

# **TEST REPORT**

Applicant:	Hangzhou Sunyard Technology Co., Ltd.		
Address:	Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang Dist., Hangzhou, China		
Equipment Type:	Android POS Terminal		
Model Name:	S200		
Brand Name:	SUNYARD		
FCC ID:	2BFZW-S200		
Test Standard:	47 CFR Part 15 Subpart C		
Test Standard.	ANSI C63.10-2013		
Sample Arrival Date:	Apr. 12, 2024		
Test Date:	Apr. 19, 2024 - Apr. 24, 2024		
Date of Issue:	Jun. 20, 2024		

**ISSUED BY:** 

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Huang Guoqiang **Checked by:** Xia Long

**Approved by:** Liao Jianming (Technical Director)

Huang . Guogiang

Xia Long

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<u>Rev. 01</u> <u>Jun. 20, 2024</u> <u>Initia</u>	al Issue
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# **1 GENERAL INFORMATION**

### 1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.	
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road,	
Address	Nanshan District, Shenzhen, Guangdong Province, P. R. China	
Phone Number	+86 755 6685 0100	

### 1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.		
	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi		
	Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China		
Location	1/F, Building B, Ganghongji High-tech Intelligent Industrial Park,		
	No. 1008, Songbai Road, Yangguang Community, Xili Sub-district,		
	Nanshan District, Shenzhen, Guangdong Province, P. R. China		
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a		
	accredited testing laboratory. The designation number is CN1196.		



# **2 PRODUCT INFORMATION**

### 2.1 Applicant Information

Applicant	Hangzhou Sunyard Technology Co., Ltd.	
Address	Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang	
	Dist., Hangzhou, China	

### 2.2 Manufacturer Information

Manufacturer	Hangzhou Sunyard Technology Co., Ltd.	
Address	Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang	
	Dist., Hangzhou, China	

### 2.3 General Description for Equipment under Test (EUT)

EUT Name	Android POS Terminal	
Model Name Under Test	S200	
Series Model Name	N/A	
Description of Model		
name differentiation	N/A	
Hardware Version	S1-00-10-01-01	
Software Version	SP6987A_V002_20240328_userdebug	
Dimensions (Approx.)	N/A	
Weight (Approx.)	N/A	



### 2.4 Technical Information

	2G Network GSM/GPRS/EDGE 850/1900 MHz	
	3G Network WCDMA/HSDPA/HSUPA Band 2/4/5	
	4G Network LTE FDD Band 2/4/5/7/12/17/66	
Network and Wireless	LTE TDD Band 38/41	
connectivity	Bluetooth (BR+EDR+BLE)	
	2.4G WIFI 802.11b, 802.11g and 802.11n(HT20/40)	
	5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/40/80)	
	U-NII-1/3, NFC	

The requirement for the following technical information of the EUT was tested in this report:

Modulation Type	ASK
Product Type	⊠ Portable
	Fix Location
Frequency Range	13.56 MHz
Receiver Categorization	3
Number of channel	1
Tested Channel	1
Antenna Type	Coil Antenna



# **3 SUMMARY OF TEST RESULTS**

#### 3.1 Test Standards

No.	Identity	Identity Document Title	
1	47 CFR Part 15, Subpart C	Miscellaneous Wireless Communications Services	
2 ANSI C63.10-2013	American National Standard for Testing Unlicensed		
	ANSI C03. 10-2013	Wireless Devices	

#### 3.2 Verdict

No.	Description	FCC Part No.	Verdict
1	Antenna Requirement	15.203	Pass Note
2	Emissions Bandwidth	15.215	Pass
3	Field Strength of Fundamental Emissions	15.225(a)	Pass
4	Radiated Emissions	15.225(d) / 15.209	Pass
5	Frequency Stability	15.225(e)	Pass
6	6 Conducted Emission 15.207 Pass		Pass
Note: The EUT has a permanently and irreplaceable attached antenna, which complies with the			
requirement FCC 15.203			

### 3.3 Test Uncertainty

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.

