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# RF Exposure Evaluation Report

**Report No. :** CQASZ20190300136E-02  
**Applicant:** ZAGG Inc.  
**Address of Applicant:** 910 West Legacy Center Way, Midvale, Utah, United States, 84047  
**Manufacturer:** ZAGG Inc.  
**Address of Manufacturer:** 910 West Legacy Center Way, Midvale, Utah, United States, 84047  
**Factory:** Cosonic Intelligent Technologies Co., Ltd  
**Address of Factory:** 506, 1st Building, No.6, South Industry Road, Songshan Lake National High-tech Industrial Development Zone, Dongguan City, Guangdong, China

**Equipment Under Test (EUT):**  
**Product:** Braven Earbuds Flye Sport  
**Model No.:** FLYE SPORT  
**Brand Name:** Braven  
**FCC ID:** QTG-BAICB12  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06

**Date of Test:** 2019-03-06 to 2019-03-12  
**Date of Issue:** 2019-03-12  
**Test Result :** PASS\*

**Tested By:**

*Daisy Qin*

(Daisy Qin)

**Reviewed By:**

*Aaron Ma*

(Aaron Ma)

**Approved By:**

*Jack Ai*  
( Jack Ai)



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

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.

## 1 Version

### Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190300136E-02	Rev.01	Initial report	2019-03-12

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### 3 General Information

#### 3.1 Client Information

Applicant:	ZAGG Inc.
Address of Applicant:	910 West Legacy Center Way, Midvale, Utah, United States, 84047
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#### 3.2 General Description of EUT

Product Name:	Braven Earbuds Flye Sport
Model No.:	FLYE SPORT
Trade Mark:	Braven
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V4.2
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Test Software of EUT:	ISRT Ver2.1.30.4913 (manufacturer declare )
Antenna Type:	Ceramic antenna
Antenna Gain:	0.5dBi
Power Supply:	lithium battery:DC3.7V, Charge by USB

Note: Only one model number: FLYE SPORT, but it comes in three colors (white, black, blue)

## 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:

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

#### Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.080	3.5±1	4.5	2.818
Middle(2441MHz)	4.470	3.5±1	4.5	2.818
Highest(2480MHz)	4.480	3.5±1	4.5	2.818
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.700	4.0±1	5.0	3.162
Middle(2441MHz)	5.000	4.5±1	5.5	3.548
Highest(2480MHz)	5.040	4.5±1	5.5	3.548
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.960	4.0±1	5.0	3.162
Middle(2441MHz)	5.250	4.5±1	5.5	3.548
Highest(2480MHz)	5.270	4.5±1	5.5	3.548

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	4.960	4.0±1	5.0	3.162	0.98	3.0
Middle (2441MHz)	5.250	4.5±1	5.5	3.548	1.11	
Highest (2480MHz)	5.270	4.5±1	5.5	3.548	1.12	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190300136E-01