

RF TEST REPORT

FCC ID: 2AQSK-LR03

Test Report No.....: RF260513002-03-001

Product(s) Name.....: LORA TRACKER

Model(s).....: LR03

Trade Mark.....: BSJ

Applicant.....: HuiZhou BoShiJie Technology CO.,Ltd

Address.....: No.1, Huifeng West three road, Zhongkai Hi-tech Zone, Huizhou
City, China

Receipt Date.....: 2026.05.14

Test Date.....: 2026.05.18 ~ 2026.05.28

Issued Date.....: 2026.05.29

Standards.....: 47 CFR FCC Part 15, Subpart C(Section 15.249)
ANSI C63.10:2020

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

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History of the test report

Original Report Issue Date: 2026.05.29

- No additional attachment
- Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General information

1.1. Basic information of EUT

Sample No.	POC260513002-S001
Product name	LORA TRACKER
Model name	LR03
Trade mark	BSJ
Power supply	DC 9-90V or DC 3.7V from battery
Operation Frequency	922 MHz
Modulation	LoRa
Antenna Designation	FPC antenna
Antenna gain	1.57dBi
Field Strength	93.02dBuV/m@3m
Applicant	HuiZhou BoShiJie Technology CO.,Ltd No.1, Huifeng West three road, Zhongkai Hi-tech Zone, Huizhou City, China
Manufacturer	HuiZhou BoShiJie Technology CO.,Ltd No.1, Huifeng West three road, Zhongkai Hi-tech Zone, Huizhou City, China

Note: For more detailed features description, please refer to the User manual.

2. Measured equipment list

2.1. Test facility

Company:	Shenzhen Haiyun Standard Technical Co., Ltd.
Address:	No. 110, 111, 112, 113, 115, 116, Block B, Jinyuan business Building, No. 302, Xixiang Avenue, Laodong Community, Xixiang Street, Bao'an District, Shenzhen P.R.C.
CNAS Registration Number:	CNAS L18252
CAB identifier:	CN0145
FCC Designation Number	CN1340
Company Number	30427
A2LA Certificate Number:	6823.01

2.2. Test instruments list

Radiated Emissions							
No.	Equipment	Manufacturer	Type No.	Serial No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal. Due date (yyyy/mm/dd)
1	Test receiver	Rohde&Schwarz	ESU	100184	JLE011	2026/2/27	2027/2/26
2	Log periodic antenna	Schwarzbeck	VULB 9168	1151	JLE012	2025/4/12	2028/4/11
3	Low frequency amplifier	/	LNA 0920N	2014	JLE023	2026/2/27	2027/2/26
4	High frequency amplifier	Schwarzbeck	BBV 9718	9718-284	JLE024	2026/2/27	2027/2/26
5	Horn Antenna	SCHWARZBECK	BBHA 9120 D	02670	JLE028	2025/4/12	2028/4/11
6	Temp&Humidity Recorder	Meideshi	JR900	/	JLE021	2026/4/8	2027/4/7
7	Horn Antenna	SCHWARZBECK	BBHA 9170	9170#685	JLE029	2024/7/15	2027/7/14
8	Loop Antenna	SCHWARZBECK	FMZB151 9B	00029	JLE030	2024/7/15	2027/7/14
9	Broadband preamplifier	Schwarzbeck	BBV9721	9721-019	JLE025	2026/2/27	2027/2/26
10	Test software	Farad Technology Co., Ltd	EZ-EMC Ver.TW-03A2				
RF Conducted Emission							
1	MXA Signal Analyzer	Keysight	N9010A	MY514401 58	JLE087	2025/9/15	2026/9/14

2.3. Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 102\text{kHz}$
Power Spectral Density	$\pm 0.243\text{dB}$
Conducted Spurious Emission	$\pm 0.743\text{dB}$
RF power conducted	$\pm 1.328\text{dB}$
Conducted emission(9kHz~30MHz) AC main	$\pm 2.68\text{dB}$
Radiated emission(9kHz~30MHz)	$\pm 3.50\text{dB}$
Radiated emission (30MHz~1GHz)	$\pm 4.20\text{dB}$
Radiated emission (1GHz~18GHz)	$\pm 5.10\text{dB}$
Radiated emission (18GHz~40GHz)	$\pm 5.26\text{dB}$

