

MPE TEST REPORT

Applicant	ID TECH
FCC ID	WQJ-VP6800B
Product	VP6800
Brand	ViVOpay
Model	IDV68-11111
Report No.	EFTA25020034-IE-01-M1V2
Issue Date	April 21, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 1.1310**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Wei Fangying

Approved by: Xu Kai

Eurofins TA Technology (Shanghai) Co., Ltd.

Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

Table of Contents

1	Test Laboratory	4
1.1	Notes of the Test Report.....	4
1.2	Test Facility.....	4
1.3	Testing Location.....	4
1.4	Laboratory Environment	4
2	Description of Equipment Under Test	5
3	Tune up and Antenna Gain	6
4	MPE Limit.....	7
5	RF Exposure Evaluation Result.....	9
ANNEX A: The EUT Appearance		12

Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	March 11, 2025
Rev.1	Add NFC.	April 11, 2025
Rev.2	Add description.	April 21, 2025
Note: This revised report (Report No.: EFTA25020034-IE-01-M1V2) supersedes and replaces the previously issued report (Report No.: EFTA25020034-IE-01-M1V1). Please discard or destroy the previously issued report and dispose of it accordingly.		

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

1.3 Testing Location

Company: Eurofins TA Technology (Shanghai) Co., Ltd.
Address: Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <https://www.eurofins.com/electrical-and-electronics>
E-mail: Kain.Xu@cpt.eurofinscn.com

1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment Under Test

Client Information

Applicant	ID TECH
Applicant address	10721 Walker Street, Cypress, California 90630
Manufacturer	ID TECH
Manufacturer address	10721 Walker Street, Cypress, California 90630

General Technologies

EUT Description			
Model	IDV68-11111		
SN	502F277060		
Hardware Version	REV.A		
Software Version	v1.00		
Frequency	Band	TX (MHz)	RX (MHz)
	Bluetooth	2400 ~ 2483.5	2400 ~ 2483.5
	Wi-Fi 2.4GHz	2400 ~ 2483.5	2400 ~ 2483.5
	NFC	13.56	13.56
Date of Sample Received	February 15, 2025		
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

3 Tune up and Antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by

Numeric gain (G)=10^(antenna gain/10)

Band	Maximum Tune up Power		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
Bluetooth LE	7.00	5.01	2.00	1.58
Wi-Fi 2.4GHz	27.00	501.19	2.00	1.58

Note: The Maximum Tune up Power value refer to the Module report (Report No.: RSHD200116001-00A, FCC ID: 2AC7Z-ESP32WROVERE, Grant date:04/13/2020).

4 MPE Limit

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm ²)
Wi-Fi 2.4GHz	1.000
Bluetooth	1.000

The Electric Field Strength for 1.34 ~ 300 MHz is 824/f. So

Band	E-field Strength Limit (V/m)
NFC	60.767

5 RF Exposure Evaluation Result

RF exposure evaluation method is based on KDB 447498 D01, this calculation is based on the conducted power, maximum power and antenna gain with provides the minimum separation distance. The formula shown below is from OET Bulletin 65 Edition 97-01 Per KDB 447498 D01:

$$S = PG / 4\pi R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

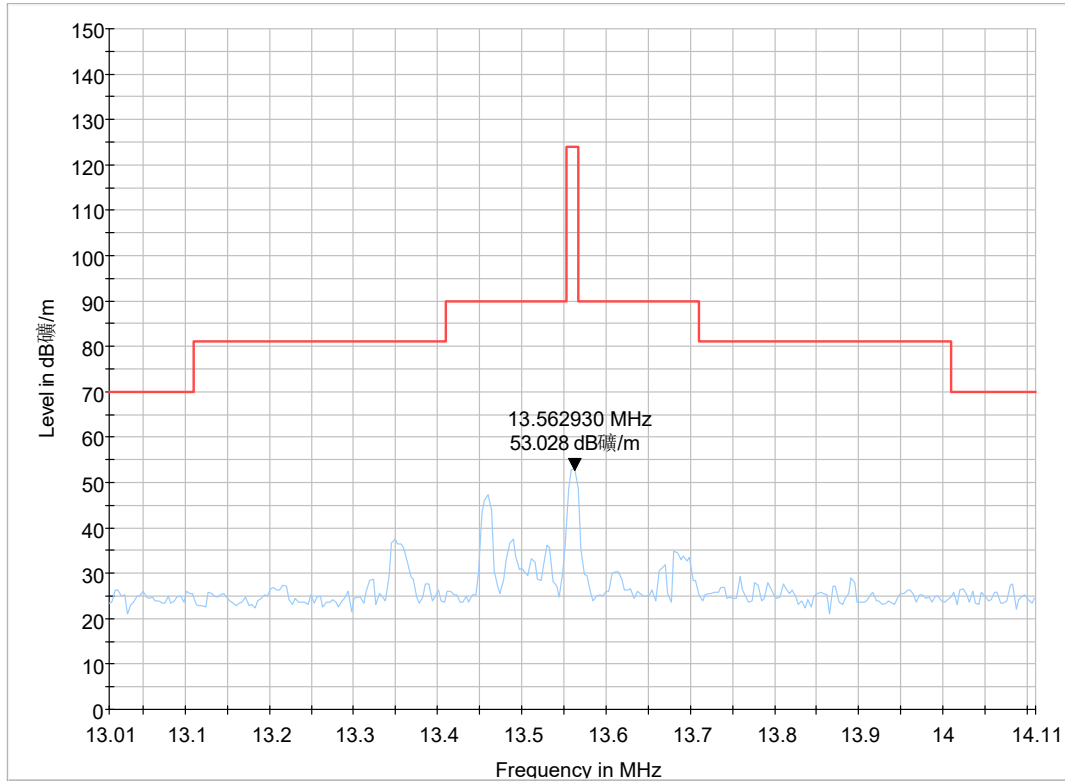
G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Maximum Tune up (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm ²)	Limit Value (mW/cm ²)	The MPE Ratio
Bluetooth LE	7.00	2.00	9.00	7.94	0.00	1.000	0.002
Wi-Fi 2.4GHz	27.00	2.00	29.00	794.33	0.16	1.000	0.158
Note: R = 20cm $\pi = 3.1416$ The MPE Ratio = Mac Result ÷ Limit Value							

