RF Exposure Evaluation

FCC ID: 2BAYZ-CP20

1. Client Information

Applicant	:	shenzhenshizhenchuansujiaozhipinyouxiangongsi
Address	:	1st Floor, 4th Floor, 5th Floor, Building B, Jintai Industrial Park, Hangcheng Avenue, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China.
Manufacturer	:	shenzhenshizhenchuansujiaozhipinyouxiangongsi
Address	:	1st Floor, 4th Floor, 5th Floor, Building B, Jintai Industrial Park, Hangcheng Avenue, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China.

2. General Description of EUT

EUT Name	:	tablet	
Model(s) No.	:	CP20, CP80, CP81, CP10, YQ10S, Q2	
Model Difference	:	All PCB boards and circuit diagrams are the same, the only difference is that appearance and model names.	
Product Description	:	Operation Frequency:	Bluetooth V4.1: 2402MHz~2480MHz Bluetooth 4.1(BLE): 2402MHz~2480MHz 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
		RF Output Power:	BT: 0.276dBm BLE: -1.581dBm 802.11b: -0.12dBm 802.11g: -2.401dBm 802.11n (HT20): -2.482dBm 802.11n (HT40): 0.716dBm
		Antenna Gain:	0.8dBi PIFA Antenna
Power Supply	:	Adapter Model: FX2U-050200U Input: AC 100-240V~ 50/60Hz 0.4A Max Output: 5V⎓2A	
Li-ion Polymer Battery	:	DC 3.85V by 6000mAh Rechargeable Li-ion battery	
Software Version	:	v1.0	
Hardware Version	:	R862-RK3326-LPDDR-V1.0	
Remark: The antenna gain and adapter provided by the applicant, 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.

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The RF Exposure Evaluation for FCC:

SAR Test Exclusion Calculations

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{\text{th}}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ \text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

Calculation:

Bluetooth&2.4GWIFI						
Mode	Frequency (MHz)	Conducted Output Power (dBm)	Antenna (dBi)	Tolerance ± (dB)	Output power (Max. Turn-up Procedure) (mW)	Limit P_{th}(mW)
2.4G WIFI 802.11 b	2412	-0.12	0.8	1±1	1.585	3
	2437	-1.07	0.8	0±1	1.259	3
	2462	-0.746	0.8	0±1	1.259	3
2.4G WIFI 802.11g	2412	-2.719	0.8	-2±1	0.794	3
	2437	-2.895	0.8	-2±1	0.794	3
	2462	-2.401	0.8	-2±1	0.794	3
2.4G WIFI 802.11n(HT20)	2412	-2.949	0.8	-2±1	0.794	3
	2437	-2.926	0.8	-2±1	0.794	3
	2462	-2.482	0.8	-2±1	0.794	3
2.4G WIFI 802.11n(HT40)	2422	-3.111	0.8	-2±1	0.794	3
	2437	-2.084	0.8	-1±1	1.000	3
	2452	0.716	0.8	2±1	1.995	3
GFSK	2402	0.159	0.8	1±1	1.585	3
	2441	-0.925	0.8	0±1	1.259	3
	2480	0.276	0.8	1±1	1.585	3
π/4-DQPSK	2402	-0.775	0.8	0±1	1.259	3
	2441	-1.791	0.8	-1±1	1.000	3
	2480	-0.581	0.8	0±1	1.259	3
8-DPSK	2402	-0.818	0.8	0±1	1.259	3
	2441	-1.801	0.8	-1±1	1.000	3
	2480	-0.576	0.8	0±1	1.259	3
BLE (1Mbps)	2402	-2.168	0.8	-1±1	1.000	3
	2440	-1.581	0.8	-1±1	1.000	3
	2480	-2.646	0.8	-2±1	0.794	3
BLE (2Mbps)	2402	-2.206	0.8	-1±1	1.000	3
	2440	-1.615	0.8	-1±1	1.000	3
	2480	-2.708	0.8	-2±1	0.794	3
Test separation: 5mm						

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, No SAR is required.

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