3. Test system information

3.1. Test result summary

47 CFR FCC Part 15, Subpart C(Section 15.249)			
Test item	Standard(s) Section	Results	Remarks
AC Power Conducted Emission	15.207(a)	---	N/A
Radiated Emissions	15.205; 15.209; 15.249	Pass	Meet the requirement of the limit
Bandwidth	15.215(c)	Pass	Meet the requirement of the limit
Antenna requirement	15.203	Compliance	Note2
Note: 1. "N/A" denotes test is not applicable in this test report; The EUT is powered by DC, so it is not applicable to this test item. 2. According to the manufacturer declared, the EUT has one FPC antenna arrangement which was permanently attached.			

3.2. Description of test mode

Operating mode	
Test mode 1	922MHz Transmitting

3.3. Power setting and test software

Power setting	0
Test software	SSCOM5.13.1

3.4. Description of support units

No.	Equipment	Model	Manufacturer	Series No
/	/	/	/	/

4. Summary of Test Projects

4.1. Conducted emission test

4.1.1. Limit

FREQUENCY (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	59 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

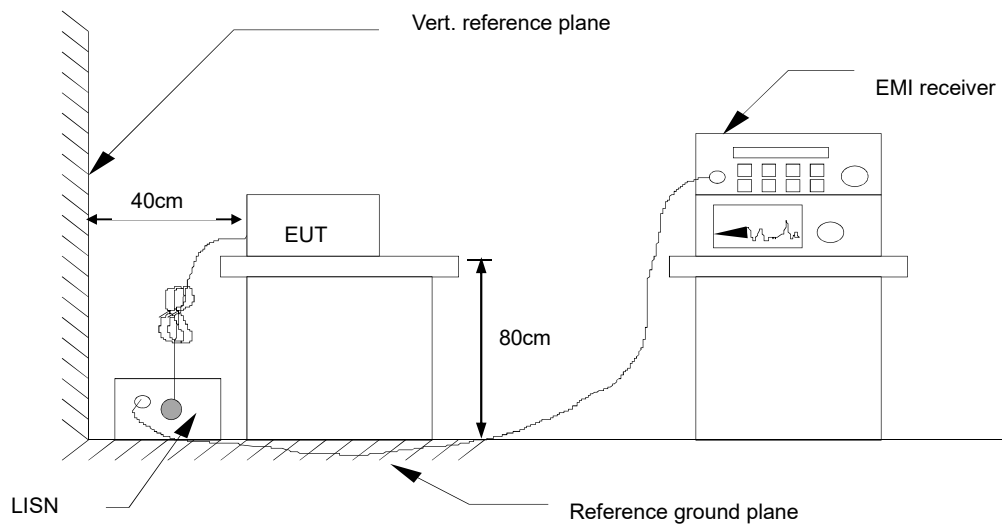
Note:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.1.2. Test procedures

1. Test limits and test methods reference ANSI C63.10:2020.
2. The EUT was placed 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (AMN). All other support equipment powered from additional AMN. The AMN provide 50 Ohm/ 50 μ H of coupling impedance for the measuring instrument.
3. Interconnecting cables that hang closer than 0.4 m to the ground plane shall be folded back and forth in the center forming a bundle 0.3 m to 0.4 m long.
4. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance.
5. The frequency range from 150 kHz to 30 MHz was searched.
6. Actual test configuration, please refer to the related Item – EUT Test Photos.
7. AAN, CP or CVP at least 0.8 m from nearest part of EUT chassis.
8. The thickness of the insulation shall not be more than 150 mm.

