

RF Exposure Evaluation

FCC ID: 2AEP6XM-JPG1-2

1. Client Information

Applicant : HangZhou XiongMai Technology CO., LTD
Address : 9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou, China
Manufacturer : HangZhou XiongMai Technology CO., LTD
Address : 9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street, Hangzhou, China

2. General Description of EUT

EUT Name	:	WarriorG1
Models No.	:	XM-JPG1-2, XM-JPG1-2S, XM-JPG1-4, XM-JPG1-4S, G1-2, G1-4S
Brand Name	:	XM
Models 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: WiFi: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	Number of Channel:	802.11b/g/n(HT20):11channels 802.11n(HT40): 7 channels
	Max Peak Output Power:	802.11b: 9.13 dBm 802.11g: 9.08 dBm 802.11n (HT20): 9.00 dBm 802.11n (HT40): 9.02 dBm
	Antenna Gain:	2 dBi PCB Antenna
	Modulation Type:	802.11b: CCK, DQPSK, DBPSK 802.11g: 64-QAM,QPSK,BPSK 802.11n: 64-QAM,16-QAM,QPSK,BPSK
Power Supply	:	DC Voltage supplied from Host System by USB cable. DC power by Li-ion Battery.
Power Rating	:	DC 5.0V by USB cable. DC 3.6V by 3400mAh 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.

TB-RF-074-1.0

SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v05r02.

- (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:

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

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

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 (mw)	Calculation Value	Threshold Value
2.412	9.12	±0.5	9.162	2.846	3.0
2.437	9.09	±0.5	9.099	2.841	3.0
2.462	9.13	±0.5	9.183	2.882	3.0
WiFi Mode(802.11g)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	9.01	±0.5	8.933	2.775	3.0
2.437	9.08	±0.5	9.078	2.834	3.0
2.462	9.05	±0.5	9.016	2.829	3.0
WiFi Mode(802.11n(HT20))					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	8.97	±0.5	8.851	2.749	3.0
2.437	8.98	±0.5	8.872	2.770	3.0
2.462	9.00	±0.5	8.913	2.797	3.0
WiFi Mode(802.11n(HT40))					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	9.02	±0.5	8.954	2.781	3.0
2.437	8.99	±0.5	8.892	2.776	3.0
2.452	8.87	±0.5	8.650	2.714	3.0

So standalone SAR measurements are not required.