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	3.2 dB
Radiated emissions (9 kHz-30 MHz)	4.3 dB
Radiated emissions (30 MHz-1 GHz)-3m	4.4 dB



# **4 GENERAL TEST CONFIGURATIONS**

### 4.1 Test Environments

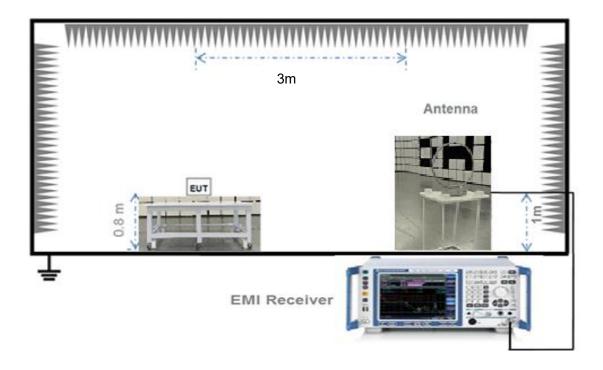
During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	30% to 60%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22°⊂ to +25°⊂
Working Voltage of the EUT	NV (Normal Voltage)	3.7 V

### 4.2 Test Setups

Test Setup 1

Radiated Test (Below 30 MHz)

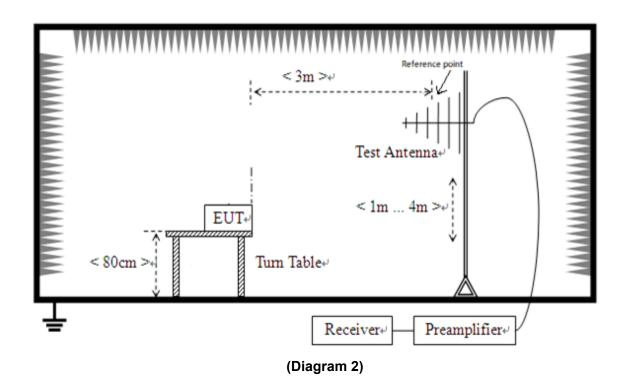


(Diagram 1)

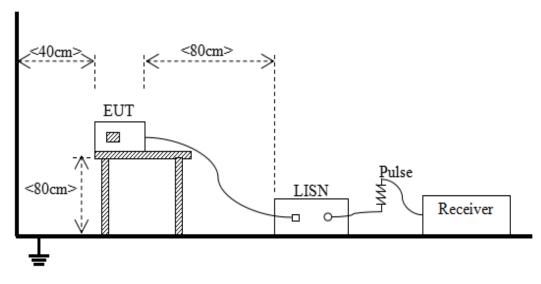


#### <u>Test Setup 2</u>

Radiated Test (30 MHz-1 GHz)



Test Setup 3 AC Power Supply Port Test



(Diagram 3)



# 5 TEST ITEMS

# 5.1 Antenna Requirements

#### 5.1.1 Relevant Standards

#### FCC §15.203

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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

#### 5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the	An embedded-in antenna design is used.
product.	

Reference Documents	Item
Photo	Please refer EUT internal photos.



# 5.2 Emission Bandwidth

#### 5.2.1 Definition

#### 15.215(c);

Intentional radiators operating under the alternative provisions to the general emission limits 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.

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

• The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

• The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.

• The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.

• The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

#### 5.2.2 Test Setup

See section 4.2(Diagram 1) for test setup for the antenna port. The photo of test setup please refer to ANNEX B.

#### 5.2.3 Test Procedure

The 20dB bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while the EUT is operating in transmission mode.

Use the following spectrum analyzer settings:

Span = between 2 to 5 times the OBW

RBW = 1% to 5% the OBW



VBW ≥ 3RBW

Sweep = auto

Detector function = peak

Trace = max hold

The 99% emission bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while the EUT is operating in transmission mode.

Use the following spectrum analyzer settings:

Span = between 1.5 to 5 times the OBW

RBW = 1% to 5% OBW

VBW ≥ 3RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.2.4 Test Result and Test Equipment List

Please refer to ANNEX A.1



# 5.3 Field Strength of Fundamental Emissions and Radiated Emissions

5.3.1 Limit

FCC §15.225(a), (b), (c)

According to FCC section 15.225, for <30 MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 10 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 kHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT)

There was no detected Restricted bands and Radiated spurious emission below 30MHz. The 30m limit was converted to 3m Limit using square factor(x) as it was found by measurements as follows; 3 m Limit( $dB\mu V/m$ ) =  $20log(X)+40log(30/3)=20log(15848)+40log(30/3)=124dB\mu V$ 