NFC-A

A symbol (dB_{μV/m}) in the test plot below means (dB_{μV/m})

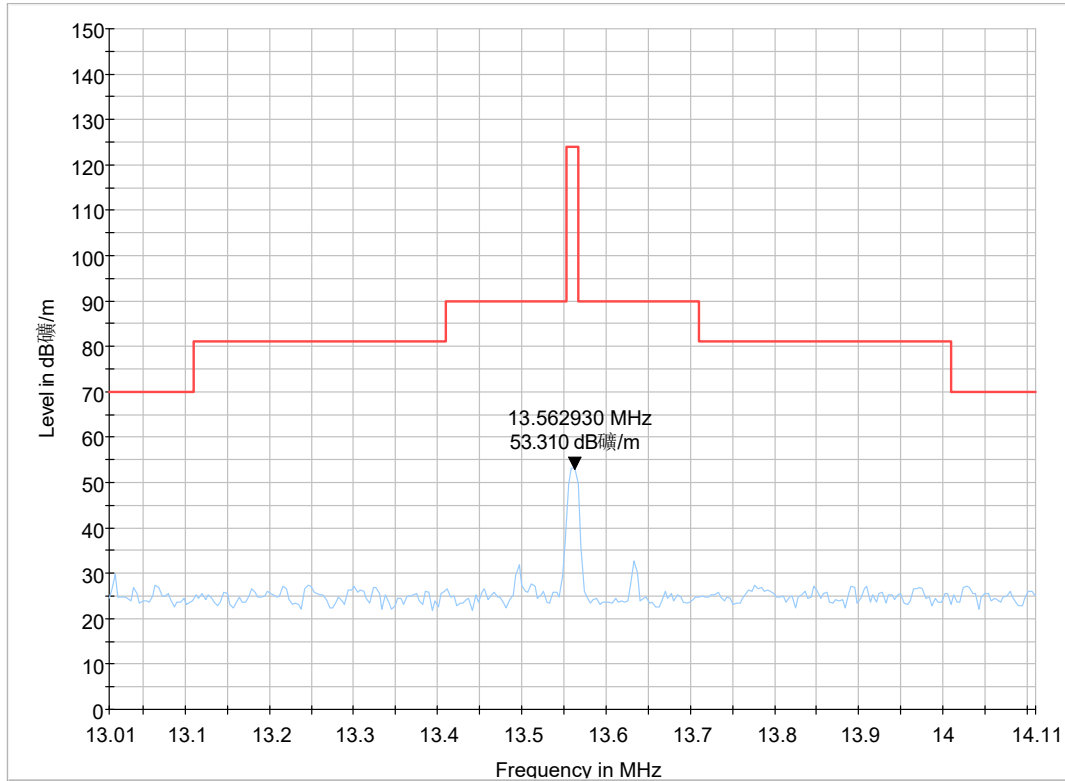


Note: Test data comes from RF report and please refer to the RF report for testing related information.

Frequency (MHz)	Max. E-field Strength @ 3m (dB _{μV/m})	Max. E-field Strength @ 20cm (dB _{μV/m})	Max. E-field Strength @ 20cm (V/m)	E-field Strength Limit (V/m)	Conclusion
13.563	53.028	76.55	0.0067	60.767	Pass
Note: Max. E-field Strength @ 20cm = Max. E-field Strength @ 3m + 20log (3m/0.2m) V/m=10(((dBuV/m)-120)/20)					

NFC-B

A symbol (dB μ V/m) in the test plot below means (dB μ V/m)



Note: Test data comes from RF report and please refer to the RF report for testing related information.

Frequency (MHz)	Max. E-field Strength @ 3m (dB μ V/m)	Max. E-field Strength @ 20cm (dB μ V/m)	Max. E-field Strength @ 20cm (V/m)	E-field Strength Limit (V/m)	Conclusion
13.563	53.310	76.832	0.0069	60.767	Pass
Note: Max. E-field Strength @ 20cm = Max. E-field Strength @ 3m + 20log (3m/0.2m) V/m=10(((dB μ V/m)-120)/20)					

Wi-Fi 2.4GHz/ Bluetooth LE antenna and NFC antenna can't transmit simultaneously.

So the simultaneous transmitting antenna pairs as below:

$$\text{TER} = \text{Wi-Fi 2.4GHz Antenna MPE ratio} + \text{Bluetooth LE Antenna MPE ratio} = 0.002 + 0.158 = 0.16 < 1$$

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

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