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# RF Exposure Evaluation Report

**Report No.:** CQASZ20200901047E-02  
**Applicant:** Shenzhen Leaderment Technology Co.,Ltd  
**Address of Applicant:** 1st Floor, Building 24, Longcheng Industrial Zone, No. 39 Longguan West Road, Gaofeng Community, Dalang Street, Longhua District, Shenzhen  
**Equipment Under Test (EUT):**  
**EUT Name:** MAGIC PICTURE  
**Model No.:** ATSS001, ATSS002, ATSS029, ATSS031, ATSS024, ATSS052, ATSS055, ATSS056  
**Test Model No.:** ATSS055  
**Brand Name:** Atumtek  
**FCC ID:** 2ASUP-ATSS055  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2020-09-10  
**Date of Test:** 2020-09-10 to 2020-09-28  
**Date of Issue:** 2020-09-28  
**Test Result:** PASS\*

\*In the configuration tested, the EUT complied with the standards specified above

**Tested By:** Martin Lee  
( Martin Lee )

**Reviewed By:** Sheek Luo  
( Sheek Luo )

**Approved By:** Jack Ai  
( Jack Ai )



## 1 Version

### Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20200901047E-02	Rev.01	Initial report	2020-09-28

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### 3 General Information

#### 3.1 Client Information

Applicant:	Shenzhen Leaderment Technology Co.,Ltd
Address of Applicant:	1st Floor, Building 24, Longcheng Industrial Zone, No. 39 Longguan West Road, Gaofeng Community, Dalang Street, Longhua District, Shenzhen
Manufacturer:	Shenzhen Leaderment Technology Co.,Ltd
Address of Manufacturer:	1st Floor, Building 24, Longcheng Industrial Zone, No. 39 Longguan West Road, Gaofeng Community, Dalang Street, Longhua District, Shenzhen

#### 3.2 General Description of EUT

Product Name:	MAGIC PICTURE
Model No.:	ATSS001, ATSS002, ATSS029, ATSS031, ATSS024, ATSS052, ATSS055, ATSS056
Test Model No.:	ATSS055
Trade Mark:	Atumtek
EUT Supports Radios application:	Bluetooth dual mode: 2402-2480MHz
Hardware Version:	N/A
Software Version:	N/A
EUT Power Supply:	lithium battery:DC3.7V, Charge by DC5V

#### 3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Type:	GFSK
Transfer Rate:	1Mbps, 2Mbps
Number of Channel:	40
Sample Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Test Software of EUT:	Maxscend Bluetooth MP Toll(MXD2660x)1.17.08.13
Antenna Type:	PCB antenna
Antenna Gain:	0 dBi

Note:

Model No.: ATSS001, ATSS002, ATSS029, ATSS031, ATSS024, ATSS052, ATSS055, ATSS056

Only the model ATSS055 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being model name.

## 4 SAR Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})}]} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

### 4.1.3 EUT RF Exposure

#### 1) For BLE

##### Measurement Data

GFSK mode(1Mbps)				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-13.05	-13±1	-12	0.063
Middle(2440MHz)	-12.4	-12±1	-11	0.079
Highest(2480MHz)	-11.88	-12±1	-11	0.079
GFSK mode(2Mbps)				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-12.94	-12.5±1	-11.5	0.071
Middle(2440MHz)	-12.23	-12.5±1	-11.5	0.071
Highest(2480MHz)	-11.78	-12±1	-11	0.079

Worst case: GFSK mode(2Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-12.94	-12.5±1	-11.5	0.071	0.022	3.0
Middle (2440MHz)	-12.23	-12.5±1	-11.5	0.071	0.022	
Highest (2480MHz)	-11.78	-12±1	-11	0.079	0.025	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20200901047E-01  
BDR and BLE can not simultaneous transmitting at same time.