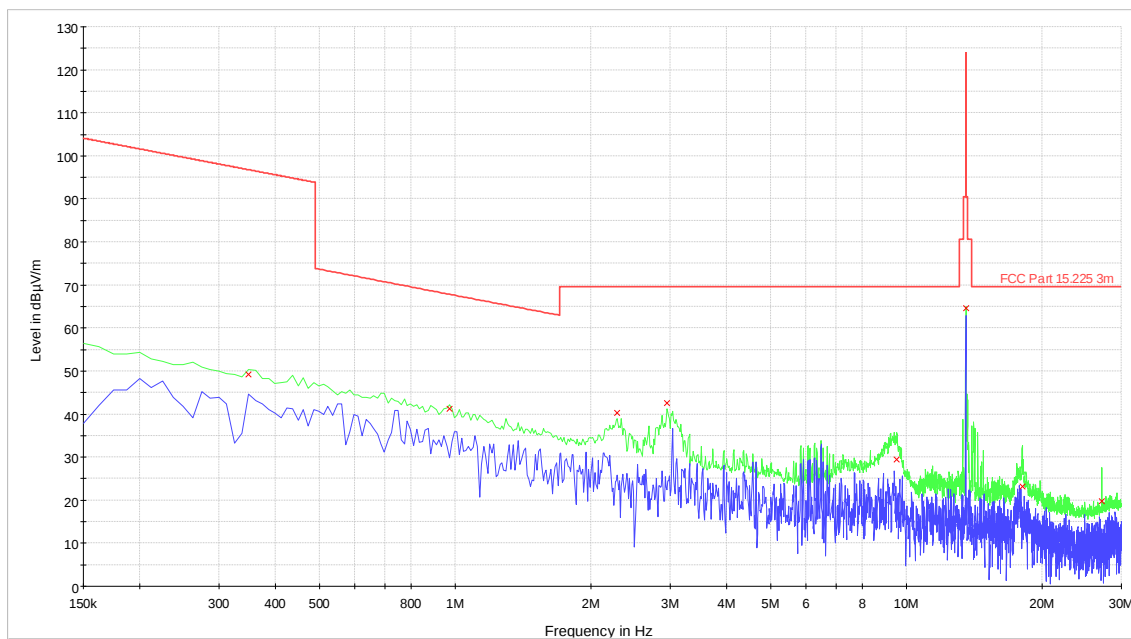
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NOTES:

**Radiated Emissions 9 kHz – 30 MHz
Parallel**



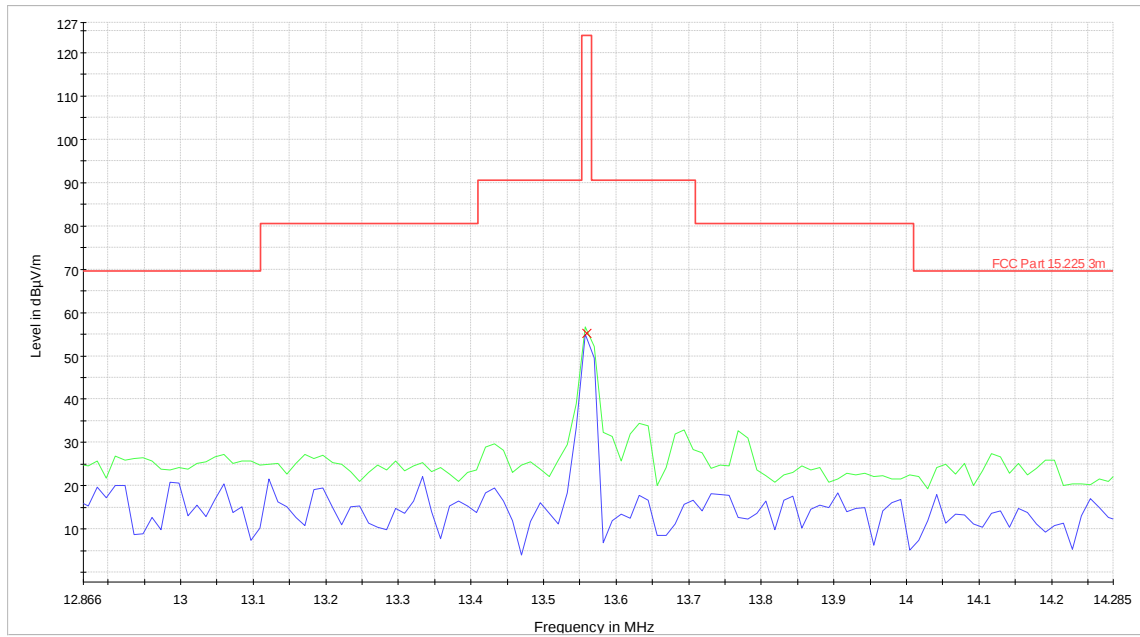
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NOTES: RFID Out of Band Emissions

**Radiated Emissions 9 kHz – 30 MHz
Perpendicular**



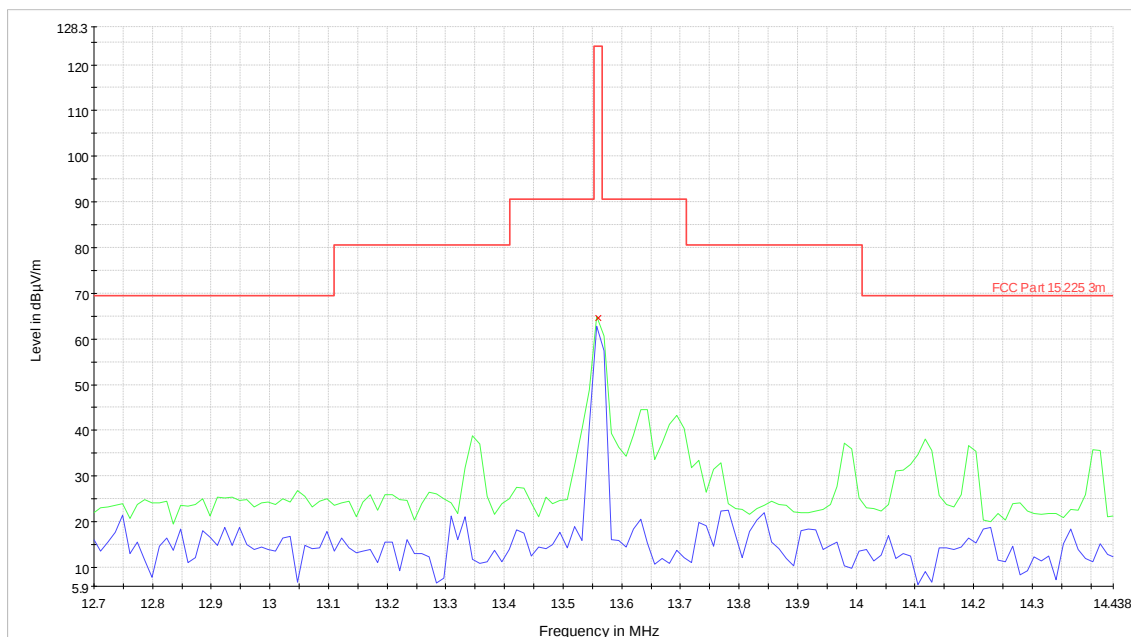
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NOTES: RFID Out of Band Emissions

