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RF Exposure Evaluation Report

Report No. :	CQASZ20191001064E-02
Applicant:	Shenzhen minew technology share co., LTD
Address of Applicant:	3rd Floor, I Bulding, Gangzhilong Science Park, Qinglong Road Longhua District, Shenzhen City, China
Equipment Under Test (EUT):	
EUT Name:	Digital Broadcating Device(iBeacon and Eddystone)
Mode No.:	i10
Brand Name:	N/A
FCC ID:	2ABU6-I10
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2019-10-22
Date of Test:	2019-10-22 to 2019-10-28
Date of Issue:	2019-10-29
Test Result :	**PASS***

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

Tested By: Tom chen.

(Tom chen)

Reviewed By: Sheek Luo

(Sheek Luo)

Approved By:

(Jack Ai)

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20191001064E-02	Rev.01	Initial report	2019-10-29

2 Contents

3 General Information

3.1 Client Information

Applicant:	Shenzhen minew technology share co., LTD
Address of Applicant:	3rd Floor, I Bulding, Gangzhilong Science Park, Qinglong Road Longhua District, Shenzhen City, China
Manufacturer:	Shenzhen minew technology share co., LTD
Address of Manufacturer:	3rd Floor, I Bulding, Gangzhilong Science Park, Qinglong Road Longhua District, Shenzhen City, China

3.2 General Description of EUT

Product Name:	Digital Broadcating Device(iBeacon and Eddystone)
Model No.:	i10
Trade Mark:	N/A
Hardware Version:	V2.0
Software Version:	V2.X.X
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Type:	GFSK
Transfer Rate:	1Mbps, 2Mbps
Number of Channel:	40
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	nRFgo Studio (manufacturer declare)
Antenna Type:	PCB antenna
Antenna Gain:	1.27dBi
EUT Power Supply:	2 X AA battery:DC3V

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 ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(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[17]
The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

For BLE

Measurement Data

GFSK(1Mbps) mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.11	4.0±1	5	3.162
Middle(2440MHz)	3.93	4.0±1	5	3.162
Highest(2480MHz)	4.12	4.0±1	5	3.162
GFSK(2Mbps) mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.1	4.0±1	5	3.162
Middle(2440MHz)	3.9	4.0±1	5	3.162
Highest(2480MHz)	4.11	4.0±1	5	3.162

Worst case: GFSK(1Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	4.11	4.0±1	5	3.162	0.98	3.0
Middle (2440MHz)	3.93	4.0±1	5	3.162	0.99	
Highest (2480MHz)	4.12	4.0±1	5	3.162	1.00	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20191001064E-01.