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency range	Field Stre	ength@30m	Field Strength@10m	Field Strength@3m
(MHz)	μV/m	dBµV/m	dBµV/m	dBµV/m
Below 13.110	30	29.5	48.58	69.5
13.110 ~ 13.410	106	40.5	59.58	80.5
13.410 ~ 13.553	334	50.5	69.58	90.5
13.553 ~13.567	15848	84	103.08	124
13.567 ~ 13.710	334	50.5	69.58	90.5
13.710 ~14.010	106	40.5	59.58	80.5
Above 14.010	30	29.5	48.58	69.5

NOTE:

- 1. Field Strength (dB $\mu$ V/m) = 20\*log[Field Strength ( $\mu$ V/m)].
- 2. In the emission tables above, the tighter limit applies at the band edges.

#### FCC §15.225(d)

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m)	Measurement distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3



Note:

- 1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- For above 1000 MHz, limit field strength of harmonics: 54dBµV/m@3m (AV) and 74dBµV/m@3m (PK).

#### 5.3.2 Test Setup

See section 4.2(Diagram 1 and Diagram 2) for test setup for the antenna port. The photo of test setup please refer to ANNEX B.

#### 5.3.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented. The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured RBW = 1 MHz for  $f \ge 1$  GHz, 100 kHz for 30 MHz < f < 1 GHz, 10 kHz for 150 kHz < f < 30 MHz, 300 Hz for f < 150 kHz VBW  $\ge$  RBW Sweep = auto Detector function = peak Trace = max hold

5.3.4 Test Result and Test Equipment List

Please refer to ANNEX A.2 and A.3

NOTE:

1. Results  $(dB\mu V/m)$  = Reading  $(dB\mu V)$  + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

- 2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain (dB)
- 3. Margin = Limit Results



# 5.4 Frequency Tolerance

#### 5.4.1 Limit

#### FCC §15.225(e)

The frequency tolerance of the carrier signal shall be maintained within  $\pm 0.01\%$  of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

#### 5.4.2 Test Setup

See section 4.2(Diagram 1) for test setup for the antenna port. The photo of test setup please refer to ANNEX B.

#### 5.4.3 Test Procedure

- 1. The test is performed in a Temperature Chamber.
- 2. The EUT is configured as MS + DC Power Supply.
- 5.4.4 Test Result and Test Equipment List

Please refer to ANNEX A.4.



# 5.5 Conducted Emission

#### 5.5.1 Limit

#### FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a  $50\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

	Conducted	Limit (dBµV)
Frequency range (MHz)	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

#### 5.5.2 Test Setup

See section 4.2(Diagram 3) for test setup for the antenna port. The photo of test setup please refer to ANNEX B.

#### 5.5.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

#### 5.5.4 Test Result and Test Equipment List

Please refer to ANNEX A.5.

#### NOTE:

1. Results  $(dB\mu V)$  = Reading  $(dB\mu V)$  + Factor (dB)

The reading level is calculated by software which is not shown in the sheet

#### 2. Factor = Insertion loss + Cable loss

#### 3. Margin = Limit – Results



# ANNEX A TEST RESULT

### A.1 Emission Bandwidth

Note: Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

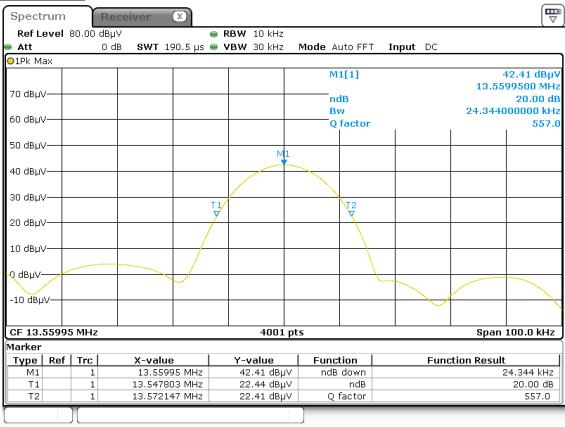
Sample No.	S10	Temperature	<b>23.8</b> ℃
Humidity	53%RH	Pressure	101kPa
Test Engineer	Xi Zifeng	Test Date	2024.04.20

#### Test Data

Frequency	Emission Bandwidth (20dB down)	Occupied Bandwidth (99%)
(MHz)	(kHz)	(kHz)
13.56	24.344	22.019

