RF Exposure Evaluation Declaration

Product Name	:	EZ-BLE Module with HomeKit
Model No.	:	CYBLE-413136-01
		CYBLE-473142-01
		CYBLE-413149-01
		CYBLE-473148-01
IC	:	7922A-3136

Applicant	:	Cypress Semiconductor
Address	:	198 Champion Ct, San Jose, California 95134
		United States

Date of Receipt	:	Mar. 30, 2018
Test Date	:	Mar. 30, 2018 ~ Apr. 11, 2018
Issued Date	:	Apr. 13, 2018
Report No.	:	1832181R-RF-CA-P20V02
Report Version	:	V 1.0

Test Report Certification

Issued Date : Apr. 13, 2018
Report No. : 1832181R-RF-CA-P20V01

Product Name	:	EZ-BLE Module with HomeKit
Applicant	:	Cypress Semiconductor
Address	:	198 Champion Ct, San Jose, California 95134 United States
Manufacturer	:	Wujiang Sigmatron Electronics Co., Ltd
Address	:	386 Huahong Rd, Wujiang, Suzhou, Jiangsu, China
Model No.	:	CYBLE-413136-01 CYBLE-473142-01 CYBLE-413149-01 CYBLE-473148-01
IC	:	7922A-3136
EUT Voltage	:	DC 3.0V-3.6V
Applicable Standard	:	RSS-102: Issue 5, 2015
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 IC Lab Code: 4075B

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Approved By : Harry Zhao

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1. RF Exposure Evaluation

1.1. Limits

From RSS-102 Issue 5, Section 2.5.1 Exemption

No SAR Evaluation Required if power is below the following threshold:

Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance[4,5]

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	EZ-BLE Module with HomeKit
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

- **Antenna Gain:**

Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Sectorized		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
			☐	Sectorized		
	☒	Internal	☐	PIFA		
			☒	PCB		
			☐	Ceramic Chip Antenna		
			☐	Metal plate type F antenna		

Antenna Technology	Ant Gain (dBi)
☒ SISO	-0.5

Maximum measured transmitter power:

Maximum conducted tune-up power is 8.4dBm

Frequency (MHz)	Pout Conducted (dBm)	Pout Conducted (mW)	Maximum Antenna Gain (dBi)	Pout EIRP (mW)
Bluetooth	8.4	6.918	-0.5	6.166

EIRP= PConducted+ Antenna Gain

Threshold for no SAR evaluation in 10mm is 7 mW

Maximum TX Power is 6.918mW Conducted and 6.166mW EIRP

Maximum TX Power is 6.918mW

Conclusion: No SAR evaluation required since maximum Transmitter Pout (both conducted and EIRP) is below IC threshold

Note: The distance between BT antenna and the shell is over 15mm, so we choose the distance of 15 mm to evaluate no SAR limit.

The End