



# SAR Exemption Evaluation Report

Product Name : Wireless Adaptor  
Model No. : CUHYA-0081  
FCC ID : SZGCUHYA0081

Applicant : Weifang GoerTek Electronics Co.,Ltd.  
Address : Gaoxin 2 Road,Free Trade Zone, Weifang, Shandong,  
261205,P.R.China

Date of Receipt : Aug. 22nd, 2017  
Test Date : Aug. 22nd, 2017~ Sep. 10th, 2017  
Issued Date : Sep. 21st, 2017  
Report No. : 1782104R-RF- US- P20V02  
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, A2LA any agency of the government.

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# Test Report Certification

Issued Date : Sep. 21st,, 2017

Report No. : 1782104R-RF-US-P20V02



Product Name : Wireless Adaptor  
Applicant : Weifang GoerTek Electronics Co.,Ltd.  
Address : Gaoxin 2 Road,Free Trade Zone, Weifang, Shandong,  
261205,P.R.China  
Manufacturer : Weifang GoerTek Electronics Co.,Ltd.  
Address : Gaoxin 2 Road,Free Trade Zone, Weifang, Shandong,  
261205,P.R.China  
Model No. : CUHYA-0081  
FCC ID : SZGCUHYA0081  
EUT Voltage : DC 5V  
Test Voltage : AC 120V/60Hz  
Applicable Standard : KDB 447498D01V06  
FCC Part1.1310  
Test Result : Complied  
Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.  
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,  
Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Registration Number: CN1199

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## 1. RF Exposure Evaluation

### 1.1. Limits

According to **KDB 447498 D01 General RF Exposure Guidance v06**

#### 4.3.1 Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] \cdot [f(\text{GHz})]$$

$\leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

a)  $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$ , at 100 MHz to 1500 MHz

b)  $[\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$  at  $> 1500$  MHz and  $\leq 6$  GHz

3) The 1-g and 10-g SAR test exclusion thresholds for below 100 MHz at test separation distances  $\leq 50$  mm are determined by:

a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm

b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm

c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable. Note: when the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

**1.2. Test Procedure**

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18 and 78% RH.

**1.3. Test Result of RF Exposure Evaluation**

Product Name	:	Wireless Adaptor
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

● **Antenna Gain:**

Antenna manufacturer	N/A		
Antenna Delivery	<input checked="" type="checkbox"/> 1*TX+1*RX	<input type="checkbox"/> 2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX
Antenna technology	<input checked="" type="checkbox"/> SISO		
	<input type="checkbox"/> MIMO	<input type="checkbox"/> Basic	
		<input type="checkbox"/> CDD	
		<input type="checkbox"/> Beam-forming	
Antenna Type	<input type="checkbox"/> External	<input type="checkbox"/> Dipole	
	<input checked="" type="checkbox"/> Internal	<input type="checkbox"/> PIFA	
		<input type="checkbox"/> PCB	
		<input checked="" type="checkbox"/> Ceramic Chip Antenna	
		<input type="checkbox"/> Stamping Antenna	
		<input type="checkbox"/> Metal plate type F antenna	
Antenna Gain #0	-3.71dBi		
Antenna Gain #1	-3.71dBi		

Based on The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm and the formula below:

$$\text{Estimated SAR} = \sqrt{f(\text{GHz})} * \frac{(\text{Max Power of channel, mW})}{\text{Min. Separation Distance, mm}}$$

Band	Exposure Condition	Pmax	Pmax	Distance	f(GHz)	calculation result	Stand-alone Test exclusion threshold	SAR Test
		(dBm)	(mw)	(mm)				
BLE	Body	4.16	2.61	5	2.47	0.82	3.0	No

Conclusion: 2402MHz-2480MHz SAR was not required.

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