TEST REPORT

Applicant Name :	Zeeva International Limited
Address :	Suite 1007B, 10th Floor, Exchange Tower, 33 Wang Chiu Road, Kowloon Bay, Hong Kong
Report Number :	SZNS211119-59683E-RF-00
FCC ID:	2ADM5-ET-0099-27

Test Standard (s)

FCC PART 15.227

Sample Description

Product Type:	RC SPEEDBOAT AST
Model No.:	ET-0099
Multiple Model(s) No.:	N/A
Trade Mark:	N/A
Date Received:	2021/11/19
Date of Test:	2022/01/12~2022/01/27
Report Date:	2022/01/27

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Fan Yang
EMC Engineer

Approved By:

Robert Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Test Frequency	27.145MHz
Antenna Specification*	3.0 dBi (provided by the applicant)
Voltage Range	DC 4.5V from battery
Sample serial number	SZNS211119-59683E-RF-S1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
SKU	Blue: 5155018
UPC	Blue: 1922347900081

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules.

The objective is to determine the compliance of EUT with FCC rules, section 15.203, 15.205, 15.209, 15.215 and 15.227.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
Conducted Emissions	AC Mains	2.72 dB
Emissions, Radiated	30MHz - 1GHz	4.28dB
	1GHz- 18GHz	4.98dB

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical mode.

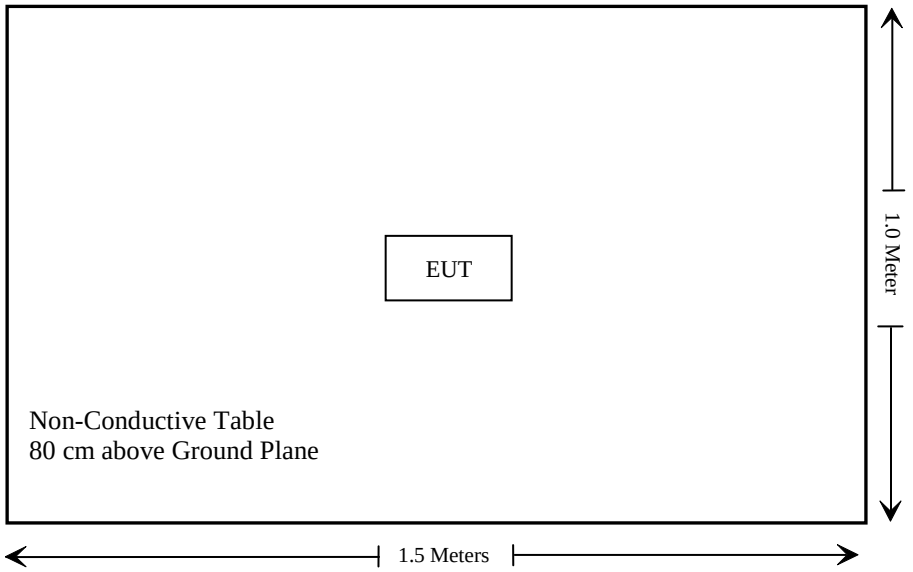
EUT Exercise Software

No exercise software was used.

Equipment Modifications

No modifications.

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna requirement	Compliant
§15.207	Conducted Emissions	Not Applicable
§15.205, §15.209, §15.227(a), §15.227(b)	Field Strength and Restricted Band Emissions	Compliant
§15.215(c)	20dB Emission Bandwidth	Compliant

Not Applicable: The EUT is powered by battery.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
SCHWARZBECK	LOOP ANTENNA	FMZB1516	1516131	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Antenna Connector Construction

The EUT has an integral antenna arrangement, which was permanently attached and the antenna gain is 3.0dBi; fulfill the requirement of this section. Please refer to EUT photos.

Result: Compliant.