**Radiated Emissions 9 kHz – 30 MHz
Parallel**



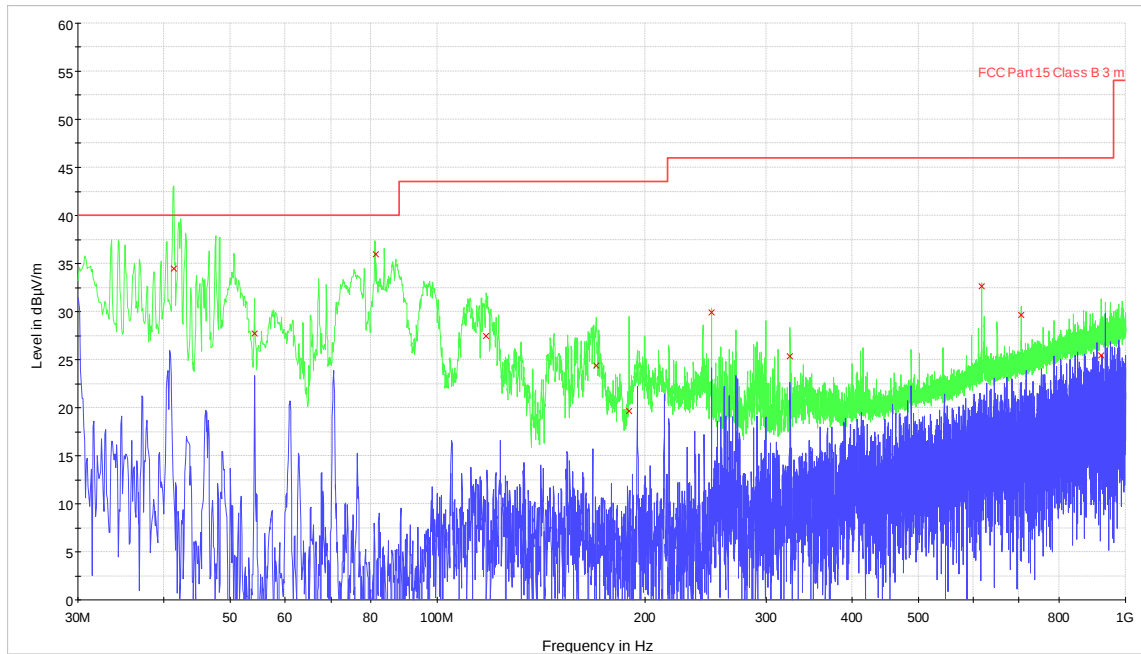
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NOTES:

**Radiated Emissions 30 – 1000 MHz
Vertical**



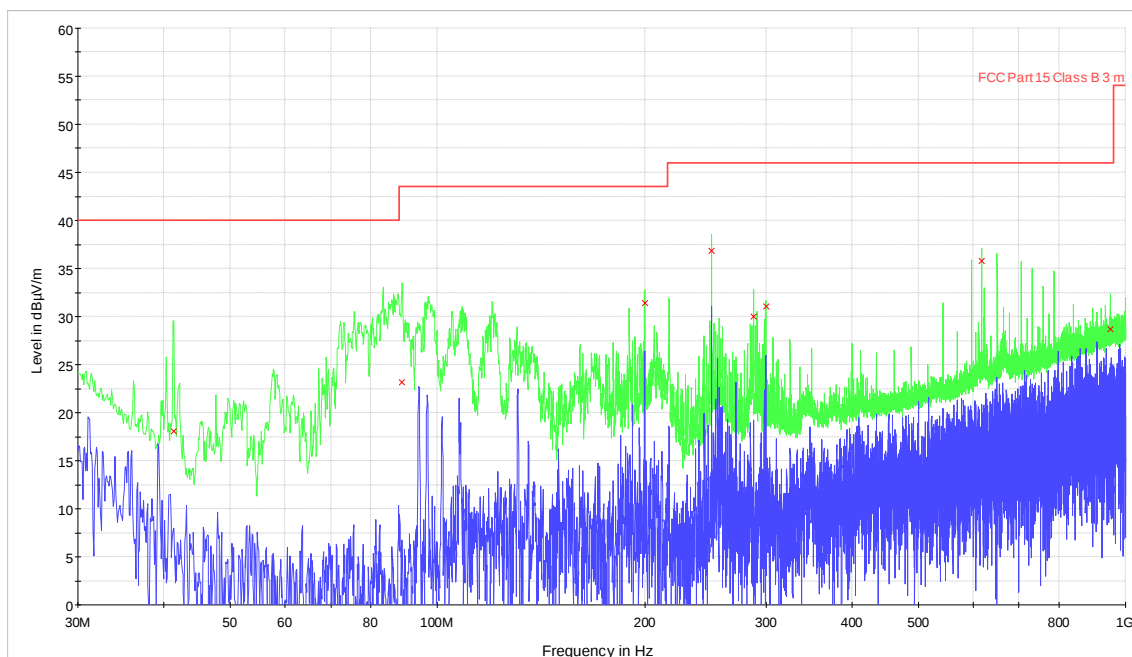
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NOTES:

**Radiated Emissions 30 – 1000 MHz
Horizontal**



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4.1.6 Final Tabulated Data

9 kHz – 30 MHz –

Frequency MHz	QuasiPeak dBμV/m	Height cm	Pol	Azimuth deg	Limit - QPK dBμV/m	Margin - QPK dB
0.2740	51.2	100.0	V	226.0	98.8	-47.6
0.3490	49.3	100.0	H	313.0	96.7	-47.4
0.9710	41.2	100.0	H	115.0	67.8	-26.6
1.0210	44.0	100.0	V	272.0	67.4	-23.4
2.2890	40.3	100.0	H	93.0	69.5	-29.2
2.9480	42.6	100.0	H	2.0	69.5	-26.9
3.0350	39.0	100.0	V	277.0	69.5	-30.5
6.3310	22.8	100.0	V	36.0	69.5	-46.7
9.4410	26.5	100.0	V	337.0	69.5	-43.0
9.5400	29.4	100.0	H	190.0	69.5	-40.1
13.5600	55.3	100.0	V	67.0	124.0	-68.7
13.5600	64.7	100.0	H	257.0	124.0	-59.3
18.0720	23.2	100.0	H	36.0	69.5	-46.3
20.2860	18.5	100.0	V	92.0	69.5	-51.0
27.1260	17.9	100.0	V	2.0	69.5	-51.6
27.1260	19.7	100.0	H	210.0	69.5	-49.8

Note: Fundamental Field maximum measured to be 64.7 dBuV/m @ 3 meters.
No Out of Band Emissions were detected.