4.1.3. Test set-up



For the actual test configuration, please refer to the related item – Photographs of the test configuration

4.1.4. Test results

N/A

4.2. Radiated emission test

4.2.1. Limit

In addition to the provisions of § 15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

Note: (1) Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges

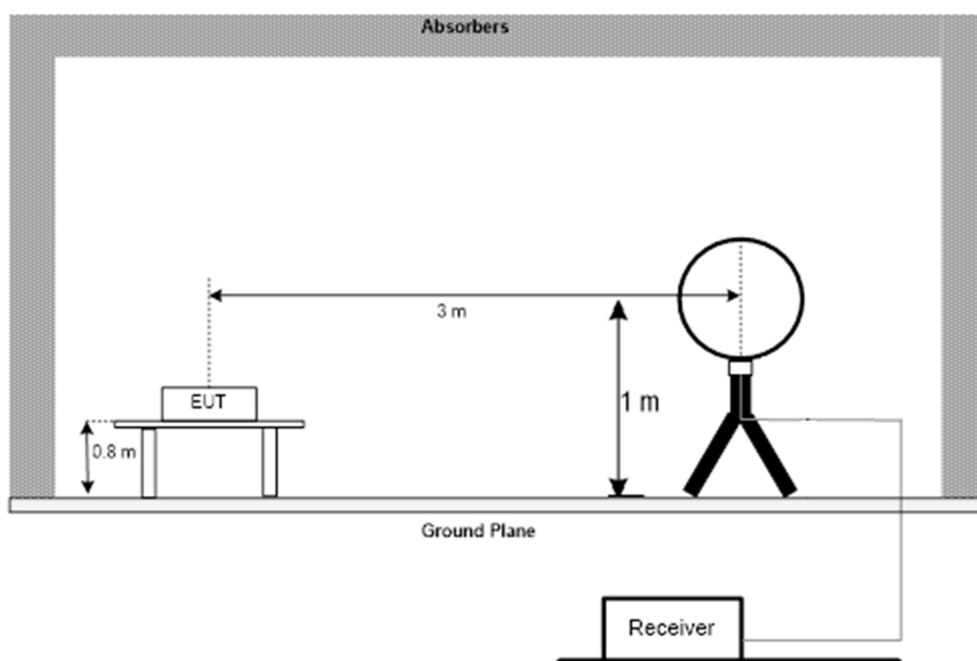
4.2.2. Test procedures

1. Test limits and test methods reference ANSI C63.10:2020.
2. Below 1GHz, the measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 m above the ground at a 3 m semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
3. Above 1GHz, the measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 m semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
5. The initial step in collecting radiated emission data is a receiver peak detector mode.
6. Pre - scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

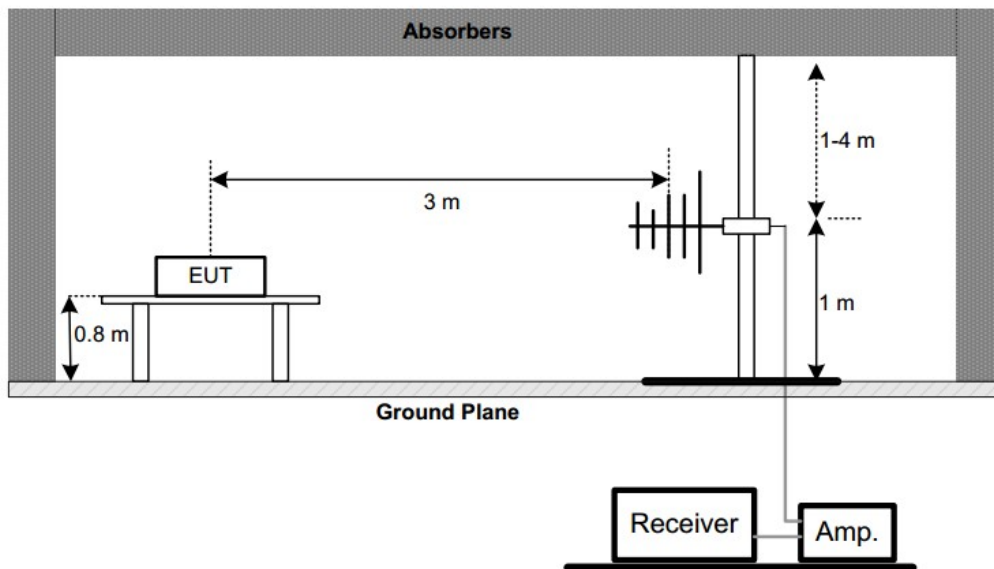
7. For above 1GHz, If the emission level of the EUT In “Peak Detection” mode is 20 dB lower than the “Average” limit (means that the emission level in “Peak Detection” mode also complies with the limit in “Average Mode”), testing will be stopped and “Peak” values of the EUT will be reported, otherwise, the emissions of the EUT will be measured in “Average Mode” again and then reported.
8. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn’t perform. (below 1GHz).
9. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn’t perform.(above 1GHz)