#### Test Plots

Emission Bandwidth





#### 99% Occupied Bandwidth

Spectrum R	eceiver 🛛 🗙				
Ref Level 80.00 dB	μV	🖷 RBW 10 kHz			· · · · · ·
		🔵 <b>VBW</b> 30 kHz	Mode Auto FFT	Input DC	
)1Pk Max					
70 dBµV			M1[1]		42.50 dBμ\ 13.5599750 MH;
			Occ Bw		22.019495126 kH
60 dBµV					
50 dBµV					
		M1			
40 dBµV					
30 dBµV		T1			
20 dвµV					
10.dBuV					
0 dBµV					
-10 dвµV					
CF 13.559975 MHz		4001 pt	s		Span 100.0 kHz
1arker		•			•
Type   Ref   Trc	X-value	Y-value	Function	Fund	ction Result
M1 1	13.559975 MHz	42.50 dBµV			
T1 1	13.5488778 MHz	27.11 dBµV	Occ Bw		22.019495126 kHz
T2 1	13.5708973 MHz	27.24 dBµV			

Equipment Information						
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCH WARZ	ESRP	101036	2023.09.05	2024.09.04	$\boxtimes$
Test Antenna- Loop	SCHWARZBE CK	FMZB 1519	1519-037	2024.01.23	2027.01.22	$\boxtimes$
Anechoic Chamber (10m)	EMC TECHNOLOGY LTD	20.1m*11.6 m*7.35m	130	2021.08.15	2024.08.14	$\boxtimes$



## A.2 Field Strength of Fundamental Emissions

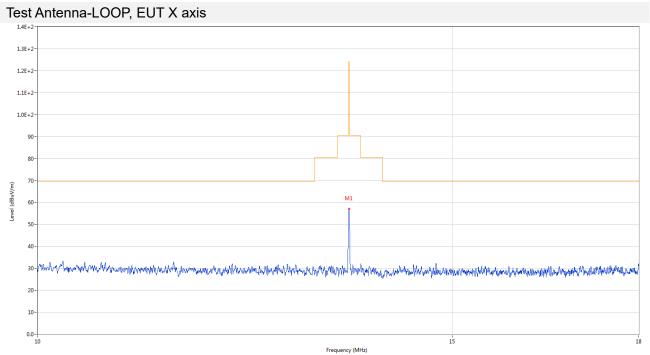
Note: Field Strength of Fundamental Emissions tests were performed in X, Y, Z axis direction of EUT. And only the worst axis test condition was recorded in this test report.

Sample No.	S10	Temperature	<b>23.6</b> ℃
Humidity	54%RH	Pressure	101kPa
Test Engineer	Xi Zifeng	Test Date	2024.04.19

#### <u>Test Data</u>

Field Strength of Fundamental Emissions Value						
Frequency	Detector	Field Strength	Limit @3m	EUT	Margin	
(MHz)	Delector	(dBµV/m)	(dBµV/m)	EUT	(dB)	
13.560	PEAK	56.92	124.0	X axis	67.08	

#### Test Plot



	Equipment Information								
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use			
EMI Receiver	ROHDE&SCH WARZ	ESRP	101036	2023.09.05	2024.09.04	$\boxtimes$			
Test Antenna- Loop	SCHWARZBE CK	FMZB 1519	1519-037	2024.01.23	2027.01.22				
Anechoic Chamber(10m)	EMC TECHNOLOGY LTD	20.1m*11.6 m*7.35m	130	2021.08.15	2024.08.14	$\boxtimes$			



### A.3 Radiated Emissions

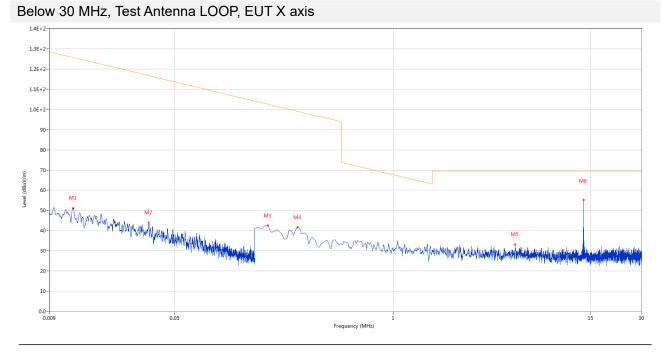
Note 1: This frequency which near 13.560 MHz with circle should be ignored because they are NFC carrier frequency.

