


RF Exposure Evaluation

FCC ID: 2A4MW-MWE360

1. Client Information

Applicant	:	Marvel Technology(China)Co., Ltd
Address	:	Block 14, Longbi Industrial Park, No 27, Dafa Rd, Bantian LongGang District, Shenzhen, China
Manufacturer	:	Marvel Technology(China)Co., Ltd
Address	:	Block 14, Longbi Industrial Park, No 27, Dafa Rd, Bantian LongGang District, Shenzhen, China

2. General Description of EUT

EUT Name	:	360 photobooth
Model(s)	:	MWE360, MWE869, MWE361, MWE362, MWE363
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, The only difference is Rotary table diameter size difference.
Brand Name	:	 MARVEL
Product Description	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz
	Number of Channel:	40 channels
	RF Output Power:	-3.33dBm (Max)
	Antenna Gain:	2.0dBi PCB Antenna
	Modulation Type:	GFSK(1M&2M bps)
Power Rating	:	AC/DC Adapter(SPF-2403) Input: AC100-240V 50/60Hz Output: DC 24V3A
Software Version	:	V1.0
Hardware Version	:	V1.0
Connecting I/O Port(S)	:	Please refer to the User's Manual
Remark: The antenna gain provided by the applicant, the adapter and 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.

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						
BLE (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	-5.03	-5 ± 1	-4.0	0.398	0.123	3.0
2.440	-3.96	-3 ± 1	-2.0	0.631	0.197	3.0
2.480	-3.66	-3 ± 1	-2.0	0.631	0.199	3.0

Test separation: 5mm						
BLE (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	-4.90	-4 ± 1	-3.0	0.501	0.155	3.0
2.440	-3.74	-3 ± 1	-2.0	0.631	0.197	3.0
2.480	-3.33	-3 ± 1	-2.0	0.631	0.199	3.0

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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