4.2.3. Test set-up

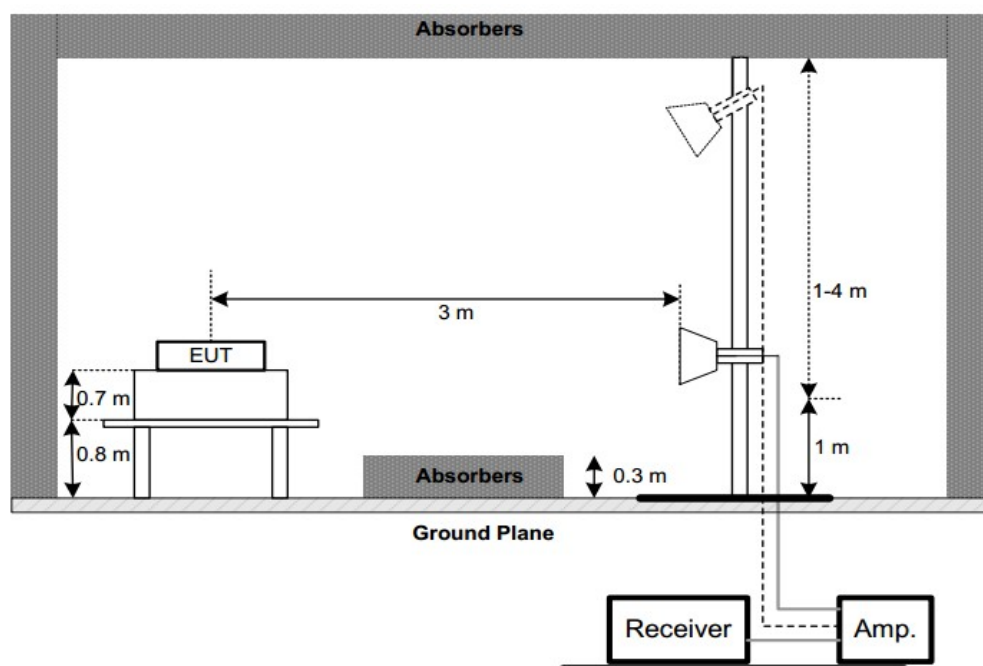
- 1) Radiated Emission Test Set-Up Frequency 9 kHz-30 MHz



