

RF Exposure Evaluation Declaration

Product Name : Unattended Payment Terminal
Model No. : xUPT-303
FCC ID : MQT-XUPT303
IC : 6692A-XUPT303

Applicant : XAC AUTOMATION CORP.

Address : No. 30, Industry E. Rd. IX, Science-based
Industrial Park, Hsinchu City 30075, Taiwan,

Date of Receipt : Mar. 09, 2015

Issued Date : Mar. 20, 2015

Report No. : 1530156R-RF-US-P20V01

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 or any agency of the government.

The test report shall not be reproduced without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : Mar. 20, 2015

Report No. : 1530156R-RF-US-P20V01



Product Name : Stereo Bluetooth/Corded headset
 Applicant : XAC AUTOMATION CORP.
 Address : No. 30, Industry E. Rd. IX, Science-based Industrial
 Park, Hsinchu City 30075, Taiwan,
 Manufacturer : XAC AUTOMATION CORP.
 Address : No. 30, Industry E. Rd. IX, Science-based Industrial
 Park, Hsinchu City 30075, Taiwan,
 Model No. : xUPT-303
 FCC ID : MQT-XUPT303
 IC : 6692A-XUPT303
 Brand Name : XAC
 EUT Voltage : DC12V/3A
 Applicable Standard : KDB 447498D01V05V02
 FCC Part1.1310(b)
 RSS-102: Issue 4, March, 2010
 Test Result : Complied
 Performed Location : Suzhou EMC Laboratory
 No.99 Hongye Rd., Suzhou Industrial Park Loufeng
 Hi-Tech Development Zone., Suzhou, China
 TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098
 FCC Registration Number: 800392; IC Lab Code: 4075B

Documented By : Alice Ni
 Reviewed By : Dream Cao
 Approved By : Jeff Chen

Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

| | | |
|----------------------|----------|-----------------------|
| Taiwan R.O.C. | : | BSMI, NCC, TAF |
| Germany | : | TUV Rheinland |
| Norway | : | Nemko, DNV |
| USA | : | FCC |
| Japan | : | VCCI |
| China | : | CNAS |

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site :<http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site :
<http://www.quietek.com/>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :

No.75-2, 3rd Lin, Wangye Keng, Yongxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory :

No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

Suzhou Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency Range (MHz) | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm ²) | Average Time (Minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| (A) Limits for Occupational/ Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100,000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/ Uncontrolled Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100,000 | -- | -- | 1 | 30 |

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

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°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

| | | |
|-----------|---|-----------------------------|
| Product | : | Unattended Payment Terminal |
| Test Item | : | RF Exposure Evaluation |
| Test Site | : | AC-6 |

- Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 13dBi in logarithm scale.

- Output Power into Antenna & RF Exposure Evaluation Distance:

| Frequency Band (MHz) | Maximum Output Power to Antenna (mW) | Power Density at R = 20 cm (mW/cm ²) |
|----------------------|--------------------------------------|--|
| 13.56 MHz | 0.0002 | 0.000001 |

Note:

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm².

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