



# TEST REPORT

No.I22Z61292-EMC08

for

**BLU Products,Inc.**

**Smart Phone**

**Model Name: B1550VL**

**FCC ID: YHLBLUB1550VL**

with

**Hardware Version: V1.0**

**Software Version: BLU\_B1550VL\_V12.0.02.05.02.17\_Fsec**

**Issued Date: 2022-09-30**

**Note:**

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No. I22Z61291-EMC08

## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I22Z61292-EMC08	Rev.0	1st edition	2022-09-30



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## 1. SUMMARY OF TEST REPORT

### 1.1. Test Items

Description	Smart Phone
Model Name	B1550VL
Brand Name	BLU
Applicant's name	BLU Products, Inc.
Manufacturer's Name	BLU Products, Inc.

### 1.2. Test Standards

FCC Part 2/22/24/27	10-1-20 Edition
ANSI C63.26	2015
KDB971168 D01	v03r01

### 1.3. Test Result

All test items are pass. Please refer to "6 Summary of Test Results" for detail.

### 1.4. Testing Location

Address: No.18A, Kangding Street, Beijing Economic-Technology Development Area,  
Beijing, P. R. China 100176

### 1.5. Project Data

Testing Start Date: 2022-09-29

Testing End Date: 2022-09-30

### 1.6. Signature

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Wang Xue  
(Prepared this test report)

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Zhang Ying  
(Reviewed this test report)

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Zhang Xia  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: BLU Products, Inc.  
Address /Post: 10814 NW 33rd St # 100 Doral, FL 33172, USA  
Contact Person: Zeng wei  
Contact Email: zwei@ctasiasz.com  
Telephone: 305.715.7171  
Fax: 305.436.8819

### **2.2. Manufacturer Information**

Company Name: BLU Products, Inc.  
Address /Post: 10814 NW 33rd St # 100 Doral, FL 33172, USA  
Contact Person: Zeng wei  
Contact Email: zwei@ctasiasz.com  
Telephone: 305.715.7171  
Fax: 305.436.8819



### **3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT**

#### **(AE)**

##### **3.1. About EUT**

Description	Smart Phone
Model Name	B1550VL
FCC ID	YHLBLUB1550VL
EN-DC Bands	DC_2A_n2A,DC_5A_n2A,DC_13A_n2A,DC_66A_n2A, DC_2A-5A_n2A ,DC_2A-13A_n2A,DC_5A-66A_n2A ,DC_13 A-66A_n2A,DC_2A_n5A,DC_66A_n5A,DC_2A-2A_n5A, DC_2A-66A_n5A ,DC_66A-66A_n5A,DC_2A_n66A ,DC_5A_ n66A,DC_13A_n66A,DC_66A_n66A,DC_2A-5A_n66A ,DC_2 A-13A_n66A,DC_5A-66A_n66A,DC_13A-66A_n66A, DC_2A_n77A,DC_5A_n77A,DC_13A_n77A,DC_66A_n77A
Antenna	Integrated
Extreme vol. Limits	3.6V to 4.4V (nominal: 3.85V)
Condition of EUT as received	No abnormality in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of SAICT.

##### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>SN or IMEI</b>	<b>HW Version</b>	<b>SW Version</b>	<b>Date of receipt</b>
UT47a	350547790009621	V1.0	BLU_B1550VL_V12.0.02.05.02.17_Fsec	2022-08-09

\*EUT ID: is used to identify the test sample in the lab internally.

##### **3.3. Internal Identification of AE used during the test**

<b>AE ID*</b>	<b>Description</b>
AE1	Battery

\*AE ID: is used to identify the test sample in the lab internally.

##### **3.4. General Description**

The Equipment Under Test (EUT) is a model Mobile Phone with integrated antenna. It consists of normal options: lithium battery, charger. Manual and specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the Client.



#### **4. REFERENCE DOCUMENTS**

The following documents listed in this section are referred for testing.

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-19 Edition
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-19 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-20 Edition
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-19 Edition
ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
KDB971168 D01	Power Meas License Digital Systems	v03r01

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber 2 / Fully-anechoic chamber 3** (10 meters×6.7 meters×6.15 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	>2 MΩ
Ground system resistance	< 0.5Ω
Normalised site attenuation (NSA)	<±3.5 dB, 3 m distance
Site voltage standing-wave ratio ( $S_{VSWR}$ )	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz





## 6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	F	Fail
	NA	Not applicable
	NM	Not measured

Note1: The test results provided in this report represent the worst case configuration.

n2

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Emission Limit	2.1051/24.238	A.1	P

n5

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Emission Limit	2.1051/22.917	A.1	P

n66

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Emission Limit	2.1051/27.53	A.1	P



