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Report No.: 1410RSU01402 Report Version: V01 Issue Date: 10-27-2014

RF Exposure Evaluation Declaration

FCC ID: 2ADFRP161WB5M

APPLICANT: Shenzhen YITOA Digital Appliance Co., Ltd.

Certification **Application Type:**

Product: petcube

Model No.: petcube

Digital Transmission System (DTS) **FCC Classification:**

Oct. 19 ~ 25, 2014 **Test Date:**

Reviewed By : Robin Wu (Robin Wu)

Approved By : Marlinchen

(Marlin Chen)

The test results relate only to the samples tested.

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

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Revision History

| Report No. | Version | Description | Issue Date |
|--------------|---------|----------------|------------|
| 1410RSU01402 | Rev. 01 | Initial report | 10-27-2014 |
| | | | |



1. RF Exposure Evaluation

1.1. Limits

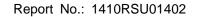
SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in Note 1 must be applied to determine SAR test exclusion.

| MHz | 5 | 10 | 15 | 20 | 25 | mm |
|------|-----|-----|-----|-----|-----|-----------|
| 150 | 39 | 77 | 116 | 155 | 194 | SAR Test |
| 300 | 27 | 55 | 82 | 110 | 137 | Exclusion |
| 450 | 22 | 45 | 67 | 89 | 112 | Threshold |
| 835 | 16 | 33 | 49 | 66 | 82 | (mW) |
| 900 | 16 | 32 | 47 | 63 | 79 | |
| 1500 | 12 | 24 | 37 | 49 | 61 | |
| 1900 | 11 | 22 | 33 | 44 | 54 | |
| 2450 | 10 | 19 | 29 | 38 | 48 | |
| 3600 | 8 | 16 | 24 | 32 | 40 | |
| 5200 | 7 | 13 | 20 | 26 | 33 | |
| 5400 | 6 | 13 | 19 | 26 | 32 | |
| 5800 | 6 | 12 | 19 | 25 | 31 | |
| | | | | | | |
| MHz | 30 | 35 | 40 | 45 | 50 | mm |
| 150 | 232 | 271 | 310 | 349 | 387 | SAR Test |
| 300 | 164 | 192 | 219 | 246 | 274 | Exclusion |
| 450 | 134 | 157 | 179 | 201 | 224 | Threshold |
| 835 | 98 | 115 | 131 | 148 | 164 | (mW) |
| 900 | 95 | 111 | 126 | 142 | 158 | |
| 1500 | 73 | 86 | 98 | 110 | 122 | |
| 1900 | 65 | 76 | 87 | 98 | 109 | |
| 2450 | 57 | 67 | 77 | 86 | 96 | |
| 3600 | 47 | 55 | 63 | 71 | 79 | |
| 5200 | 39 | 46 | 53 | 59 | 66 | |
| 5400 | 39 | 45 | 52 | 58 | 65 | |
| 5800 | 37 | 44 | 50 | 56 | 62 | |

Note 1:

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





[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * $[\sqrt{f(GHz)}] \le 3.0$ for 1-g SAR and ≤ 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.



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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 | petcube |
|-----------|------------------------|
| Test Item | RF Exposure Evaluation |

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 4.59dBi for 2.4GHz in logarithm scale.

Output Power into Antenna:

| Test Mode | Frequency Band (MHz) | Maximum output power to antenna (mW) | SAR Test Exclusion Threshold (mW) |
|-------------|----------------------|--------------------------------------|--------------------------------------|
| 802.11b/g/n | 2412~2462 | 9.04 | 10 |

Per FCC KDB 447498 D01v05r02, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)}*\sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum conducted power of Wi-Fi and the antenna to use separation distance, Wi-Fi SAR was not required;

 $[(9.04 \text{mW/5})^* \sqrt{2.412}] = 2.808 < 3.0.$

Note: When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

_____ The End