



# RF Exposure Evaluation

## FCC ID: 2AF2R-HB168RX

### 1. Client Information

<b>Applicant</b>	:	Shenzhen Videotimes Technology Co., Ltd
<b>Address</b>	:	Room 2106, Building 11, Tianan Yungu Phase II(Plot of Land 02-08), Gangtou Community, Bantian Street, Longgang District, Shenzhen, Guangdong.China.
<b>Manufacturer</b>	:	Shenzhen Videotimes Technology Co., Ltd
<b>Address</b>	:	Room 2106, Building 11, Tianan Yungu Phase II(Plot of Land 02-08), Gangtou Community, Bantian Street, Longgang District, Shenzhen, Guangdong.China.

### 2. General Description of EUT

<b>EUT Name</b>	:	2.4GHz Digital Wireless Audio Parent Unit	
<b>Model(s) No.</b>	:	HB168, VT168, BBM800, JA2001, BG1001, BL9001, VV6001	
<b>Model Difference</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is different customers, different model name.	
<b>Product Description</b>	:	Operation Frequency:	Bluetooth 5.2(BR+EDR): 2402MHz~2480MHz
	:	Number of Channel:	79 channels
	:	Antenna Gain:	2.05dBi Monopole antenna
	:	Modulation Type:	GFSK, Pi/4-DQPSK, 8-DPSK
<b>Power Supply</b>	:	AC Adapter #1 (Model: K05V050100U): Input: 100-240V~50/60Hz, 0.2A Output: 5.0V=1.0A AC Adapter #2 (Model: A318-050100W-US2): Input: 100-240V~50/60Hz, 0.2A Output: 5.0V=1.0A	
<b>Software Version</b>	:	1.0	
<b>Hardware Version</b>	:	1.0	
<b>Remark:</b> The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.			

**Note:** More test information about the EUT please refer the RF Test Report.

## SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance  $\leq 5$  mm are determined by:

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

$$\frac{[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}]}{\leq 7.5.0 \text{ for 10-g SAR}}$$



**2. Calculation:**

Test separation: 5mm						
Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	8.387	8±1	9	7.943	2.462	3.0
2.441	6.345	6±1	7	5.012	1.566	3.0
2.480	4.540	4±1	5	3.162	0.996	3.0
Bluetooth Mode (Pi/4-DQPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	8.536	8±1	9	7.943	2.462	3.0
2.441	6.559	6±1	7	5.012	1.566	3.0
2.480	4.723	4±1	5	3.162	0.996	3.0
Bluetooth Mode (8-DPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	8.419	8±1	9	7.943	2.462	3.0
2.441	6.433	6±1	7	5.012	1.566	3.0
2.480	4.600	4±1	5	3.162	0.996	3.0

**Conclusion:**

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

-----END OF THE REPORT-----