Note 2: All Radiated Emissions tests were performed in X, Y, Z axis direction of EUT. And only the worst axis test condition was recorded in this test report.

(9 kHz ~ 30 MHz)(at 10m chamber)

Sample No.	S10	Temperature	<b>23.6</b> ℃
Humidity	54%RH	Pressure	101kPa
Test Engineer	Xi Zifeng	Test Date	2024.04.19

#### The Data and Plots



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	32.571	18.64	-27.34	40.0	21.36	Peak	181.00	100	Horizontal	Pass
2	84.368	15.60	-30.41	40.0	24.40	Peak	360.00	200	Horizontal	Pass
3	181.562	24.10	-27.73	43.5	19.40	Peak	249.00	200	Horizontal	Pass
4	284.722	24.08	-25.40	46.0	21.92	Peak	360.00	100	Horizontal	Pass
5	487.500	23.52	-19.47	46.0	22.48	Peak	254.00	200	Horizontal	Pass
6	950.918	30.85	-9.83	46.0	15.15	Peak	341.00	200	Horizontal	Pass



	Equipment Information								
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use			
EMI Receiver	ROHDE&SC HWARZ	ESRP	101036	2023.09.05	2024.09.04	$\boxtimes$			
Test Antenna- Loop	SCHWARZB ECK	FMZB 1519	1519-037	2024.01.23	2027.01.22	$\boxtimes$			
Anechoic Chamber(10m)	EMC TECHNOLO GY LTD	20.1m*11.6m* 7.35m	130	2021.08.15	2024.08.14	$\boxtimes$			
Description	Supplier	Name	Version	1		Use			
Test Software	BALUN	BL410-E	V22.930	/		$\square$			

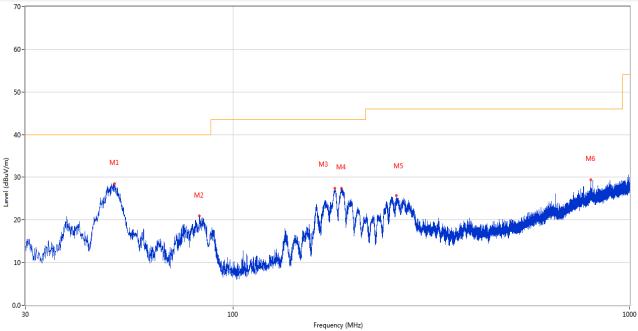


#### (30 MHz ~ 10th Harmonic)

Sample No.	S10	Temperature	<b>21.1</b> ℃
Humidity	53%RH	Pressure	101kPa
Test Engineer	Gong Baihua	Test Date	2024.04.23

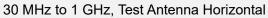
#### The Data and Plots

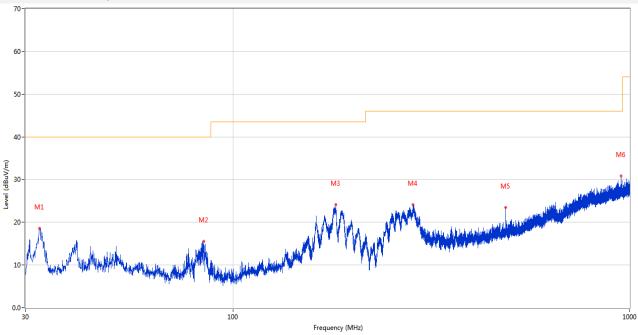




No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	50.322	28.54	-26.75	40.0	11.46	Peak	358.00	100	Vertical	Pass
2	82.380	20.90	-30.51	40.0	19.10	Peak	227.00	200	Vertical	Pass
3	180.932	27.40	-27.63	43.5	16.10	Peak	217.00	100	Vertical	Pass
4	187.770	27.43	-28.20	43.5	16.07	Peak	356.00	100	Vertical	Pass
5	258.338	25.74	-26.56	46.0	20.26	Peak	187.00	100	Vertical	Pass
6	798.337	29.36	-11.77	46.0	16.64	Peak	194.00	100	Vertical	Pass