30 - 1000 MHz –

Frequency MHz	QuasiPeak dBμV/m	Height cm	Pol	Azimuth deg	Limit - QPK dBμV/m	Margin - QPK dB
41.36	34.5	100.0	V	168.0	40.0	-5.5
41.36	18.0	100.0	H	143.0	40.0	-22.0
54.24	27.7	100.0	V	250.0	40.0	-12.3
81.36	36.0	100.0	V	208.0	40.0	-4.0
88.80	23.1	100.0	H	333.0	43.5	-20.4
117.68	27.5	100.0	V	205.0	43.5	-16.0
169.96	24.4	100.0	V	165.0	43.5	-19.1
189.84	19.7	100.0	V	355.0	43.5	-23.8
200.00	31.4	100.0	H	92.0	43.5	-12.1
250.00	29.9	100.0	V	293.0	46.0	-16.1
250.00	36.9	100.0	H	45.0	46.0	-9.1
288.00	30.0	100.0	H	205.0	46.0	-16.0
300.00	31.0	100.0	H	332.0	46.0	-15.0
325.48	25.3	100.0	V	352.0	46.0	-20.7
617.16	32.7	100.0	V	5.0	46.0	-13.3
617.16	35.8	100.0	H	187.0	46.0	-10.2
705.16	29.6	100.0	V	223.0	46.0	-16.4
922.20	25.5	100.0	V	9.0	46.0	-20.5
949.28	28.7	100.0	H	43.0	46.0	-17.3

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4.2 Conducted Emissions

This test measures the electromagnetic levels of spurious signals generated by the EUT on the AC power line that may affect the performance of other nearby electronic equipment.

4.2.1 Over View of Test

Results	Complies (as tested per this report)					Date	08/11/2021	
Standard	FCC 15.207(a), RSS-210(8.8)							
Product Model	JB3.0-321/322/401/402/481/482/801				Serial#	JB3.0-2-000460T		
Configuration	See test plan for details.							
Test Set-up	Tested in shielded room, EUT placed on table. See test plans for details.							
EUT Powered By	120V 60Hz	Temp	23°C	Humidity	56%	Pressure	992 mbar	
Frequency Range	150 kHz - 30 MHz							
Perf. Criteria	Class B (Below Limit)	Perf. Verification		Readings Under Limit for L1 & Neutral				
Mod. to EUT	None	Test Performed By		Alexander Sowinski				

4.2.2 Test Procedure

Conducted and emissions tests were performed using the procedures of FCC 15.207(a), RSS-210(8.8) and/or ANSI C63.4 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration. Further conducted emission tests were performed per the procedures stated in the other emissions standards listed in this report.

The frequency range from 150 kHz - 30 MHz was investigated for conducted emissions.

Conducted Emissions measurements were performed in the shielded room using procedures specified in the test plan and standard.

4.2.3 Deviations

During the Conducted Emissions test of the Juicebar, emissions in the 380 kHz range were noted to be over the Class B limits. By switching off the RFID and re-measuring, it was proven that the sources of these emissions are not the radios. The Juicebar still passes the Class A limits required for an electric vehicle charger under the relevant EMC standards.

4.2.4 Final Test

All final conducted emissions measurements were below (in compliance) the limits.

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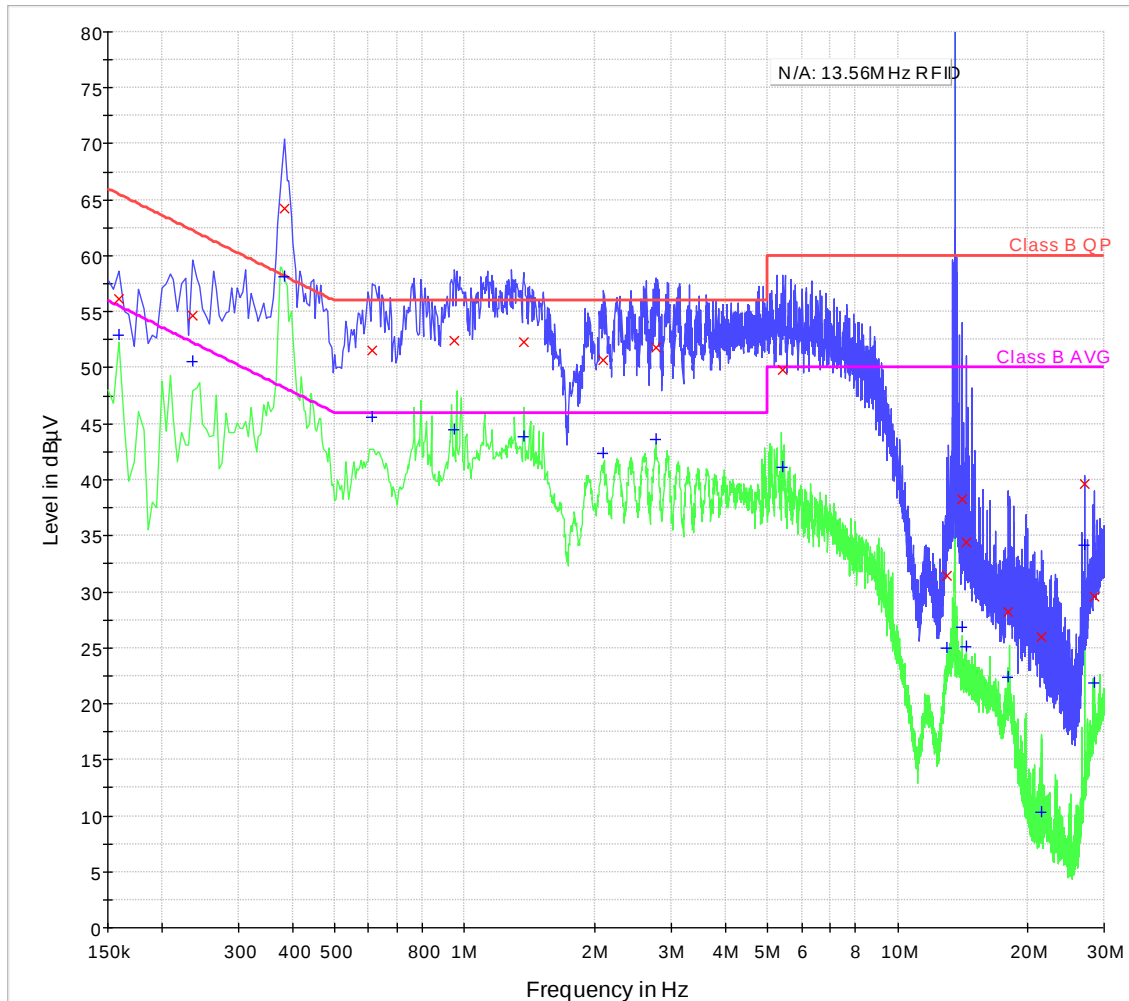
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4.2.5 Final Graphs