2) Radiated Emission Test Set-Up Frequency 30 MHz-1000 MHz



3) Radiated Emission Test Set-Up Frequency Above 1 GHz



4.2.4. Test results

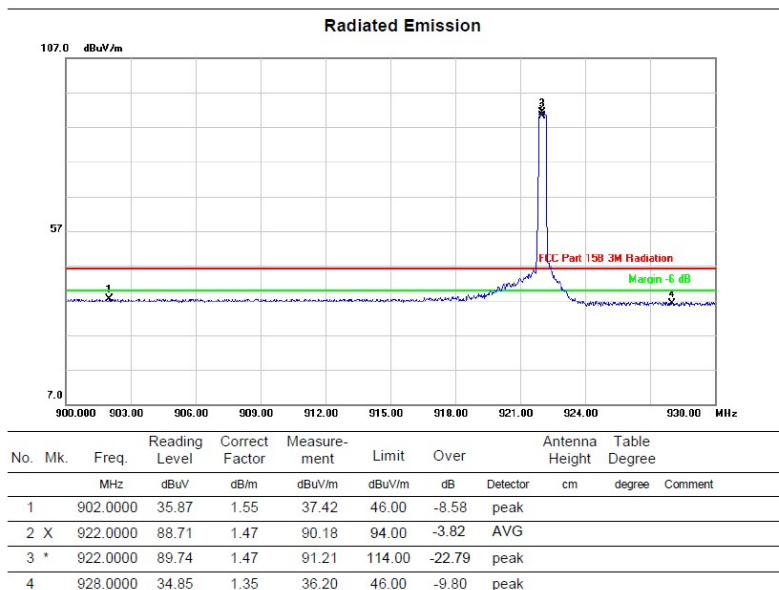
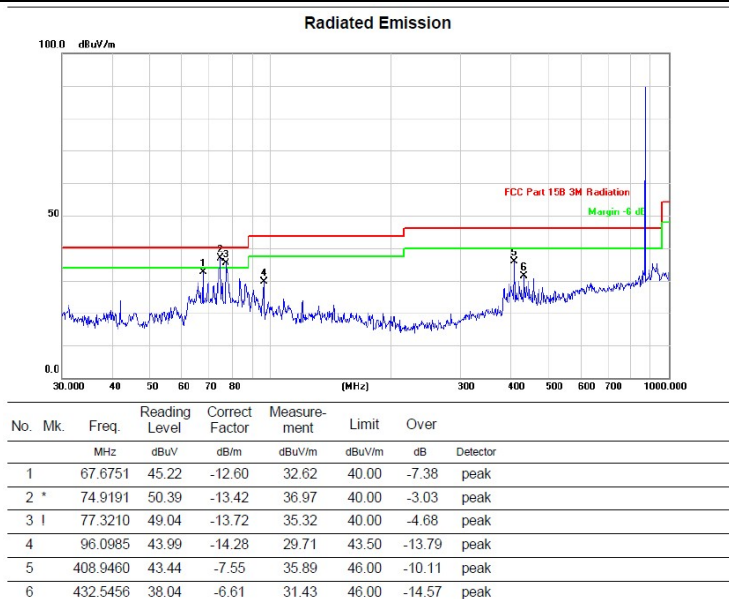
1) Radiated emission: 9kHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

2) Radiated emission: 30MHz-1GHz

Product Model	LR03	Location	3m chamber
Environmental Conditions	24.0°C, 52% RH	Test Mode	Mode 1
Antenna Pole	Vertical	RBW	120 kHz
Tested by	Keith Huang	Test Results	PASS
Test Date	2026-05-28		

Note: DC 90V



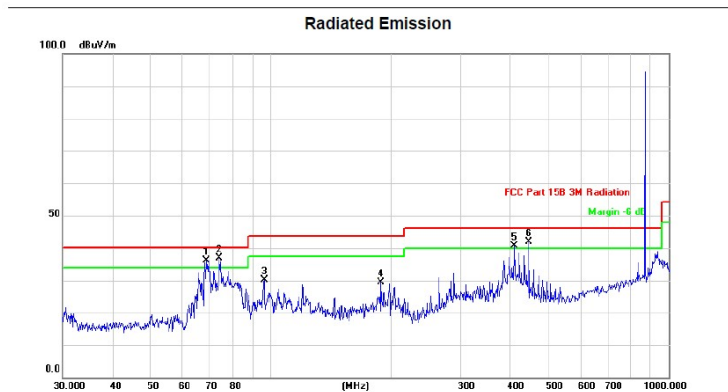
Note: 1.QP= Quasi-peak Reading.

2.The other emission levels were very low against the limit.

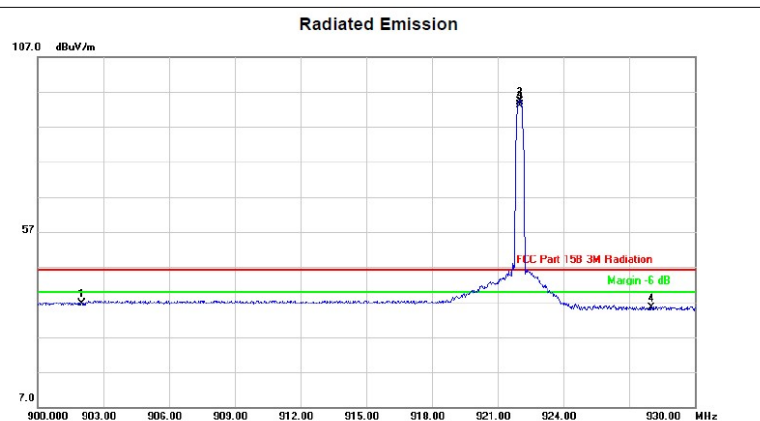
3. Measurement = Reading Level+Correct Factor, Over = Measurement- Limit

