

FCC RF EXPOSURE REPORT

Applicant	Guangzhou Bresser Optical Instruments Co., Ltd.						
Address	Kangda Rd. 12, Yunpu Ind. Area, Huangpu, Guangzhou, PRC						
Equipment	: 4-days Smart weather station						
Model No.	: WSH4103						
Trade Name	EXPL @ RE						
FCC ID.	: 2AE3N-WSH4103						

I HEREBY CERTIFY THAT :

The sample was received on May 18, 2022 and the testing was completed on May 27, 2022 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Leevin Li / Supervisor



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History of this test report

Original

□ Additional attachment as following record:

Attachment No.	Issue Date	Description
DEFJ2203163	May 31, 2022	Original



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment

Equipment	ment 4-days Smart weather station				
Model Name	WSH4103				
Model Discrepancy N/A					
Frequency Range	WIFI 2.4G: 2400MHz-2483.5MHz				
Modulation Type	2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM				
Data Rate	WIFI 2.4GHz: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: MCS0-MCS15, HT20/HT40				
Antenna Type	PCB Antenna				
Antenna Gain.	For Wlan 2400~2483.5MHz: ANT A: 2.2dBi				
Adapter Model: HS06-0501000US Input:100-240V~ 50/60Hz 0.2A Max Output:5.0V1.0A 5.0W					
Temperature Range	-10℃~+50℃				

Note: for more details, please refer to the User's manual of the EUT.



1.2 General Information of Te

Test Site	Cerpass Technology Corporation(Cerpass Laboratory) Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912				
FCC Designation No.:	CN1288				
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz				
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.				

2. Radio Frequency Exposure

Dovice category	Portable (<20cm separation)				
Device category	Mobile (>20cm separation)				
	Occupational/Controlled exposure (S = 5mW/cm ²)				
Exposure classification	General Population/Uncontrolled exposure				
	(S=1mW/cm ²)				
	Single antenna				
	Multiple antennas				
Antenna diversity	Tx diversity				
	Rx diversity				
	⊠ Tx/Rx diversity				
	MPE Evaluation*				
Evaluation applied	SAR Evaluation				
	□ N/A				

TEST RESULTS

No non-compliance noted.

Calculation

Given

$$E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{3770}$$

Where *E* = Field strength in Volts / meter *P* = Power in Watts *G* = Numeric antenna gain *d* = Distance in meters *S* = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770d^2}$$

Changing to units of mW and cm, using:

Yields

1

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$
 Equation 1

Where d = Distance in cm P = Power in mW G = Numeric antenna gain S = Power density in mW / cm²



Maximum Permissible Exposure

	Frequency	Measured	Tuneuptoleran	Max.TuneupP	Peak output	Antenna Gain	Antenna gain		Power density	Limit
Test Mode	band (MHz)	power(dBm)	ce(dBm)	ower(dBm)	power(mW)	(dBi)	(Numeric)	Distance (cm)	(mW/cm2)	(mW/cm2)
WLAN 2.4G	2412-2462	17.77	17.77±1	18.77	75.33555637	2.2	1.66	20	0.024880155	1

----- End of the report ------