NOTES: RFID TX on

Conducted Emissions @ 120V/60Hz Line



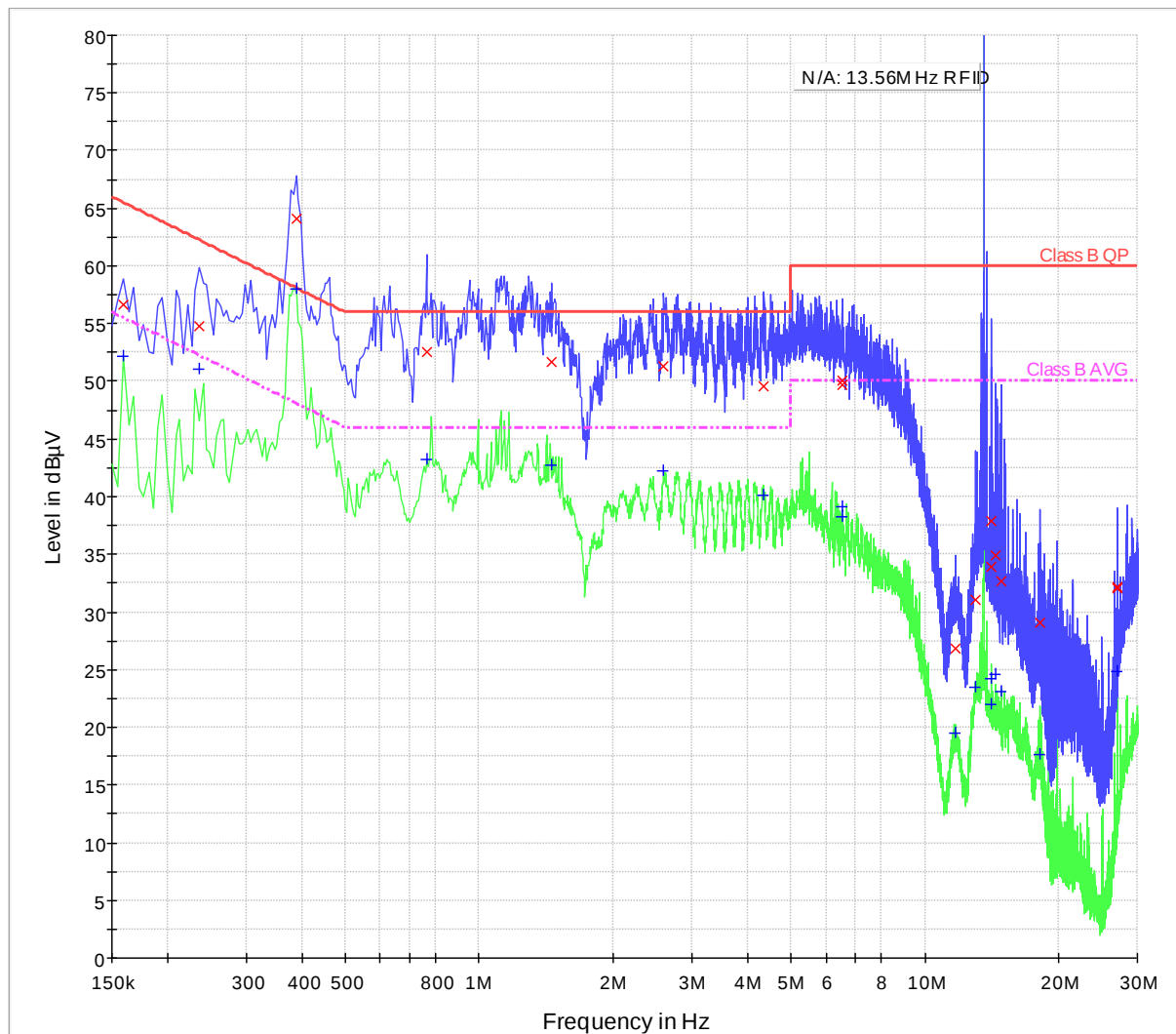
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NOTES: RFID TX on

**Conducted Emissions @ 120V/60Hz
Neutral**



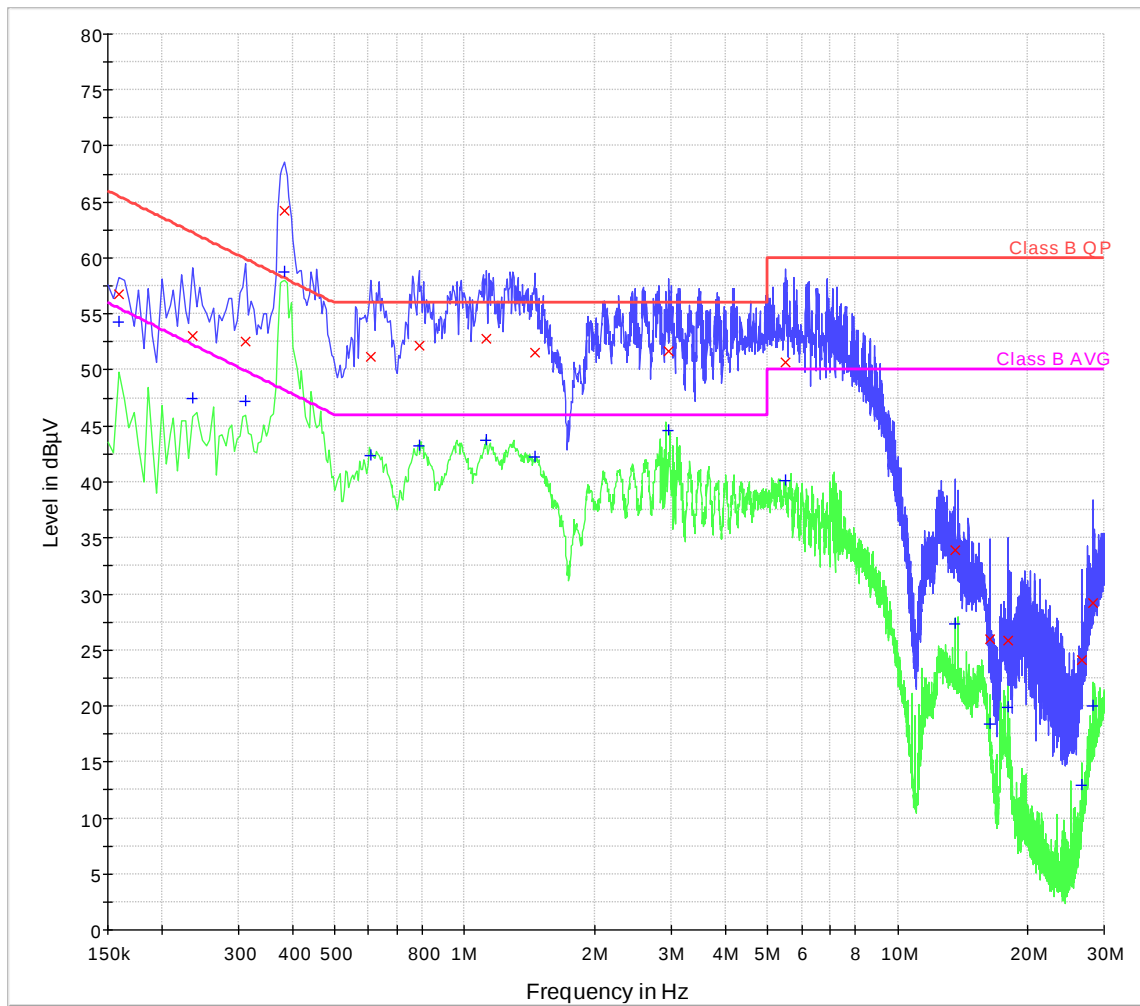
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NOTES: RFID TX off

