Shenzhen CTA Testing Technology Co., Ltd.
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai
Street, Bao'an District, Shenzhen, China

RF Exposure MPE

Report Reference No..... :	**CTA25040301505**
FCC ID..... :	**2A8W5S6MAX**
Compiled by (position+printed name+signature) .:	File administrators Joan Wu
Supervised by (position+printed name+signature) .:	Project Engineer Zoey Cao
Approved by (position+printed name+signature) .:	RF Manager Eric Wang
Date of issue .....:	Apr. 08, 2025
Testing Laboratory Name.....:	**Shenzhen CTA Testing Technology Co., Ltd.**
Address .....:	Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name.....:	**BAODE INTERNATIONAL LIMITED**
Address .....:	UNIT 2, 22/F., RICHMOND COMM. BLDG.,109 ARGYLE STREET, MONGKOK, KOWLOON, Hong Kong, China
Standard.....:	**47CFR §1.1310** **47CFR §2.1091** **KDB447498 D01 General RF Exposure Guidance v06**

Test item description .....:	**Smart Media Player**
Manufacturer .....:	**BAODE INTERNATIONAL LIMITED**
Trade Mark	N/A
Model/Type reference .....:	SuperBOX S6MAX
Rating .....:	DC 5.0V From external circuit
Result .....:	**PASS**

TEST REPORT

Equipment under Test	:	Smart Media Player
Model /Type	:	SuperBOX S6MAX
Listed Models	:	SuperBOX S5MAX, SuperBOX S5Pro, SuperBOX S6Pro, SuperBOX S6Ultra
Model difference External	:	The PCB board, circuit, structure and internal of these models are the Same,the difference info refer to Inside the table Model difference External and internal 1.EUT colors are different, SuperBOX S6MAX, SuperBOX S5MAX was(blue), SuperBOX S5Pro and SuperBOX S6Pro was(black), SuperBOX S6Ultra was (silvery), and all models heat dissipation holes are not the same. 2.SuperBOX S5Pro and SuperBOX S6Pro only EUT model name and the shape of the display were different
Model difference Internal	:	1.Ethernet interface IC was different, Model SuperBOX S6MAX, SuperBOX S5MAX, SuperBOX S6Pro, SuperBOX S6Ultra are use IC GST5009, Model SuperBOX S5Pro is use IC 2230H, But the chip pins are the same. 2.SuperBOX S5Pro and SuperBOX S6Pro less one LED than other models 3.SuperBOX S5Pro EMS memory use kingston was different with other models (ISOCOM),but the specification are same
Applicant	:	**BAODE INTERNATIONAL LIMITED**
Address	:	UNIT 2, 22/F., RICHMOND COMM. BLDG.,109 ARGYLE STREET, MONGKOK, KOWLOON, Hong Kong, China
Manufacturer	:	**BAODE INTERNATIONAL LIMITED**
Address	:	UNIT 2, 22/F., RICHMOND COMM. BLDG.,109 ARGYLE STREET, MONGKOK, KOWLOON, Hong Kong, China

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1 TEST STANDARDS

The tests were performed according to following standards:

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
FCC KDB 447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures.
FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.
FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

2 SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	Dec. 11, 2024
Testing commenced on	:	Dec. 11, 2024
Testing concluded on	:	Dec. 20, 2024

2.2 Product Description

Product Name:	Smart Media Player
Model/Type reference:	SuperBOX S6MAX
Power supply:	DC 5.0V From external circuit
Adapter 1 information:	Model: QL010-0502000U Input: AC 100-240V 50/60Hz Output: DC 5V 2A
Adapter 2 information:	Model: HJ-G-0500200F Input: AC 100-240V 50/60Hz Output: DC 5V 2A
Hardware version:	V1.0
Software version:	V1.0
Testing sample ID：	CTA250403015-1# (Engineer sample) CTA250403015-2# (Normal sample)
Bluetooth :	
Supported Type:	Bluetooth BR/EDR
Modulation:	GFSK, π/4DQPSK, 8DPSK
Operation frequency:	2402MHz~2480MHz
Channel number:	79
Channel separation:	1MHz
Antenna type:	External Antenna
Antenna gain:	4.09dBi
Bluetooth BLE	
Supported type:	Bluetooth low Energy
Modulation:	GFSK
Operation frequency:	2402MHz to 2480MHz
Channel number:	40
Channel separation:	2 MHz
Antenna type:	External Antenna
Antenna gain:	4.09dBi
2.4GWIFI :	
Supported type:	802.11b/802.11g/802.11n(H20)/ 802.11n(H40)/802.11ax(H20)/ 802.11ax(H40)
Modulation:	802.11b: DSSS 802.11g/802.11n(H20)/ 802.11n(H40)/802.11ax(H20)/ 802.11ax(H40): OFDM
Operation frequency:	802.11b/802.11g/802.11n(H20)/802.11ax(H20): 2412MHz~2462MHz 802.11n(H40)/802.11ax(H40): 2422MHz~2452MHz

