

RF Exposure Evaluation

FCC ID: 2AL64-WESTGATE

1. Client Information

Applicant : Shenzhen qiuyu Electronic Co.,Ltd
Address : 3F, E Building, Hongzhuyongqi Industrial Park, Lezhujiao village, xixiang town, Bao'an District, Shenzhen, China
Manufacturer : Shenzhen qiuyu Electronic Co.,Ltd
Address : 3F, E Building, Hongzhuyongqi Industrial Park, Lezhujiao village, xixiang town, Bao'an District, Shenzhen, China

2. General Description of EUT

EUT Name	:	Tablet PC
Models No.	:	PTV-R78-3288, Westgate Owner Tablet
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:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz Bluetooth V4.0(BLE): 2402~2480 MHz
	RF Output Power:	802.11b: 8.47 dBm 802.11g: 8.69 dBm 802.11n (HT20): 8.91 dBm 802.11n (HT40): 8.41 dBm Bluetooth: 1.505 dBm(GFSK) BLE: -3.54 dBm
	Antenna Gain:	1.4 dBi Integral Antenna
Power Supply	:	DC Voltage supplied by AC/DC Adapter DC Voltage supplied by Li-ion battery
Power Rating	:	AC/DC Adapter (K-T100502000U): Input: AC 100~240V, 50/60Hz, 0.35A. Output: DC 5V, 2.0A. DC 3.7V by 3500mAh 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.

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:

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

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

2.Calculation:

Test separation: 5mm						
WiFi Mode(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
2.412	8.47	8 ± 1	9	7.943	2.467	3.0
2.437	7.85	8 ± 1	9	7.943	2.480	3.0
2.462	6.95	8 ± 1	9	7.943	2.493	3.0
WiFi Mode(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	8.52	8 ± 1	9	7.943	2.467	3.0
2.437	8.69	8 ± 1	9	7.943	2.480	3.0
2.462	7.97	8 ± 1	9	7.943	2.493	3.0
WiFi Mode(802.11n(HT20))						
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	8.91	8 ± 1	9	7.943	2.467	3.0
2.437	8.72	8 ± 1	9	7.943	2.480	3.0
2.462	8.48	8 ± 1	9	7.943	2.493	3.0
WiFi Mode(802.11n(HT40))						
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	8.41	8 ± 1	9	7.943	2.472	3.0
2.437	8.31	8 ± 1	9	7.943	2.480	3.0
2.452	8.28	8 ± 1	9	7.943	2.488	3.0

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	1.480	1.5 ± 0.5	2	1.585	0.491	3.0
2.441	1.505	1.5 ± 0.5	2	1.585	0.495	3.0
2.480	1.474	1.5 ± 0.5	2	1.585	0.499	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	0.627	1.5 ± 0.5	2	1.585	0.491	3.0
2.441	0.654	1.5 ± 0.5	2	1.585	0.495	3.0
2.480	0.640	1.5 ± 0.5	2	1.585	0.499	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	0.817	1.5 ± 0.5	2	1.585	0.491	3.0
2.441	0.910	1.5 ± 0.5	2	1.585	0.495	3.0
2.480	0.889	1.5 ± 0.5	2	1.585	0.499	3.0
BLE 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	-4.115	-4 ± 1	-3	0.501	0.155	3.0
2.442	-3.540	-4 ± 1	-3	0.501	0.157	3.0
2.480	-3.690	-4 ± 1	-3	0.501	0.158	3.0

Test separation: 5mm			
The worst RF Exposure Evaluation			
Worst Calculation Value		Total Calculation Value	Threshold Value
WiFi Mode	Bluetooth Mode		
2.493	0.499	2.992	3.0

Because the WiFi and Bluetooth can be operated simultaneously, So the worst RF Exposure Evaluation is calculated as $2.493 + 0.499 = 2.992 / \text{cm}^2 < \text{limit } 3.0$, So standalone SAR measurements are not required.

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