**Conducted Emissions @ 120V60Hz
Line**



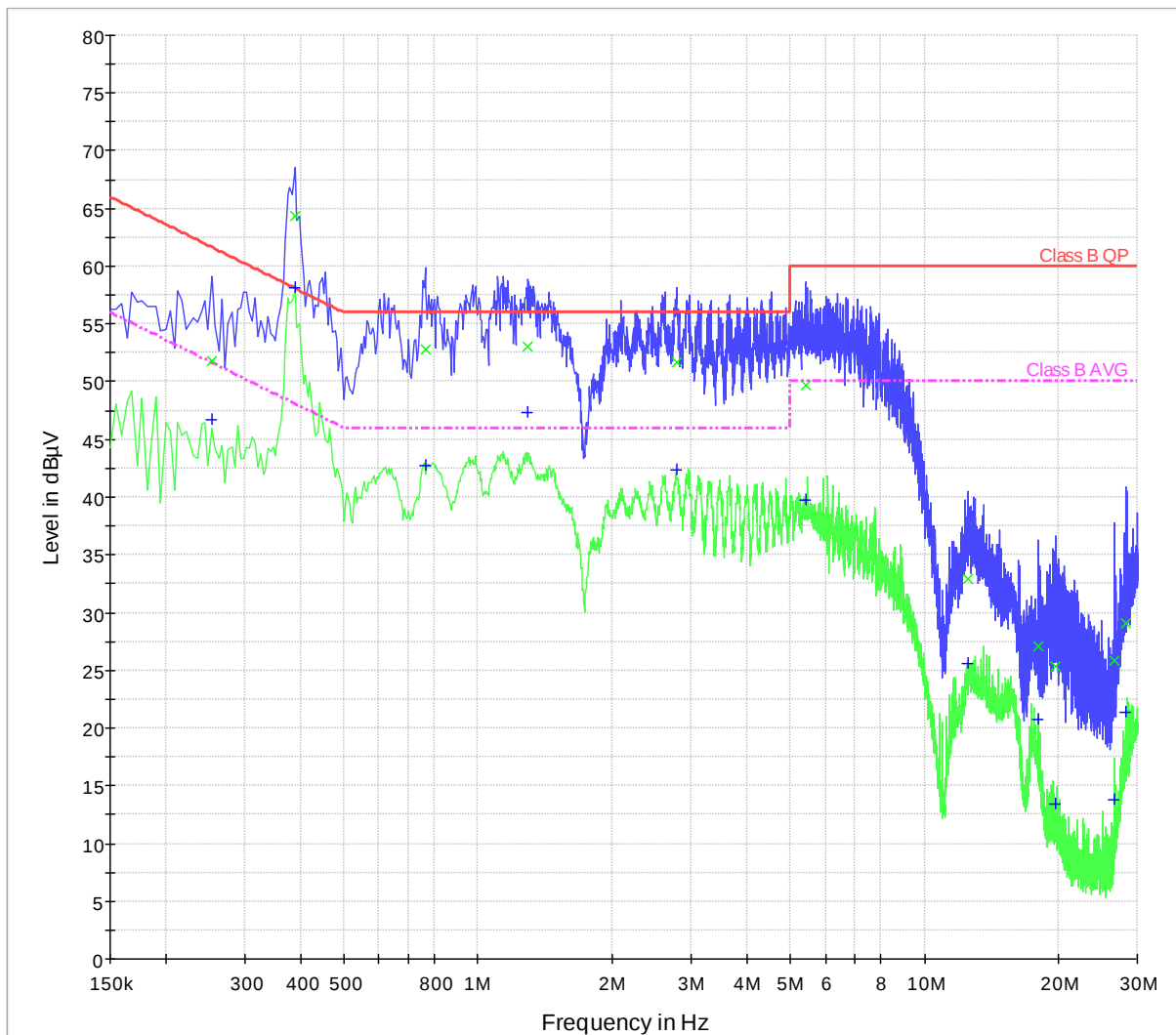
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NOTES: RFID TX off

**Conducted Emissions @ 120V60Hz
Neutral**



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4.2.6 Final Tabulated Data at 120V/60Hz, RFID on

Frequency MHz	QuasiPeak dBμV	Average dBμV	Line	Limit - QPK dBμV	Margin - QPK dB	Limit - AVG dBμV	Margin - AVG dB
0.1590	56.6	52.2	N	65.5	-8.9	55.5	-3.3
0.1590	56.2	52.9	L1	65.5	-9.3	55.5	-2.6
0.2355	54.8	51.0	N	62.3	-7.5	52.3	-1.3
0.2355	54.7	50.6	L1	62.3	-7.6	52.3	-1.7
0.3840	64.2	58.1	L1	58.2	6.0	48.2	9.9
0.3885	64.1	58.1	N	58.1	6.0	48.1	10.0
0.6135	51.6	45.6	L1	56.0	-4.4	46.0	-0.4
0.7620	52.6	43.2	N	56.0	-3.4	46.0	-2.8
0.9465	52.4	44.4	L1	56.0	-3.6	46.0	-1.6
1.3695	52.3	43.8	L1	56.0	-3.7	46.0	-2.2
1.4550	51.6	42.7	N	56.0	-4.4	46.0	-3.3
2.0940	50.7	42.3	L1	56.0	-5.3	46.0	-3.7
2.5980	51.3	42.3	N	56.0	-4.7	46.0	-3.7
2.7690	51.8	43.6	L1	56.0	-4.2	46.0	-2.4
4.3620	49.6	40.1	N	56.0	-6.4	46.0	-5.9
5.4240	49.8	41.1	L1	60.0	-10.2	50.0	-8.9
6.5355	50.0	39.2	N	60.0	-10.0	50.0	-10.8
11.6970	26.8	19.5	N	60.0	-33.2	50.0	-30.5
13.0020	31.1	23.4	N	60.0	-28.9	50.0	-26.6
13.0020	31.5	24.9	L1	60.0	-28.5	50.0	-25.1
14.0640	38.2	26.8	L1	60.0	-21.8	50.0	-23.2
14.0730	33.9	24.2	N	60.0	-26.1	50.0	-25.8
14.1180	37.9	22.0	N	60.0	-22.1	50.0	-28.0
14.4015	35.0	24.6	N	60.0	-25.0	50.0	-25.4
14.4015	34.4	25.1	L1	60.0	-25.6	50.0	-24.9
14.8335	32.7	23.1	N	60.0	-27.3	50.0	-26.9
18.0465	28.2	22.4	L1	60.0	-31.8	50.0	-27.6
18.0825	29.1	17.7	N	60.0	-30.9	50.0	-32.3
21.5115	25.9	10.3	L1	60.0	-34.1	50.0	-39.7
27.1230	39.6	34.2	L1	60.0	-20.4	50.0	-15.8
27.1275	32.1	24.8	N	60.0	-27.9	50.0	-25.2
28.3875	29.5	21.9	L1	60.0	-30.5	50.0	-28.1

