

FCC ID: 2AU3A-RCMBT

RF exposure evaluation

Statement of Compliance

This device has been evaluated for compliance with FCC RF exposure requirements in 47 CFR §2.1093, FCC KDB 447498 D01, and FCC KDB 865664 D02. Based on worst-case output power including tune-up, antenna gain, duty cycle where permitted, and the minimum test separation distance, the device meets the SAR test-exclusion thresholds of KDB 447498 D01 §4.3.1 and §4.3.2 for portable devices. No SAR measurement is required.

Evaluation Approach & References

§ 2.1093 Radiofrequency radiation exposure evaluation: Portable Devices.

Guidance: KDB 447498 D01 §4.3.1 and §4.3.2 (SAR test exclusion, 100 MHz–6 GHz) and KDB 865664 D02 (RF exposure reporting).

3. Device Description and Operating Modes

Product name:	Recon Bluetooth Electronic Muff
Prepared for:	Good Sportsman Marketing, LLC
Model:	GWP-RECM-BT
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Accessories:	None
Exposure conditions:	Portable (<5mm), general public
Restrictions:	None
Duty cycle:	100% for RF exposure evaluation

Because the worse-case exposure condition was considered, additional diagram of antenna position and separation are not necessary and therefore not provide.

Wireless technologies:

Bluetooth, 2.402 – 2.478 GHz, 79 channels

Output Power and Antenna Data

Output power:	2.56 dBm peak conducted
Antenna:	-0.58 dBi gain,

Manufacturer Tune-Up Declaration

GFSK (1Mbps):	2 dB
8DPSK:	3 dB

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SAR Exemption Calculation (KDB 447498 D01 §4.3.1 and §4.3.2)

All values used for RF exposure evaluation were taken from peak conducted output power measurements.

Radio report: BCTC2502584921-2E, Shenzen BCTC Testing Co., Ltd

Antenna datasheet: ZHUHAI JIELE TECHNOLOGY CO.,LTD “ANT SPEC”
Meander-style PCB planar antenna, 11.4. x 2.4mm

The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 5 mm are determined by:

- $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [f(\text{GHz})] \leq 3.0$ for 1-g 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
- When the minimum test separation distance is < 5 mm, a distance of 5 mm according I. is applied to determine SAR test exclusion.
- The result is rounded to one decimal place for comparison

Modulation	Frequency (GHz)	Max. Power (dBm)	Max. Tune up Power (dBm)	Max. Tune up Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
GFSK(1Mbps)	2.402	1.60	2.0	1.58	5	0.50	3.0
8DPSK	2.402	2.56	3.0	2.00	5	0.63	3.0

Notes:

1. The device is only capable of transmitting 1 signal at a time. Therefore, simultaneous transmission is not possible and was not considered.
2. Antenna gain is negative, so conducted output power was chosen as the worse-case condition.
3. Exposure limits for general public and head/torso were used.
4. Max power was measured with a PEAK detector

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Conclusion

Using the firmware-limited maximum power, antenna gain, the measured duty cycle, and a physically guaranteed minimum test separation distance, the EASEE Communicator meets the SAR test-exclusion thresholds of KDB 447498 D01. No SAR measurement is required for FCC equipment authorization.