## **7. STATEMENT**

Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

**8. TEST EQUIPMENTS UTILIZED**

<b>NO.</b>	<b>Description</b>	<b>TYPE</b>	<b>Manufacture</b>	<b>series number</b>	<b>CAL DUE DATE</b>
1	Test Receiver	E4440A	MY48250642	Agilent	2023-03-10
2	EMI Antenna	VULB9163	9163-482	Schwarzbeck	2022-11-16
3	EMI Antenna	LB-7180-NF	J203001300005	A-INFO	2023-02-23
4	EMI Antenna	3117	00058889	ETS-Lindgren	2022-11-07
5	Signal Generator	SMF100A	101295	R&S	2022-12-11
6	Universal Communication Tester	MT8821C	6262257899	Anritsu	2023-05-15
7	Universal Communication Tester	MT8000A	6262261933	Anritsu	2023-05-15

## **ANNEX A: MEASUREMENT RESULTS**

### **A.1 Emission Limit**

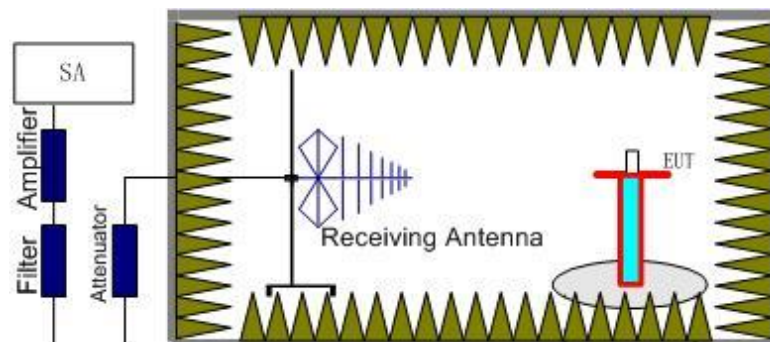
#### **A.1.1 Measurement Method**

The measurements procedures in TIA-603E-2016 are used. This measurement is carried out in fully anechoic chamber FAC-3.

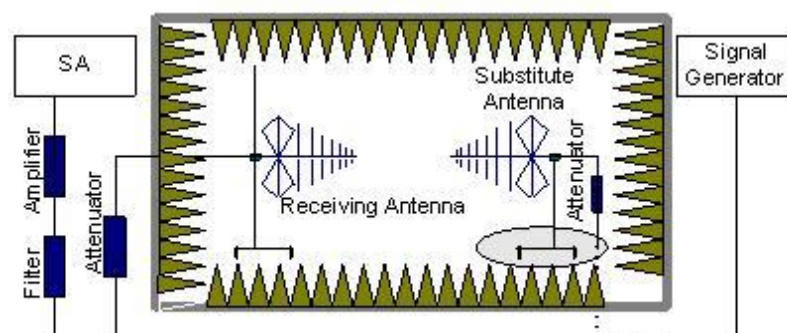
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier. The resolution bandwidth is set 1MHz. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of each NR Band.

#### **The procedure of radiated spurious emissions is as follows:**

1. EUT was placed on a 1.5-meter-high non-conductive stand at a 3-meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360 and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the

reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power ( $P_{Mea}$ ) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded ( $P_r$ ). The power of signal source ( $P_{Mea}$ ) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss ( $P_{pl}$ ) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain ( $G_a$ ) should be recorded after test.  
An amplifier should be connected in for the test.  
The Path loss ( $P_{pl}$ ) is the summation of the cable loss and the gain of the amplifier.  
The measurement results are obtained as described below:  
Power (EIRP) =  $P_{Mea} - P_{pl} + G_a$
5. This value is EIRP since the measurement is calibrated using an antenna of known gain (unit: dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $ERP = EIRP - 2.15dB$ .

#### A.1.2 Measurement Limit

NR Band 2/25: Part 24.238 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power ( $P$ ) by a factor of at least  $43 + 10 \log(P)$  dB.

NR Band 4/66: Part 27.53(h) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power ( $P$ ) by a factor of at least  $43 + 10 \log(P)$  dB.

NR Band 5/26(824MHz~849MHz): Part 22.917 specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power ( $P$ ) by a factor of at least  $43 + 10 \log(P)$  dB.

#### A.1.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of each NSA Band. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of each ENDC Band into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this. The range of evaluated frequency is from 30MHz to 26GHz. All combinations of ENDC bands have been tested, only the worst cases are reported.