FCC §15.205, §15.209, §15.227(a), §15.227 (b) – FIELD STRENGTH AND RESTRICTED BAND EMISSIONS

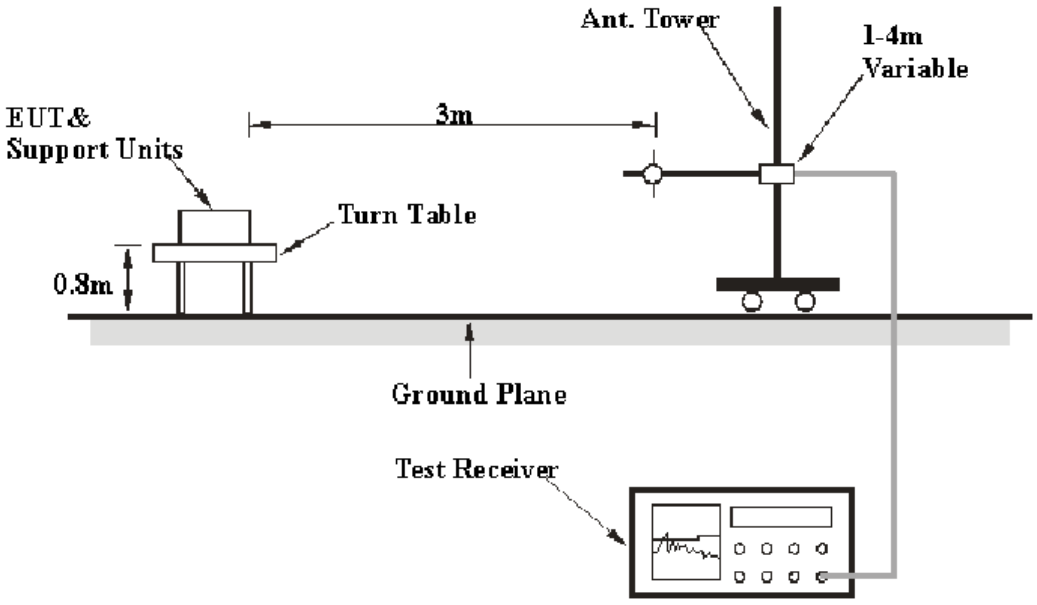
Applicable Standard

According to FCC §15.227 (a), the field strength if any emission within this band shall not exceed 10,000 microvolts/meter at 3 meters.

(b) The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in §15.209.

EUT Setup

30MHz-1GHz



The radiated emission tests were performed in the 3 meters, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part 15.205 and 15.209 and 15.227 limits.

For Below 30MHz

According to ANSI C63.10-2013, Clause 6.4.6, the lowest height of the magnetic antenna shall be 1 m above the ground and shall be positioned at the specified distance from the EUT. When the EUT contains a loop antenna that can only be placed in a vertical axis, normal measurements shall be made aligning the measurement antenna along the site axis, and then orthogonal to the axis. For each measurement antenna alignment, the EUT shall be rotated through 0 °to 360 °on a turntable

EMI Test Receiver Setup

The system was investigated from 9 kHz to 1000MHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Correction Factor
Correction Factor = Antenna Loss + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Data

Environmental Conditions

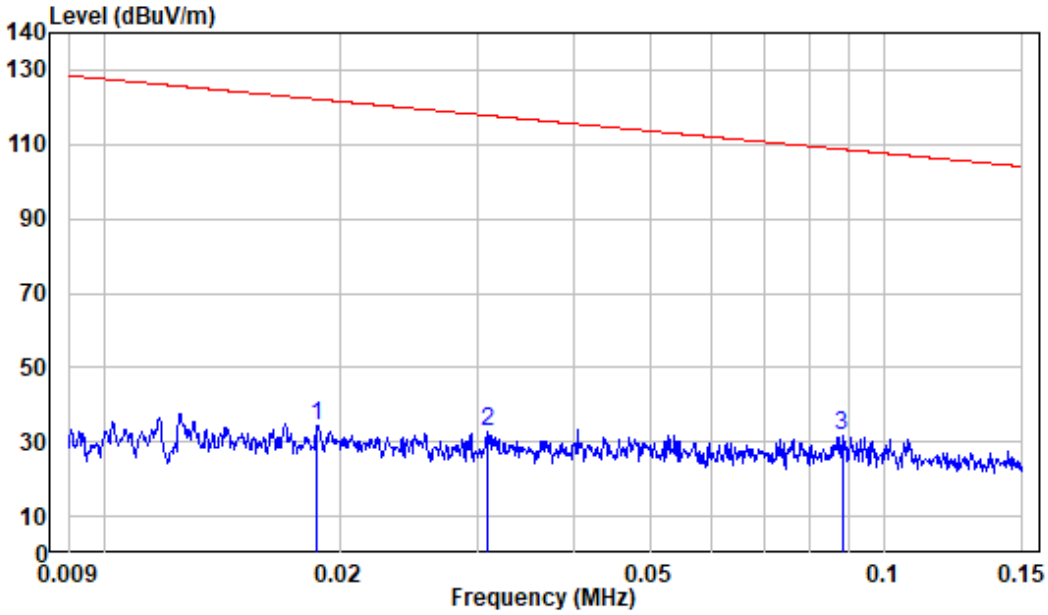
Temperature:	21 ℃
Relative Humidity:	62 %
ATM Pressure:	101.0 kPa

