MRT Technology (Suzhou) Co., Ltd
Phone: +86-512-66308358
Web: www.mrt-cert.com

Report No.: 1803RSU015-U2
Report Version: V02
Issue Date: 10-18-2018

RF Exposure Evaluation Declaration

FCC ID: 2ACS5-YUNST6

APPLICANT: Yuneec Technology Co., Limited

Application Type: Certification

Product: mLP Transmitter

Model No.: BLH9910

Brand Name: Blade

FCC Classification: Digital Transmission System (DTS)

Test Procedure(s): KDB 447498 D01v06

Reviewed By : *Sunny Sun*
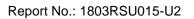(Sunny Sun)

Approved By : *Robin Wu*
(Robin Wu)

Revision History

Report No.	Version	Description	Issue Date	Note
1803RSU015-U2	Rev. 01	Initial Report	06-07-2018	Invalid
1803RSU015-U2	Rev. 02	Update Product Name, Model and Brand Name	10-18-2018	Valid

1.   PRODUCT INFORMATION

1.1. Equipment Description

Product Name	mLP Transmitter
Model No.	BLH9910
Brand Name	Blade
ZigBee Specification	802.15.4
Power Supply	By Battery (DC 3.7V)

1.2. Product Specification Subjective

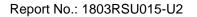|	
Frequency Range	802.15.4: 2405 ~ 2475 MHz
Type of Modulation	O-QPSK
Antenna Type	Dipole Antenna
Antenna Gain	1dBi

2. RF Exposure Evaluation

2.1. Limits

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in Note 1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test
300	27	55	82	110	137	Exclusion
450	22	45	67	89	112	Threshold
835	16	33	49	66	82	(mW)
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

MHz	30	35	40	45	50	mm
150	232	271	310	349	387	SAR Test
300	164	192	219	246	274	Exclusion
450	134	157	179	201	224	Threshold
835	98	115	131	148	164	(mW)
900	95	111	126	142	158	
1500	73	86	98	110	122	
1900	65	76	87	98	109	
2450	57	67	77	86	96	
3600	47	55	63	71	79	
5200	39	46	53	59	66	
5400	39	45	52	58	65	
5800	37	44	50	56	62	

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

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

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 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 according to 5) in section 4.1 is applied to determine SAR test exclusion.

2.2. Test Result of RF Exposure Evaluation

Product	mLP Transmitter
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum Output Power (dBm)	SAR Test Exclusion Threshold (mW)
ZigBee	2405 ~ 2475	9.82	10

Note: Per FCC KDB 447498 D01v06, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)} * \sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum conducted power of Bluetooth and the antenna to use separation distance, Bluetooth SAR was not required;

[(9.59mW/5)* √2.405] = 2.97 < 3.00

Note: When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

—————————————— The End ——————————————