RF Exposure Evaluation

FCC ID: 2BE3V-ZB10

1. Client Information

Applicant	:	Shenzhen Peicheng Technology Co.,Ltd
Address	:	5th Floor, Building 64, Baotian Industrial Zone, Chentian Community, Xixiang Street, Baoan District, Shenzhen City, China
Manufacturer	:	Shenzhen Peicheng Technology Co.,Ltd
Address	:	5th Floor, Building 64, Baotian Industrial Zone, Chentian Community, Xixiang Street, Baoan District, Shenzhen City, China

2. General Description of EUT

EUT Name	:	Tablet	
Model(s) No.	:	ZB10, ZB10S,YQ10S, AT10	
Model Difference	:	All of these models are identical in the same PCB, layout and circuit, the only difference is that the model names.	
Product Description	:	Operation Frequency:	Bluetooth&LE 5.2: 2402~2480MHz 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11ax(HE20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz 802.11ax(HE40): 2422MHz~2452MHz
		Number of Channel:	79/40 channels 802.11b/g/n(HT20)/ax(HE20):11 channels 802.11n(HT40)/ax(HE40): 7 channels
		Antenna Gain:	1.24dBi FPC Antenna
Power Supply	:	Adapter: FX2U-050200U Output: DC 5V, 2A, 0.4A	
Li-ion Polymer Battery	:	DC 3.8V by 6000mAh Rechargeable Li-ion battery	
Software Version	:	ZB10S-A12GO-V1.0	
Hardware Version	:	R862T-RK3326S-V1.0-C	

Remark:
(1) The antenna gain and adapter provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.
(2) The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

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	1.844	1±1	2	1.585	0.491	**3.0**
2.441	0.889	0±1	1	1.259	0.393	**3.0**
2.480	2.498	2±1	3	1.995	0.628	**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	2.348	2±1	3	1.995	0.618	**3.0**
2.441	1.487	1±1	2	1.585	0.495	**3.0**
2.480	0.600	0±1	1	1.259	0.397	**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	2.614	2±1	3	1.995	0.618	**3.0**
2.441	1.723	1±1	2	1.585	0.495	**3.0**
2.480	0.860	0±1	1	1.259	0.397	**3.0**
Bluetooth LE Mode(1Mbps)						
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	2.279	2±1	3	1.995	0.618	**3.0**
2.440	3.125	3±1	4	1.585	0.495	**3.0**
2.480	1.956	1±1	2	1.259	0.397	**3.0**
Bluetooth LE Mode(2Mbps)						
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	3.559	3±1	4	2.512	0.779	**3.0**
2.440	3.370	3±1	4	2.512	0.785	**3.0**
2.480	2.957	2±1	3	1.995	0.628	**3.0**

Test separation: 5mm						
2.4G Wi-Fi 802.11b						
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
2.462	7.99	7±1	8	6.310	1.980	**3.0**
2.4G Wi-Fi 802.11g						
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
2.412	7.51	7±1	8	6.310	1.960	**3.0**
2.4G Wi-Fi 802.11n20						
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
2.412	7.54	7±1	8	6.310	1.960	**3.0**
2.4G Wi-Fi 802.ax20						
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
2.412	7.82	7±1	8	6.310	1.960	**3.0**
2.4G Wi-Fi 802.11n40						
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
2.422	7.86	7±1	8	6.310	1.964	**3.0**
2.4G Wi-Fi 802.ax40						
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
2.422	8.36	8±1	9	7.943	2.472	**3.0**
only show the worst case data.						

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.

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