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4.2.7 Final Tabulated Data at 120V60Hz, RFID off

Frequency MHz	QuasiPeak dBμV	Average dBμV	Line	Limit - QPK dBμV	Margin - QPK dB	Limit - AVG dBμV	Margin - AVG dB
0.1590	56.8	54.3	L1	65.5	-8.7	55.5	-1.2
0.2355	53.1	47.5	L1	62.3	-9.2	52.3	-4.8
0.2535	51.9	46.7	N	61.6	-9.7	51.6	-4.9
0.3120	52.5	47.2	L1	59.9	-7.4	49.9	-2.7
0.3840	64.3	58.8	L1	58.2	6.1	48.2	10.6
0.3885	64.3	58.1	N	58.1	6.2	48.1	10.0
0.6090	51.1	42.3	L1	56.0	-4.9	46.0	-3.7
0.7620	52.8	42.8	N	56.0	-3.2	46.0	-3.2
0.7845	52.1	43.2	L1	56.0	-3.9	46.0	-2.8
1.1265	52.8	43.7	L1	56.0	-3.2	46.0	-2.3
1.2930	53.1	47.3	N	56.0	-2.9	46.0	1.3
1.4550	51.5	42.3	L1	56.0	-4.5	46.0	-3.7
2.7870	51.6	42.4	N	56.0	-4.4	46.0	-3.6
2.9580	51.7	44.6	L1	56.0	-4.3	46.0	-1.4
5.4420	49.7	39.8	N	60.0	-10.3	50.0	-10.2
5.5140	50.7	40.1	L1	60.0	-9.3	50.0	-9.9
12.5700	32.9	25.7	N	60.0	-27.1	50.0	-24.3
13.5960	33.9	27.4	L1	60.0	-26.1	50.0	-22.6
16.3500	26.0	18.3	L1	60.0	-34.0	50.0	-31.7
18.0195	25.8	19.9	L1	60.0	-34.2	50.0	-30.1
18.0330	27.1	20.7	N	60.0	-32.9	50.0	-29.3
19.7475	25.3	13.4	N	60.0	-34.7	50.0	-36.6
26.6820	25.8	13.9	N	60.0	-34.2	50.0	-36.1
26.6910	24.1	13.0	L1	60.0	-35.9	50.0	-37.0
28.3200	29.0	21.4	N	60.0	-31.0	50.0	-28.6
28.3650	29.2	20.0	L1	60.0	-30.8	50.0	-30.0

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4.3 Frequency Stability

This test evaluates the error in the transmission frequency of an RFID device across different ambient temperatures and supply voltages.

4.3.1 Test Over View

Results	Complies (as tested per this report)				Date	08/11/2021	
Standard	FCC 15.225(e), RSS-210(B.6.b)						
Product Model	JB3.0-321/322/401/402/481/482/801			Serial#	JB3.0-2-000460T		
Configuration	See test plan for details.						
Test Set-up	Tested in shielded room, EUT placed on table. See test plan for details.						
EUT Powered By	120V 60Hz	Temp	23°C	Humidity	56%	Pressure	992 mbar
Perf. Criteria	Error < 100 ppm (Below Limit)		Perf. Verification		Readings under Limit		
Mod to EUT	None		Test Performed By		Alexander Sowinski		

4.3.2 Test Procedure

The EUT was placed inside the temperature chamber and allowed to stabilize at each of -22, 20, and 50 °C. For each temperature, the supply voltage was varied by ±15%. The RFID transmit frequency was measured and the error was calculated using a spectrum analyzer.

4.3.3 Deviations

There were no deviations from the test methodology listed in the test plan for the frequency stability test.

4.3.4 Final Test

The frequency stability error of the EUT was below the 100 ppm limits specified in the standard.

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4.3.5 Final Data

Frequency Stability		Offset Factor: -3.2 dB		TX Freq	13.56		
Temperature	Supply Voltage	Center TX	Error	Limit	Error	Limit	Result
C	V	MHz	%	%	ppm	ppm	
-20	102	13.56085044	0.006271704	0.01	62.7170354	100	Pass
-20	120	13.56079291	0.005847426	0.01	58.47426254	100	Pass
-20	138	13.56067785	0.004998879	0.01	49.98879056	100	Pass
22	102	13.5609013	0.006646785	0.01	66.46784661	100	Pass
22	120	13.56076957	0.005675258	0.01	56.75258112	100	Pass
22	138	13.56076957	0.005675258	0.01	56.75258112	100	Pass
50	102	13.56085044	0.006271704	0.01	62.7170354	100	Pass
50	120	13.56067785	0.004998879	0.01	49.98879056	100	Pass
50	138	13.56073538	0.005423156	0.01	54.23156342	100	Pass