Product Model	LR03	Location	3m chamber
Environmental Conditions	24.0℃, 52% RH	Test Mode	Mode 1
Antenna Pole	Horizontal	RBW	120 kHz
Tested by	Keith Huang	Test Results	PASS
Test Date	2026-05-28		

Note: DC 90V



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	!	68.6310	48.70	-12.46	36.24	40.00	-3.76	peak
2	*	74.1351	50.64	-13.74	36.90	40.00	-3.10	peak
3		96.0985	44.41	-14.28	30.13	43.50	-13.37	peak
4		189.0743	41.86	-12.45	29.41	43.50	-14.09	peak
5	!	408.9460	48.28	-7.55	40.73	46.00	-5.27	peak
6	!	444.8514	48.29	-6.52	41.77	46.00	-4.23	peak



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		902.0000	35.06	1.55	36.61	46.00	-9.39	peak			
2	*	922.0000	92.74	1.47	94.21	114.00	-19.79	peak			
3	X	922.0000	91.55	1.47	93.02	94.00	-0.98	AVG			
4		928.0000	34.10	1.35	35.45	46.00	-10.55	peak			

Note: 1.QP= Quasi-peak Reading.

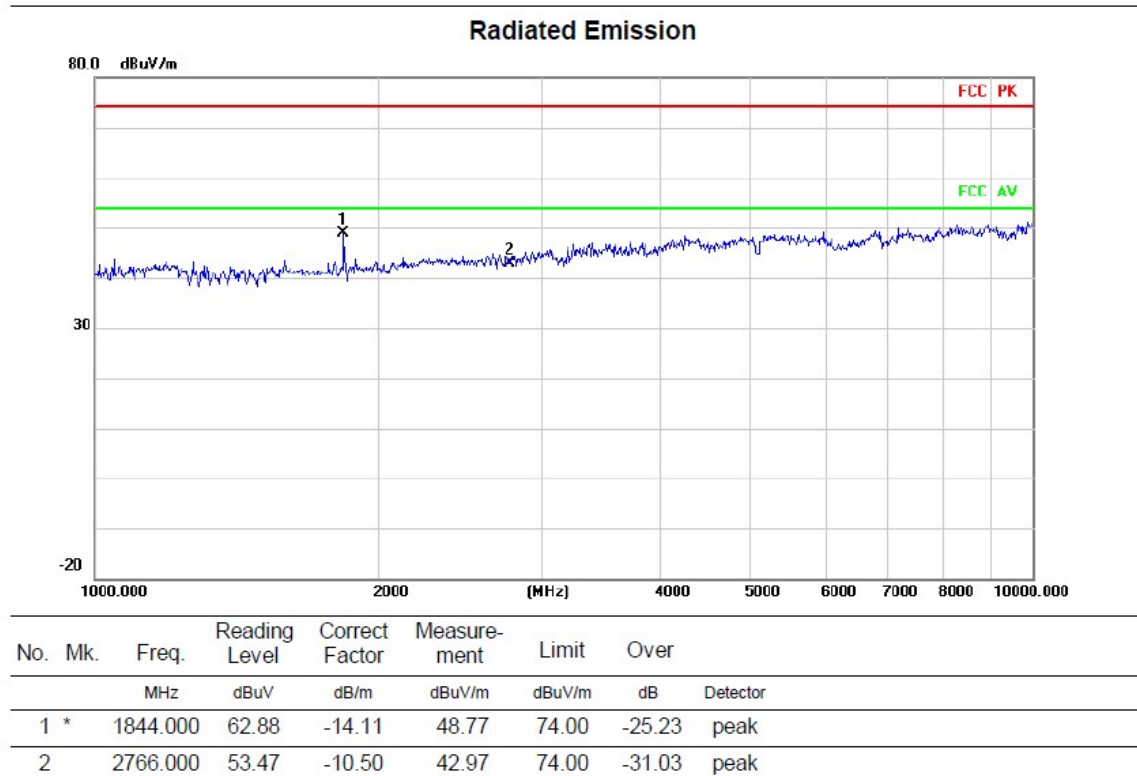
2.The other emission levels were very low against the limit.