Channel number:	802.11b/802.11g/802.11n(H20)/802.11ax(H20): 11 802.11n(H40)/802.11ax(H40):7			
Channel separation:	5MHz			
Antenna type:	External Antenna			
Antenna gain:	4.09dBi			
5GWIFI				
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system
	802.11a 802.11n 802.11ac 802.11ax	802.11n 802.11ac 802.11ax	N/A	N/A
Operation frequency:	5180MHz-5240MHz 5745MHz-5825MHz	5190MHz-5230MHz 5755MHz-5795MHz	N/A	N/A
Modulation:	OFDM	OFDM	N/A	N/A
Channel number:	9	4	N/A	N/A
Channel separation:	20MHz	40MHz	N/A	N/A
Antenna type:	External Antenna			
Antenna gain:	2.6dBi for 5180-5240MHz 4.61dBi for 5745-5825MHz			

2.3 Special Accessories

The following is the EUT test of the auxiliary equipment provided by the laboratory:

Description	Manufacturer	Model	Technical Parameters	Certificate	Provided by
/	/	/	/	/	/

2.4 Modifications

No modifications were implemented to meet testing criteria.

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:
FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01
Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.
The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen CTA Testing Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Shenzhen CTA Testing Technology Co., Ltd. :

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	9KHz~30MHz	3.02 dB	(1)
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)
Output Peak power	30MHz~18GHz	0.55 dB	(1)
Power spectral density	/	0.57 dB	(1)
Spectrum bandwidth	/	1.1%	(1)
Radiated spurious emission (30MHz-1GHz)	30~1000MHz	4.10 dB	(1)
Radiated spurious emission (1GHz-18GHz)	1~18GHz	4.32 dB	(1)
Radiated spurious emission (18GHz-40GHz)	18-40GHz	5.54 dB	(1)

4 Test limit

4.1 Requirement

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
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 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

4.2 MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$
Where: S=power density
P=power input to antenna
G=power gain of the antenna in the direction of interest relative to an isotropic radiator
R=distance to the center of radiation of the antenna

4.3 Conducted Power Results

TestMode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]
BLE_1M	Ant1	2402	0.72
		2440	0.05
		2480	-0.21

Test Mode	Antenna	Freq(MHz)	Conducted Peak Powert[dBm]
DH5	Ant1	2402	0.60
		2441	0.03
		2480	-0.13
2DH5	Ant1	2402	-0.16
		2441	-0.73
		2480	-0.89
3DH5	Ant1	2402	-0.15
		2441	-0.73
		2480	-0.88

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]
11B	Ant1	2412	14.35
		2437	14.47
		2462	13.32
11G	Ant1	2412	14.11
		2437	13.96
		2462	13.10
11N20SISO	Ant1	2412	14.30
		2437	13.78
		2462	12.94
11N40SISO	Ant1	2422	13.40
		2437	12.68
		2452	13.80
11AX20SISO	Ant1	2412	14.09
		2437	13.63
		2462	13.08
11AX40SISO	Ant1	2422	13.45
		2437	12.54
		2452	13.63

Test Mode	Antenna	Freq(MHz)	Conducted Power [dBm]
11A	Ant1	5180	13.01
		5220	12.04
		5240	12.32
		5745	10.83
		5785	10.63
		5825	10.48
11N20SISO	Ant1	5180	13.34
		5220	13.03
		5240	12.76
		5745	10.84
		5785	10.30
		5825	10.14

11N40SISO	Ant1	5190	12.90
		5230	12.83
		5755	10.03
		5795	9.84
11AC20SISO	Ant1	5180	12.75
		5220	12.87
		5240	11.87
		5745	10.81
		5785	10.10
		5825	10.27
11AC40SISO	Ant1	5190	12.15
		5230	12.14
		5755	9.80
		5795	10.29
11AX20SISO	Ant1	5180	13.14
		5220	11.89
		5240	12.85
		5745	10.85
		5785	10.37
		5825	9.64
11AX40SISO	Ant1	5190	12.22
		5230	12.23
		5755	11.08
		5795	10.54

4.4 Manufacturing tolerance

Mode	Max. Peak Conducted Output Power (dBm)	Max. tune-up
BT	0.6	1.0±1
BLE	0.72	1.0±1
2.4GWIFI	14.47	15.0±1
Mode	Max. Averager Conducted Output Power (dBm)	Max. tune-up
5.2GWIFI	13.34	13.0±1
5.8GWIFI	11.08	12.0±1

4.5 Standalone MPE Result

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna is refer to section 2.2, the RF power density can be obtained.

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	dBm	mW				
BT	2.0	1.5849	4.09	2.5645	0.0008	1.0000
BLE	2.0	1.5849	4.09	2.5645	0.0008	1.0000
2.4GWIFI	16.0	39.8107	4.09	2.5645	0.0203	1.0000
5.2GWIFI	14.0	25.1189	2.60	1.8197	0.0091	1.0000
5.8GWIFI	13.0	19.9526	4.61	2.8907	0.0115	1.0000

Remark:
1. Output power (Peak) including turn-up tolerance;
2. MPE evaluate distance is 20cm from user manual provide by manufacturer.
3. BT and WLAN can be active at the same time, but only with interleaving of packages switched on board level. That means that they cannot transmit at the same time.

4.6 Simultaneous Transmission for MPE Result

N/A

5 Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device Threshold per KDB 447498 D01v06

********** End of Report **********