Testing was performed by Chao Mo on 2022-01-12.

Test mode: Transmitting (*Scan with X-AXIS, Y-AXIS, Z-AXIS, the worst case was Y-AXIS which was recorded*)

9 kHz~30MHz:

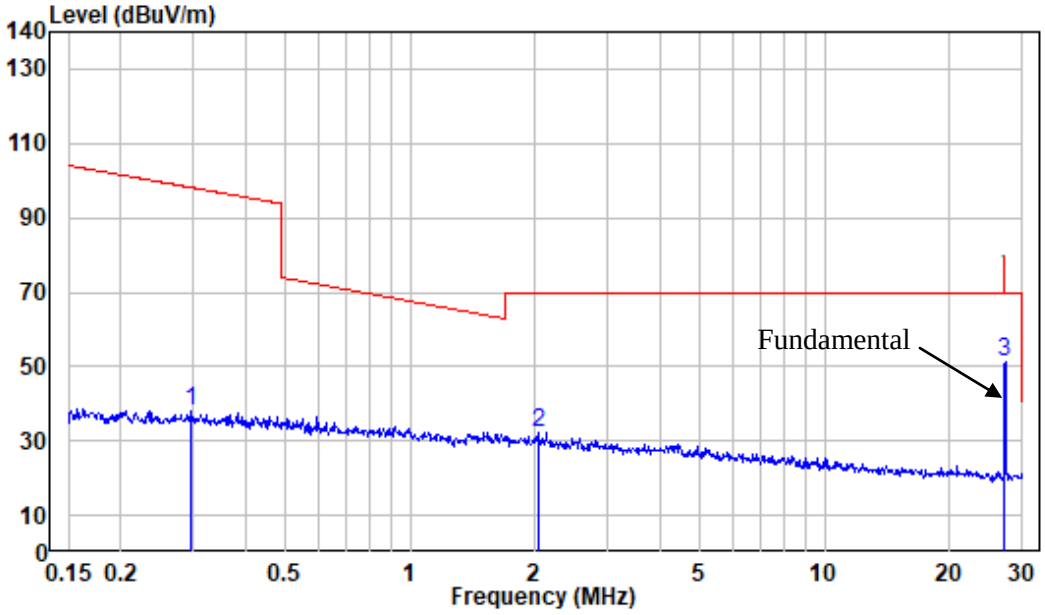
Worst case (Y Axis) was recorded in the report.



Site : chamber
Condition: 3m
Job No. : SZNS211119-59683E-RF
Test Mode: Transmission
Pol : Y

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.019	-11.65	46.00	34.35	122.14	-87.79	Peak
2	0.031	-11.63	44.45	32.82	117.79	-84.97	Peak
3	0.088	-11.57	43.40	31.83	108.70	-76.87	Peak

Note: PK detector data compliance with the QP detector limit for the spurious emission test.