No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	32.571	18.64	-27.34	40.0	21.36	Peak	181.00	100	Horizontal	Pass
2	84.368	15.60	-30.41	40.0	24.40	Peak	360.00	200	Horizontal	Pass
3	181.562	24.10	-27.73	43.5	19.40	Peak	249.00	200	Horizontal	Pass
4	284.722	24.08	-25.40	46.0	21.92	Peak	360.00	100	Horizontal	Pass
5	487.500	23.52	-19.47	46.0	22.48	Peak	254.00	200	Horizontal	Pass
6	950.918	30.85	-9.83	46.0	15.15	Peak	341.00	200	Horizontal	Pass



	Equipment Information								
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use			
	Frequency Below 1 GHz								
EMI Receiver	Keysight	N9038A	MY53220118	2023.09.05	2024.09.04	$\square$			
Amplifier (30-1GHz)	COM-MV	ZT30-1000M	B2017119082	2023.12.05	2024.12.04	$\boxtimes$			
Test Antenna- Bi-Log	SCHWARZB ECK	VULB 9163	9163-624	2021.08.20	2024.08.19	$\boxtimes$			
Anechoic Chamber (#4)	ChangNing	9m*6m*6m	101	2023.03.04	2026.03.03	$\boxtimes$			
Description	Supplier	Name	Version	/		Use			
Test Software	BALUN	BL410-E	V22.930	1		$\square$			



## A.4 Frequency Stability

Note: The operating temperature range of the EUT is 0°C to 45°C.

Sample No.	S10	Temperature	<b>23.5</b> ℃
Humidity	55%RH	Pressure	101kPa
Test Engineer	Xi Zifeng	Test Date	2024.04.19

OPERATING FREQUENCY:	13560000 Hz
REFERENCE VOLTAGE:	7.2 V
DEVIATION LIMIT:	±0.01%

Test Data

	Test Co	nditions	Fraguanay		
VOLTAGE (%)	Power (VDC)	Temperature (°C)	Frequency (Hz)	Deviation (%)	Verdict
100		-30	13560050	0.000369	Pass
100		-20	13560050	0.000369	Pass
100		-10	13560050	0.000369	Pass
100		0	13560025	0.000184	Pass
100	7.2	+10	13560025	0.000184	Pass
100	1.2	+20	13560025	0.000184	Pass
100		+25	13560025	0.000184	Pass
100		+30	13560075	0.000553	Pass
100		+40	13560075	0.000553	Pass
100		+50	13560075	0.000553	Pass
85	6.80	+20	13560025	0.000184	Pass
115	7.92	+20	13560050	0.000369	Pass

Equipment Information									
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use			
EMI Receiver	ROHDE&SC HWARZ	ESRP	101036	2023.09.05	2024.09.04	$\boxtimes$			
Test Antenna- Loop	SCHWARZB ECK	FMZB 1519	1519-037	2024.01.23	2027.01.22	$\boxtimes$			
Temperature Chamber	AHK	NTH64-40A	1310	2023.12.05	2024.12.05	$\boxtimes$			
DC Power Supply	ROHDE&SC HWARZ	HMP2020	018141664	2023.05.15	2024.05.14	$\boxtimes$			



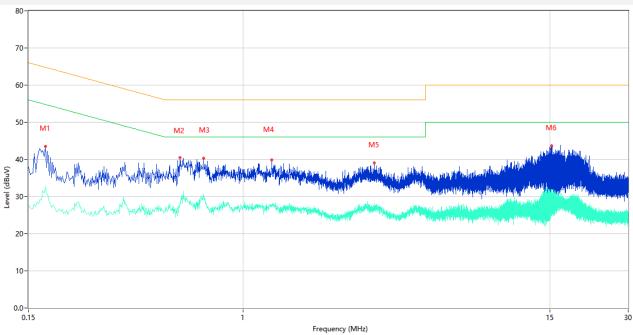
### A.5 Conducted Emissions

Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

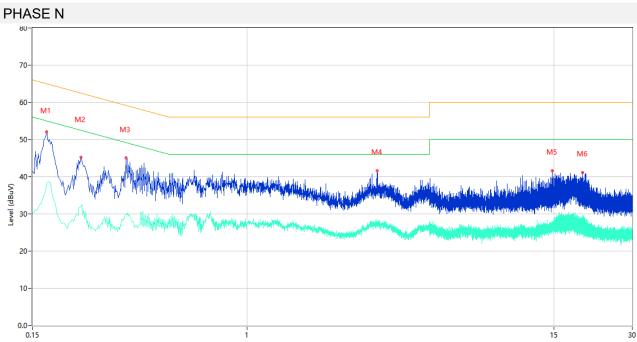
Sample No.	S06	Temperature	<b>25.3</b> ℃			
Humidity	61%RH	Pressure	101kPa			
Test Engineer	Yang Yang	Test Date	2024.04.24			