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4.3.6 Sample Plots

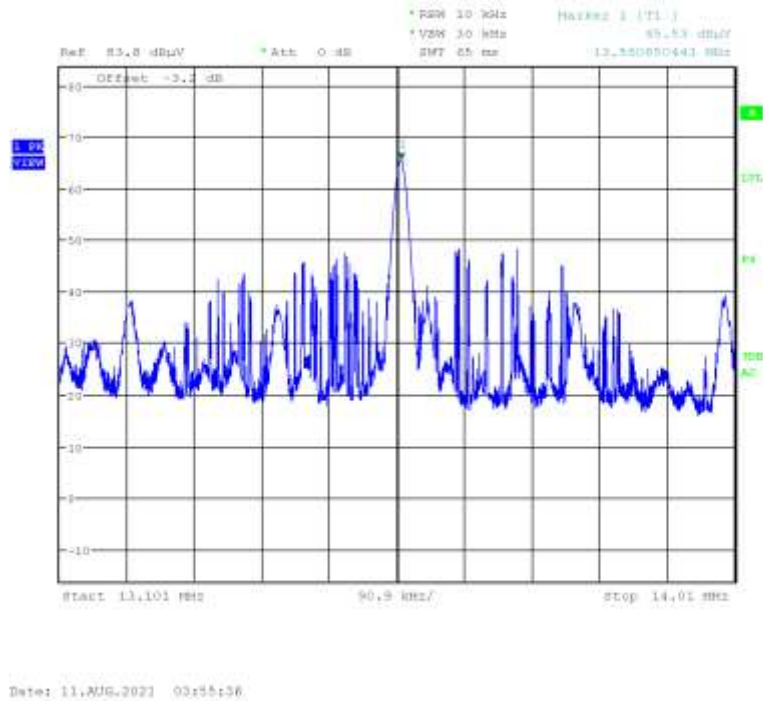


Figure 1: Frequency stability @ -20°C, 102 VAC

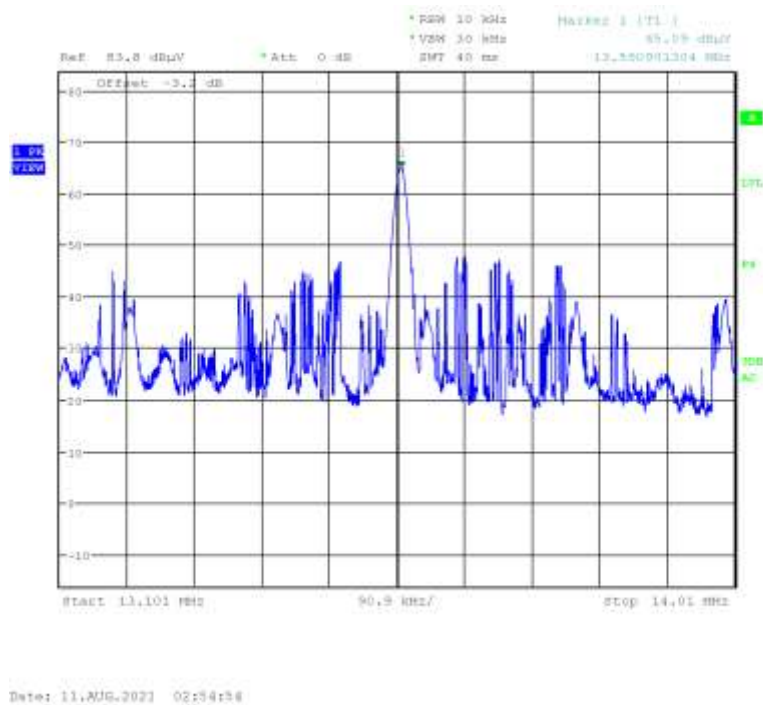


Figure 2: Frequency stability @ 22°C, 102 VAC

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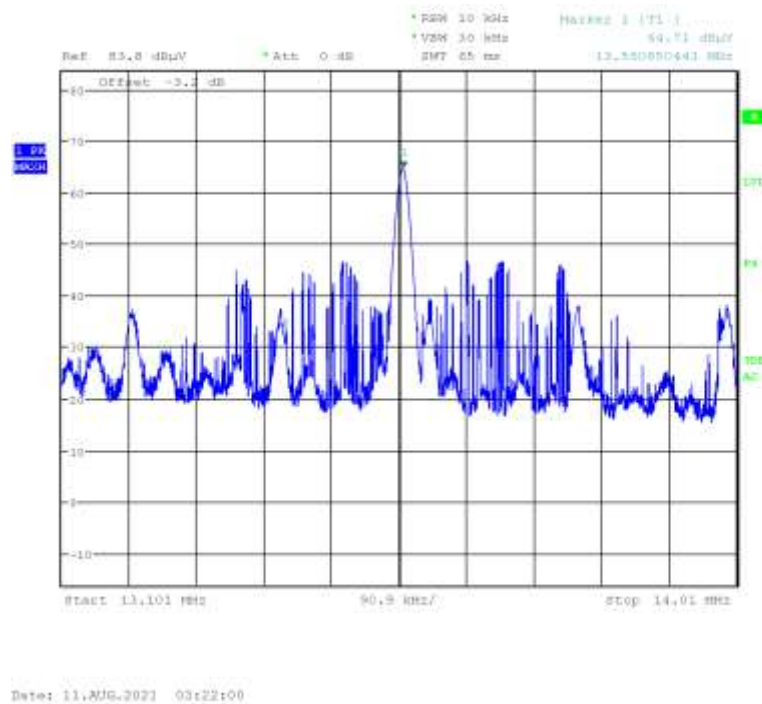


Figure 3: Frequency stability @ 50°C, 102 VAC

4.4 Occupied Bandwidth

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This test evaluates the occupied bandwidth of the EUT.

4.4.1 Test Over View

Results	Complies (as tested per this report)					Date	08/11/2021	
Standard	FCC 15.225(e), RSS-210(B.6.b)							
Product Model	JB3.0-321/322/401/402/481/482/801				Serial#	JB3.0-2-000460T		
Configuration	See test plan for details.							
Test Set-up	Tested in shielded room, EUT placed on table. See test plan for details.							
EUT Powered By	120V 60Hz	Temp	23°C	Humidity	56%	Pressure	992 mbar	
Perf. Criteria	Report Value			Perf. Verification	Report Value			
Mod to EUT	None			Test Performed By	Alexander Sowinski			

4.4.2 Test Procedure

The EUT was placed on the test bench and powered on. The measurement antenna was setup nearby and an additional offset factor was added such that the peak measured field matched what was observed during chamber measurements. Per the requirements of RSS-Gen, the 99% occupied bandwidth was measured. The spectrum analyzer was set to RBW=10 Hz (minimum), VBW=30 Hz in order to comply with the 1-5% RBW measurement requirement.

4.4.3 Deviations

There were no deviations from the test methodology listed in the test plan for the occupied bandwidth test.

4.4.4 Final Test

The occupied bandwidth of the EUT was recorded.

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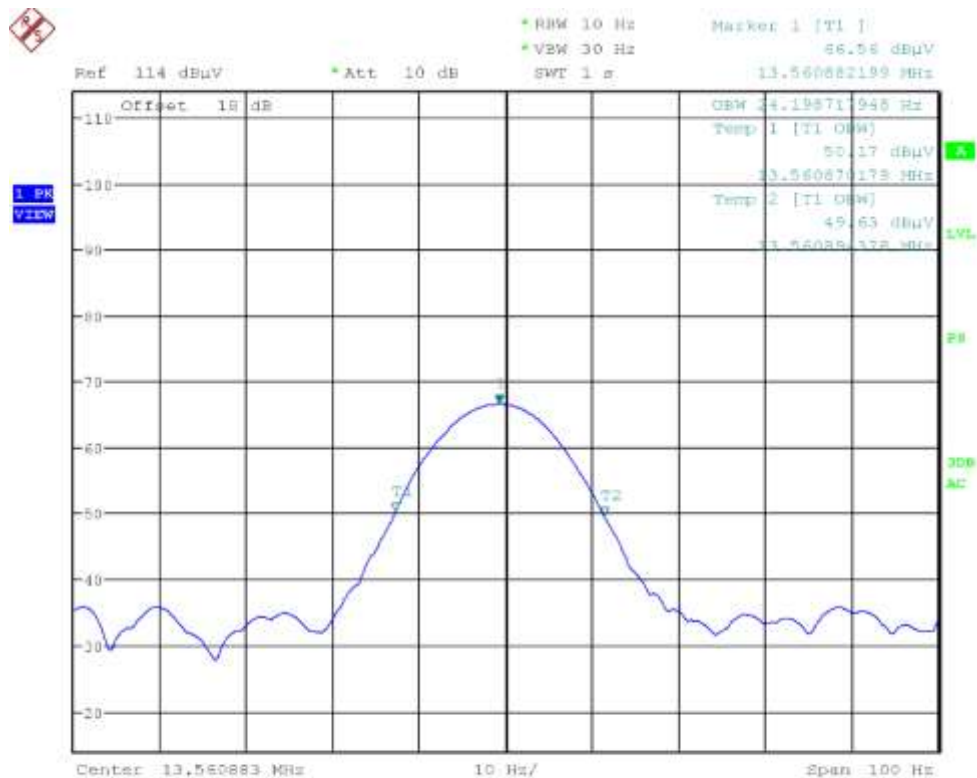
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4.4.5 Final Occupied Bandwidth Data