**NSA, LB66+n2, BPSK , CH 370500**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3705.01	-37.39	6.42	8.49	-35.32	-13.00	22.32	V
5557.01	-36.51	7.19	10.59	-33.11	-13.00	20.11	H
6981.01	-41.93	8.15	11.58	-38.50	-13.00	25.50	H
7410.01	-37.98	8.14	12.09	-34.03	-13.00	21.03	H
8726.01	-47.61	8.44	13.05	-43.00	-13.00	30.00	V
11118.00	-45.54	9.76	13.18	-42.12	-13.00	29.12	H

**NSA, LB66+n2, BPSK , CH 376000**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3760.01	-36.12	6.26	8.56	-33.82	-13.00	20.82	V
5640.01	-30.90	7.27	10.57	-27.60	-13.00	14.60	H
6983.01	-43.47	8.17	11.58	-40.06	-13.00	27.06	V
7521.01	-36.09	8.31	12.22	-32.18	-13.00	19.18	V
8727.01	-44.58	8.44	13.05	-39.97	-13.00	26.97	V
11282.00	-42.94	9.89	13.14	-39.69	-13.00	26.69	V

**NSA, LB66+n2, BPSK , CH 381500**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3815.01	-39.26	6.09	8.64	-36.71	-13.00	23.71	V
5722.01	-26.51	7.30	10.56	-23.25	-13.00	10.25	H
6981.01	-41.48	8.15	11.58	-38.05	-13.00	25.05	H
7630.01	-35.08	8.11	12.30	-30.89	-13.00	17.89	H
9543.01	-50.91	9.39	13.36	-46.94	-13.00	33.94	H
11448.00	-44.42	9.94	13.11	-41.25	-13.00	28.25	H



**NSA, LB2+n5, BPSK, CH 165300**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3305.75	-49.72	5.29	7.73	2.15	-49.43	-13.00	36.43	V
3759.82	-51.67	6.26	8.56	2.15	-51.52	-13.00	38.52	V
4132.41	-53.86	6.05	9.03	2.15	-53.03	-13.00	40.03	H
5640.87	-31.49	7.27	10.57	2.15	-30.34	-13.00	17.34	H
7520.53	-28.08	8.31	12.22	2.15	-26.32	-13.00	13.32	V
10744.99	-46.06	9.42	13.15	2.15	-44.48	-13.00	31.48	H

**NSA, LB2+n5, BPSK, CH 167300**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3346.14	-54.76	5.31	7.83	2.15	-54.39	-13.00	41.39	V
3760.52	-52.47	6.26	8.56	2.15	-52.32	-13.00	39.32	H
5640.87	-32.92	7.27	10.57	2.15	-31.77	-13.00	18.77	H
7520.53	-28.20	8.31	12.22	2.15	-26.44	-13.00	13.44	V
9400.88	-50.35	9.04	13.34	2.15	-48.20	-13.00	35.20	H
11280.54	-46.65	9.88	13.14	2.15	-45.54	-13.00	32.54	V

**NSA, LB2+n5, BPSK, CH 169300**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Correction	Peak ERP (dBm)	Limit (dBm)	Margin (dB)	Polorization
1693.01	-51.55	3.59	5.15	2.15	-52.14	-13.00	39.14	V
3385.84	-53.97	5.35	7.93	2.15	-53.54	-13.00	40.54	V
3760.52	-52.53	6.26	8.56	2.15	-52.38	-13.00	39.38	V
5640.18	-31.45	7.27	10.57	2.15	-30.30	-13.00	17.30	H
7521.23	-30.75	8.30	12.22	2.15	-28.98	-13.00	15.98	V
10157.90	-41.97	9.37	12.96	2.15	-40.53	-13.00	27.53	H

**NSA, LB2+n66, BPSK, CH 342500**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3425.01	-49.33	5.38	8.02	-46.69	-13.00	33.69	V
5138.01	-55.35	6.86	10.09	-52.12	-13.00	39.12	V
5641.01	-48.74	7.27	10.57	-45.44	-13.00	32.44	H
6852.01	-42.13	7.82	11.42	-38.53	-13.00	25.53	H
7520.01	-45.40	8.31	12.22	-41.49	-13.00	28.49	V
10278.01	-52.77	9.57	13.01	-49.33	-13.00	36.33	V

**NSA, LB2+n66, BPSK, CH 347500**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3475.01	-45.66	5.47	8.14	-42.99	-13.00	29.99	V
5213.01	-54.71	6.98	10.20	-51.49	-13.00	38.49	V
5641.01	-48.46	7.27	10.57	-45.16	-13.00	32.16	H
6952.01	-44.43	7.93	11.54	-40.82	-13.00	27.82	H
7521.01	-45.15	8.31	12.22	-41.24	-13.00	28.24	V
10428.01	-56.93	9.76	13.07	-53.62	-13.00	40.62	V

**NSA, LB2+n66, BPSK, CH 352500**

Frequency (MHz)	SG (dBm)	CableLoss (dB)	AntennaGain (dBi)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polorization
3525.01	-46.95	5.57	8.24	-44.28	-13.00	31.28	V
3760.01	-60.54	6.26	8.56	-58.24	-13.00	45.24	H
5287.01	-54.08	6.99	10.30	-50.77	-13.00	37.77	V
5641.01	-48.21	7.27	10.57	-44.91	-13.00	31.91	H
7053.01	-46.54	8.22	11.66	-43.10	-13.00	30.10	H
7520.01	-45.41	8.31	12.22	-41.50	-13.00	28.50	V

Note: The maximum value of expanded measurement uncertainty for this test item is  $U = 4.69$  dB,  $k = 2$ .

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