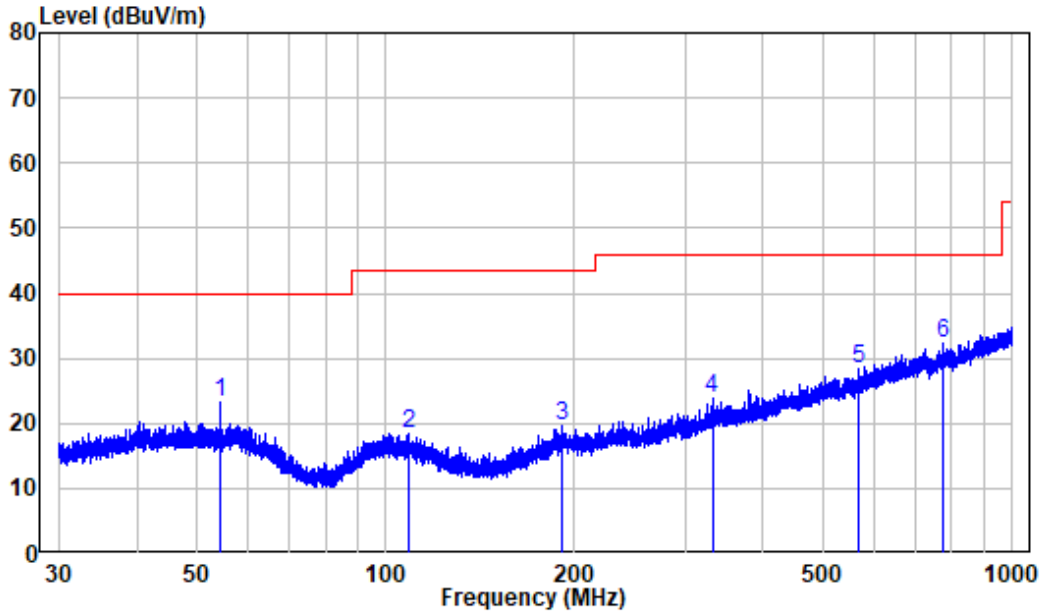
Site : chamber
Condition: 3m
Job No. : SZNS211119-59683E-RF
Test Mode: Transmission
Pol : Y

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.297	-11.82	49.78	37.96	98.15	-60.19	Peak
2	2.033	-11.34	43.34	32.00	69.54	-37.54	Peak
3	27.145	-9.97	61.45	51.48	80.00	-28.52	Peak

Note: PK detector data compliance with the average and QP detector limit for the spurious emission test.

30 MHz ~ 1GHz

Horizontal

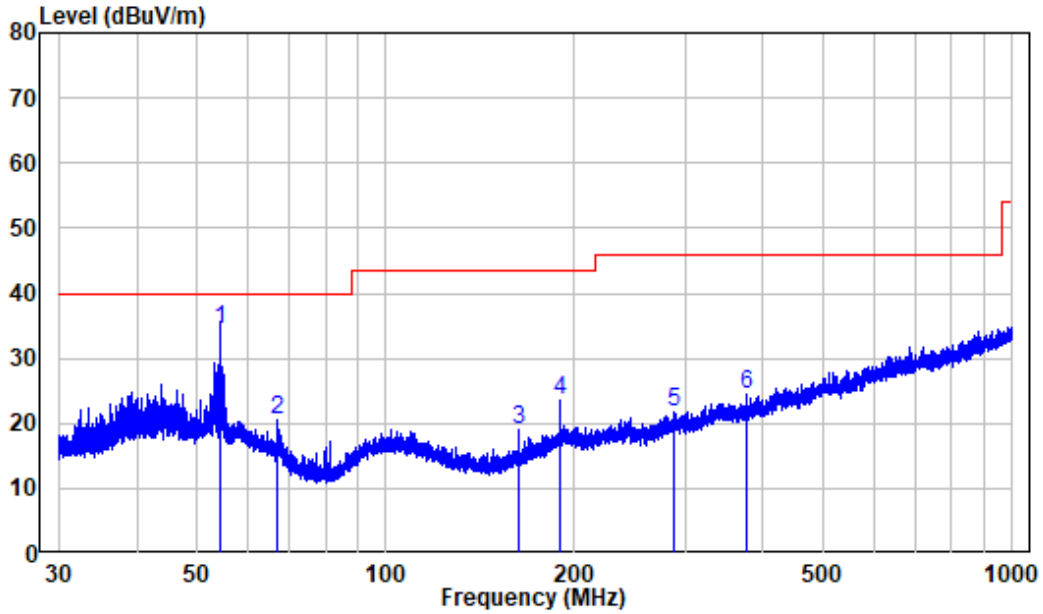


Site : chamber
Condition: 3m Horizontal
Job No. : SZNS211119-59683E-RF
Test Mode: Transmission