Test Data and Plots

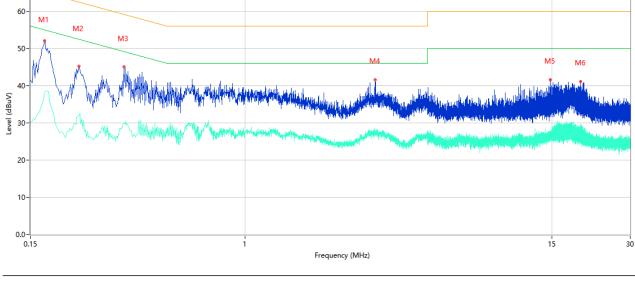
PHASE L



No.	Frequency	Results	Factor	Limit	Margin	Detector	Line	Verdict
	(MHz)	(dBuV)	(dB)	(dBuV)	(dB)			
1	0.174	43.42	9.78	64.77	21.35	Peak	L	Pass
1**	0.174	32.76	9.78	54.77	22.01	AV	L	Pass
2	0.572	40.44	10.09	56.00	15.56	Peak	L	Pass
2**	0.572	28.39	10.09	46.00	17.61	AV	L	Pass
3	0.706	40.27	10.59	56.00	15.73	Peak	L	Pass
3**	0.706	29.90	10.59	46.00	16.10	AV	L	Pass
4	1.288	39.79	10.50	56.00	16.21	Peak	L	Pass
4**	1.288	27.47	10.50	46.00	18.53	AV	L	Pass
5	3.188	39.03	10.24	56.00	16.97	Peak	L	Pass
5**	3.188	27.32	10.24	46.00	18.68	AV	L	Pass
6	15.268	43.60	10.59	60.00	16.40	Peak	L	Pass
6**	15.268	25.47	10.59	50.00	24.53	AV	L	Pass



No.	Frequency	Results	Factor	Limit	Margin	Detector	Line	Verdict
	(MHz)	(dBuV)	(dB)	(dBuV)	(dB)			
1	0.170	52.10	9.78	64.96	12.86	Peak	N	Pass
1**	0.170	38.32	9.78	54.96	16.64	AV	N	Pass
2	0.230	45.23	9.77	62.45	17.22	Peak	N	Pass
2**	0.230	31.91	9.77	52.45	20.54	AV	N	Pass
3	0.342	45.00	10.60	59.15	14.15	Peak	N	Pass
3**	0.342	29.78	10.60	49.15	19.37	AV	N	Pass
4	3.144	41.61	9.98	56.00	14.39	Peak	N	Pass
4**	3.144	27.24	9.98	46.00	18.76	AV	N	Pass
5	14.778	41.62	10.62	60.00	18.38	Peak	N	Pass
5**	14.778	25.62	10.62	50.00	24.38	AV	N	Pass
6	19.372	41.19	11.04	60.00	18.81	Peak	N	Pass
6**	19.372	25.69	11.04	50.00	24.31	AV	N	Pass







Equipment Information									
Equipment Name	Supplier	Model	Serial No.	Cal. Date	Cal. Due	Use			
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04	$\boxtimes$			
LISN	SCHWARZB ECK	NSLK 8127	8127-687	2023.05.16	2024.05.15	$\boxtimes$			
Shielded Room	YiHeng Electronic Co., Ltd	3.5m*3.1m*2. 8m	112	2022.02.19	2025.02.18	$\boxtimes$			
Description	Supplier	Name	Version	1		Use			
Test Software	BALUN	BL410-E	V22.930	/		$\square$			



# ANNEX B TEST SETUP PHOTOS

Please refer the document "BL-SZ2440362-AE-2.PDF".

# ANNEX C EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ2440362-AW.PDF".

# ANNEX D EUT INTERNAL PHOTOS

Please refer the document "BL-SZ2440362-AI.PDF".



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--END OF REPORT--