



RF Exposure Evaluation Declaration

FCC ID: 2A13G-A7210

APPLICANT: Pico Technology Co., Ltd.

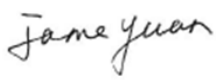
Application Type: Certification


Product: VR All-In-One Headset

Model No.: A7210

Brand Name: 

FCC Classification: FCC Part 15 Spread Spectrum Transmitter(DSS)
Digital Transmission System (DTS)

Reviewed By : 
(Jame Yuan)

Approved By : 
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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 | Note |
|--------------|---------|----------------|------------|-------|
| 1705RSU04204 | Rev. 01 | Initial report | 06-07-2017 | Valid |
| | | | | |

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 Exclusion Threshold (mW) |
| 300 | 27 | 55 | 82 | 110 | 137 | |
| 450 | 22 | 45 | 67 | 89 | 112 | |
| 835 | 16 | 33 | 49 | 66 | 82 | |
| 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 Exclusion Threshold (mW) |
| 300 | 164 | 192 | 219 | 246 | 274 | |
| 450 | 134 | 157 | 179 | 201 | 224 | |
| 835 | 98 | 115 | 131 | 148 | 164 | |
| 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: 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:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * \sqrt{f(\text{GHz})} \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ 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 ≤ 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.

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 | VR All-In-One Headset |
| Test Item | RF Exposure Evaluation |

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.4dBi 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) |
|-----------|----------------------|--------------------------------------|-----------------------------------|
| Bluetooth | 2402 ~ 2480 | 2.34 | 96 |
| WLAN | 2412 ~ 2462 | 28.97 | 96 |

Per FCC KDB 447498 D01v06, the SAR exclusion threshold for distances < 50mm is defined by the following equation:

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

Based on the maximum conducted power of Bluetooth & WLAN and the antenna to use separation distance, Bluetooth & WLAN SAR was not required;

Bluetooth: $[(2.34\text{mW}/50) * \sqrt{2.441}] = 0.0731 < 3.0$

WLAN: $[(28.97\text{mW}/50) * \sqrt{2.412}] = 0.8998 < 3.0$

Both of the WLAN 2.4GHz Band and WLAN 5GHz Band can transmit simultaneously.

The Max $P_d = 0.0731 + 0.8998 = 0.9729 < 3.0$

Note: The actual closest distance (From head to the device antenna) is 59.64 mm which is declared by the manufacturer. According to FCC KDB 447498 D01v06, the device can be applied to determine SAR test exclusion.

_____ The End _____