RF Exposure Evaluation

FCC ID: 2APJC-V7

1. Client Information

Applicant : Shenzhen Vitel Electronic Co., Limited

Address : 4F, Bldg C, Zhenhan Industrial Park, Zhenhan Road, Gankeng, Buji, Longgang District, Shenzhen, China

Manufacturer : Shenzhen Vitel Electronic Co., Limited

Address : 4F, Bldg C, Zhenhan Industrial Park, Zhenhan Road, Gankeng, Buji, Longgang District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Wireless Earphone	
Models No.	:	V7, V6, V8, V9, V10, VS2, VS6, V316T, V358, VXX(X=0-9, X=A-Z)	
Model Difference	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is model name for commercial.	
Product Description	:	Operation Frequency:	Bluetooth V4.2: 2402~2480 MHz
		RF Output Power:	GFSK: 4.734dBm π/4-DQPSK: 4.311dBm 8-DPSK: 4.400dBm
		Antenna Gain:	1.2dBi Ceramic Antenna
Power Supply	:	Battery Box DC Voltage Supply from USB Port. Earphone DC Supply by the Li-ion Battery and Battery Box.	
Power Rating	:	Battery Box DC 5.0 V from the USB Cable. Earphone DC 3.7V by 50mAh Li-ion Battery.	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

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

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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≤5 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤3.0 for 1-g SAR
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤7.5.0 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	4.022	4±1	5	3.162	0.980	**3.0**
2.441	4.734	4±1	5	3.162	0.988	**3.0**
2.480	4.288	4±1	5	3.162	0.996	**3.0**
Bluetooth Mode (π/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	3.603	4±1	5	3.162	0.980	**3.0**
2.441	4.311	4±1	5	3.162	0.988	**3.0**
2.480	3.936	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	3.659	4±1	5	3.162	0.980	**3.0**
2.441	4.400	4±1	5	3.162	0.988	**3.0**
2.480	3.980	4±1	5	3.162	0.996	**3.0**

So standalone SAR measurements are not required.

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