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.285	-10.33	33.71	23.38	40.00	-16.62	Peak
2	108.647	-11.98	30.48	18.50	43.50	-25.00	Peak
3	190.906	-11.43	31.09	19.66	43.50	-23.84	Peak
4	331.791	-7.86	31.68	23.82	46.00	-22.18	Peak
5	570.110	-3.85	32.16	28.31	46.00	-17.69	Peak
6	776.537	0.05	32.21	32.26	46.00	-13.74	Peak

Note: PK detector data compliance with the QP detector limit for the spurious emission test.

Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : SZNS211119-59683E-RF
Test Mode: Transmission

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	54.261	-10.33	44.70	34.37	40.00	-5.63	QP
2	67.173	-13.44	34.08	20.64	40.00	-19.36	Peak
3	162.896	-14.29	33.31	19.02	43.50	-24.48	Peak
4	189.988	-11.59	35.21	23.62	43.50	-19.88	Peak
5	288.622	-9.35	31.21	21.86	46.00	-24.14	Peak
6	376.433	-7.24	31.80	24.56	46.00	-21.44	Peak

Note: PK detector data compliance with the QP detector limit for the spurious emission test.

Result: Compliant.

FCC §15.215(c) - 20dB EMISSION BANDWIDTH

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

Per ANSI C63.10-2013 §6.4 & §6.9.

Test Data

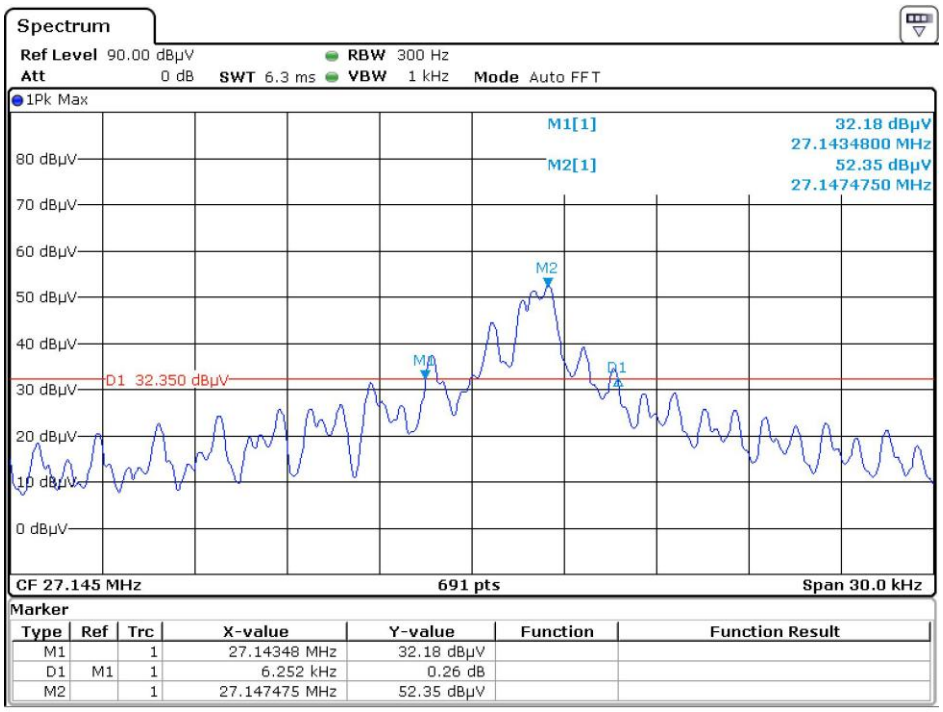
Environmental Conditions

Temperature:	30 ℃
Relative Humidity:	58 %
ATM Pressure:	101.0 kPa

Testing was performed by Fan Yang on 2022-01-27.

Test Mode: Transmitting

Please refer to the following plots.



F_L(MHz)	F_H (MHz)	Permitted frequency range(MHz)	Result
27.14348	27.149732	26.96-27.28	Compliant

******END OF REPORT******