Center Freq	Flow	Fhigh	99% OBW
MHz	MHz	MHz	Hz
13.5608822	13.5608702	13.5608944	24.1982

4.4.6 Occupied Bandwidth Plot



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Appendix A

5 Test Plan

This test report is intended to follow the test plan outlined herein unless otherwise stated. The test plan provides product information, reference standards, and testing details. The product information below came via client, product manual, product itself and or the internet. Test procedure information will reference standards or internal TUV Rheinland NA procedures.

5.1 General Information

Client	Oasis Charger Corp.
Address 1	1 Technology Drive
Address 2	Tolland CT, 06084
Contact Person	Anne Ryan
Telephone	860-308-2054
Fax	--
e-mail	aryan@gyre9.com

5.2 Model(s) Name

JB3.0-321/322/401/402/481/482/801

5.3 Type of Product

Juicebar EV Charger

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5.4 Equipment Under Test (EUT) Description

The Juicebar is an electric vehicle supply equipment (EVSE) that contains RFID / NFC payment options.

5.5 Wireless

EUT Specifications	
Environment:	Outdoor
Operating Temperature Range °C	-20°C - 50°C
Multiple Feeds:	No
FCC ID:	2A37SJB3G9MTZI
Product Marketing Name (PMN):	Juicebar Gen 3
Hardware Version Identification Number (HVIN):	321, 322, 401, 402, 481, 482, 801
Firmware Version Identification Number (FVIN):	1.0.0
RF Software Version:	1.0.0
Operating Modes:	13.56 MHz
Transmitter Frequency Band:	RFID @ 13.56 MHz band.
Power @ Operating Channel (dBm):	-19.6 dBm
Antenna Type	Circular / Loop
Antenna Gain (dBi)	+17 dBi
Modulation:	ASK
Data Rate	880 kbps
TX/RX Chain (s):	Single
Type of Equipment:	EVSE
*All EUT specifications are provided by the manufacturer or the TUV direct customer	
Note: Information supplied by the customer and can affect the validity of results	
Note:	

5.6 General Product Information

Size		H	87 cm	W	33 cm	L	33 cm
Weight		41 kg		Fork-Lift Needed		No	
Notes							

5.7 Modifications

None.

5.8 EUT Electrical Power Information

5.8.1 Electrical Power Type

☒	AC	☐	DC	☐	Batteries	☐	Host -
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5.8.2 Electrical Power Information

Name	Type	Voltage		Frequency	Current	Notes
		min	max			
AC mains	AC	110	250	60	0-80 A	
Notes						

5.9 EUT Modes of Operation during Testing

The Juicebar EV charger is placed on the turntable and powered on. RFID is enabled, transmitting at 13.56 MHz.

5.10 EUT Clock/Oscillator Frequencies

Please specify the maximum clock frequency used in the product – __24 MHz__

In the table below, please specify other clock frequencies and sensitive operating frequencies in the product.

Clock Frequencies & Sensitive Frequencies

5.11 Electrical Support Equipment

Type	Manufacturer	Model	Connected To
None.			

5.12 Non - Electrical Support Equipment

Item	Notes
Gas	None.
Water	
Air	

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5.13 EUT Equipment/Cabling Information

EUT Port	Connected To	Location	Length	Shielded / Unshielded
J1772 cable	EV simulator	Primary exterior cable	12-25 ft	unshielded

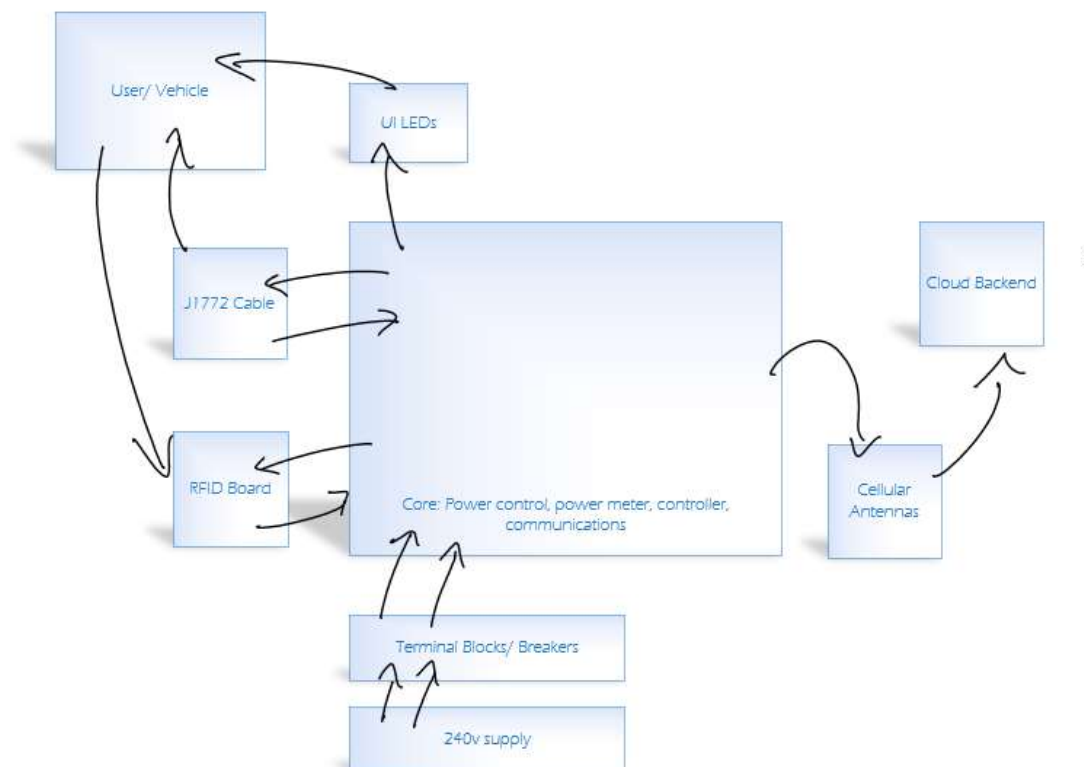
5.14 Monitoring of EUT during Testing

During testing, line voltage is applied along the J1772 connector as controlled by safety features. The vehicle is also notified of maximum current draw via PWM.

5.15 EUT Configuration

Configuration	Description
EV supplied at maximum current	Power applied along EV cables
Notes	All configurations are the same except as noted above

5.16 Block Diagram



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--- Ende des Prüfberichts / End of Test Report ---