

# SAR Exemption Evaluation Report

Product Name : VR  
Model No. : MiV1  
FCC ID : 2AFZZ-XMVRVRMIV1

Applicant : Xiaomi Communications Co.,Ltd  
Address : The Rainbow City Office Building,68 Qinghe Middle  
Street Haidian District,Beijing 100085 China

Date of Receipt : Aug. 08, 2016  
Test Date : Aug. 10, 2016~ Oct. 28, 2016  
Issued Date : Nov. 23, 2016  
Report No. : 1682040R-RF-US-P20V02  
Report Version : V1.1

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 CNAS, TAF any agency of the government.

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

## Test Report Certification

Issued Date : Nov. 23, 2016

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Product Name : VR  
Applicant : Xiaomi Communications Co.,Ltd  
Address : The Rainbow City Office Building,68 Qinghe Middle  
Street Haidian District,Beijing 100085 China  
Manufacturer : Shanghai MeetVR Tech. Co., Ltd  
Address : Caohejing High - tech Park, No.668 Xinzhuan Road,  
Songjiang District ,Shanghai China  
Model No. : MiV1  
FCC ID : 2AFZZ-XMVRVRMIV1  
EUT Voltage : DC 3.3V  
Applicable Standard : KDB 447498 D01v06  
Test Result : Complied  
Performed Location : Quietek Corporation - Suzhou EMC Laboratory  
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FCC Registration Number: 800392;

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## History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1682040R-RF-US-P20V02	V1.0	Initial Issued Report	Nov. 04, 2016
1682040R-RF-US-P20V02	V1.1	Modified the FCC ID	Nov. 23, 2016

## 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:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>BSMI, NCC, TAF</b>
<b>USA</b>	<b>:</b>	<b>FCC</b>
<b>Japan</b>	<b>:</b>	<b>VCCI</b>
<b>China</b>	<b>:</b>	<b>CNAS</b>

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/english/about/certificates.aspx?bval=5>  
The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : [http://www.quietek.com/index\\_en.aspx](http://www.quietek.com/index_en.aspx)

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

### **HsinChu Testing Laboratory :**

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### **LinKou Testing Laboratory :**

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### **Suzhou Testing Laboratory :**

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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:

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

$\leq 3.0$  for 1-g SAR and  $\leq 7.5$  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  $\leq 50$  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)  $\left[ \text{Power allowed at numeric threshold for 50 mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot \left( \frac{f(\text{MHz})}{150} \right) \right]$  mW, at 100 MHz to 1500 MHz
- b)  $\left[ \text{Power allowed at numeric threshold for 50 mm in step 1} + (\text{test separation distance} - 50 \text{ mm}) \cdot 10 \right]$  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  $\left[ 1 + \log(100/f(\text{MHz})) \right]$  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°C and 78% RH.

## 1.3. Test Result of RF Exposure Evaluation

Product	:	VR
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

### ● Antenna Gain:

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"/>	Metal plate type F antenna		
			<input type="checkbox"/>	Dipole		
Antenna Gain	2dBi					

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 (dBm)	Pmax (mw)	Distance (mm)	f(GHz)	calculation result	Stand-alone Test exclusion threshold	SAR Test
BT	Body	0.01	1.0023	5	2.480	0.316	3.00	No

Conclusion: 2400MHz-2480MHz SAR was not required.

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