3. Measurement = Reading Level+ Correct Factor, Over = Measurement- Limit

3) Radiated emission: Above 1GHz

Product Model	LR03	Location	3m chamber
Environmental Conditions	24.0°C, 52% RH	Test Mode	Mode 1
Antenna Pole	Vertical	RBW	1MHz
Tested by	Keith Huang	Test Results	PASS
Test Date	2026-05-28		

Note: DC 90V

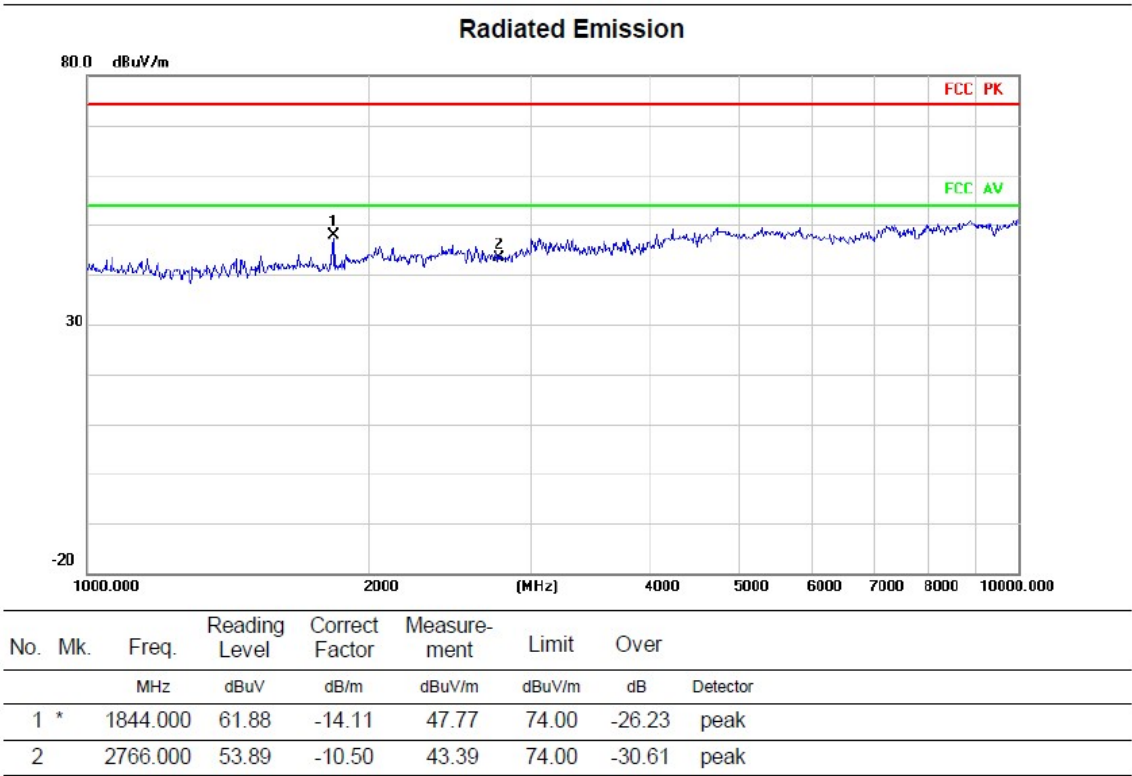


Note: 1. The other emission levels were very low against the limit.

2. Measurement = Reading Level+ Correct Factor, Margin = Limit- Measurement

Product Model	LR03	Location	3m chamber
Environmental Conditions	24.0℃, 52% RH	Test Mode	Mode 1
Antenna Pole	Horizontal	RBW	1MHz
Tested by	Keith Huang	Test Results	PASS
Test Date	2026-05-28		

Note: DC 90V



Note: 1. The other emission levels were very low against the limit.
 2. Measurement = Reading Level+ Correct Factor, Margin = Limit- Measurement

4.3. 20dB Bandwidth & 99% Bandwidth

4.3.1. Applicable Standard

FCC Part15 C Section 15.215

4.3.2. Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT shall be connected to the spectrum analyser, and the spectrum analyser is set as follow:

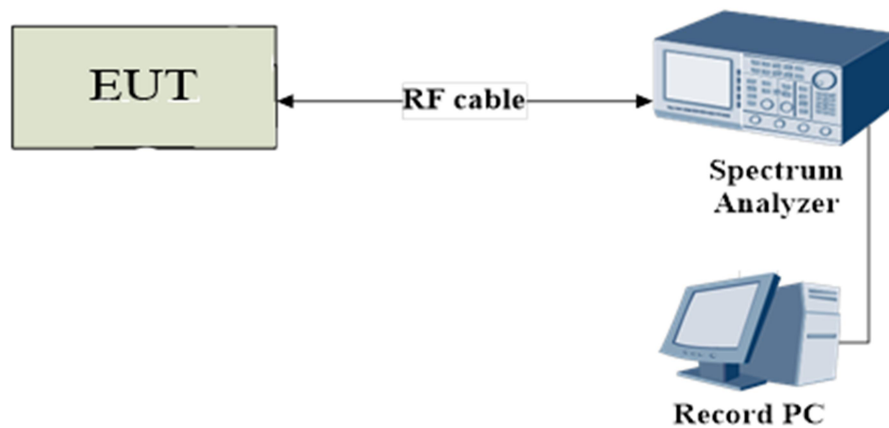
Centre Frequency	The centre frequency of the channel under test
RBW	1%-5% OCB
VBW	> 3*RBW
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) The EUT was programmed to be in continuously transmitting mode, Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -20dB bandwidth function of the spectrum analyser to measure the 20dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

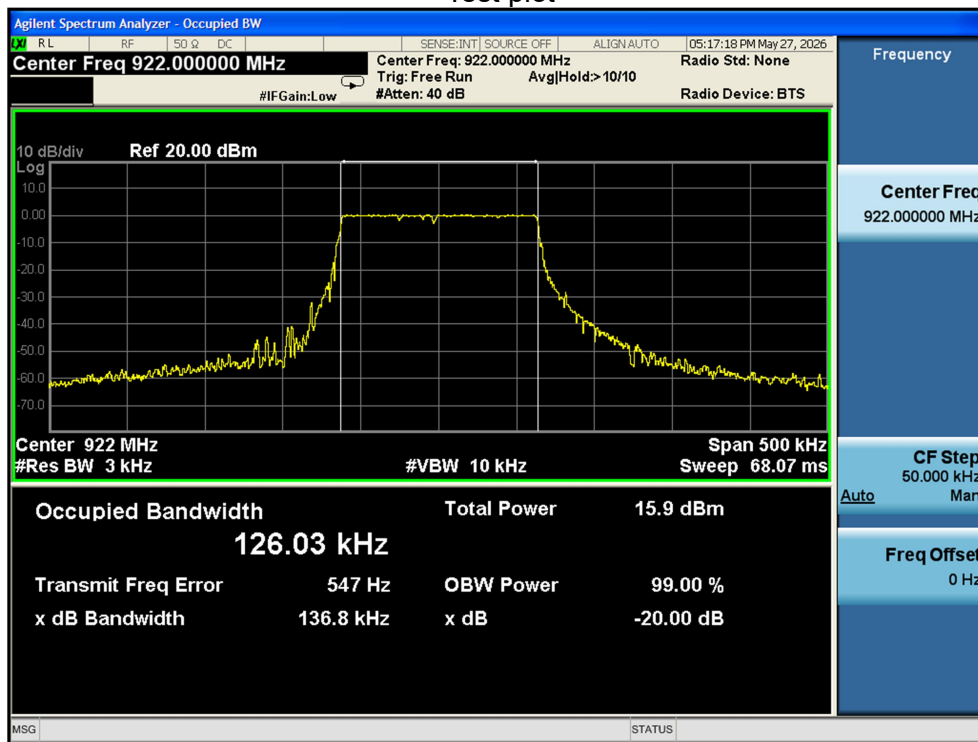
4.3.3. Test set-up



4.3.4. Test Result

Frequency(MHz)	20dB Bandwidth(kHz)	99% Occupied BW(kHz)
922	136.8	126.03

Test plot



Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

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(END OF REPORT)