



RF EXPOSURE EVALUATION

FCC ID: 2BRUZ-AR4

Product Name	:	aaboRing 4
Model Name	:	AR4XZ, AR4, AR4X, AR4P, AR4Z
Bluetooth Version	:	BT 5.1
Operating frequency	:	2402-2480MHz
Numbers of Channel	:	40 channels For DTS
Antenna Type	:	Ceramic antenna
Antenna Gain	:	2.28 dBi
Type of Modulation	:	GFSK
Power supply	:	Input: DC 5VA Li-ion Battery: 170724 Voltage: 3.7V Capacity: 16.5mAh 0.0611Wh The ring is charged wirelessly
Hardware Version	:	V1.0
Software Version	:	V1.0

Model difference:

AR4 is an downgraded version of AR4XZ, without the feature of the AI algorithms and the feature of 20 days battery life.

AR4X is an downgraded version of AR4XZ, without the feature of the AI algorithms.

AR4P is an extended version of AR4XZ, equipping the charging case of AR4 with the environment sensing function.

AR4Z is an downgraded version of AR4XZ, without the feature of 20 days battery life.



Standard Requirement

According to § 15.247(i) and § 1.1307b(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See KDB 447498 D01 General RF Exposure Guidance v06, section 4. 3. 1.

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

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

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison.

The test exclusions are applicable only when the minimum test separation distance is $\leq 50\text{mm}$ and for transmission frequencies between 100MHz and 6GHz. When the minimum test separation distance is $< 5\text{mm}$, a distance of 5mm is applied to determine SAR test exclusion. Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to quality for TCB approval.

Channel (MHz)	Maximum output power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Distance (mm)	Calculation results	Limit	Operating Mode
2402	1.18	1.18±1	1.651962	5	0.512055	3	BLE

According to KDB 447498, The device only support BT function, and no simultaneous SAR measurement is required.

Signature

A handwritten signature in black ink that reads "Simon Pu".

Simon Pu

Manager

Date: 2025-09-28