



Certification Exhibit

FCC ID: 2ADCB-RMODIT3

FCC Rule Part: 47 CFR Part 2.1093

TÜV SÜD Project Number: 72165114

Manufacturer: Acuity Lighting Brands Inc.
Model: RMODIT3

RF Exposure

General Information:

Applicant: Acuity Lighting Brands Inc.
 Device Category: Portable
 Environment: General Population/Uncontrolled Exposure
 Exposure Conditions: Extremity

Model: RMODIT3 / FCC ID: 2ADCB-RMODIT3 is a pre-certified single modular approved radio integrated in the following host devices:

Acuity Lighting Brands Inc. nLight® AIR wall switch models rPODB, rPODL, rPODBA and rPODLA

The 915MHz radio is collocated and transmits simultaneously with the 2.4 GHz BLE radio.

Technical Information:**Table 1: Technical Information**

Detail	915MHz Radio	BLE Radio
Frequency Range	904 – 926MHz	2402 – 2480MHz
Number of Channels	12	40
Modulation Format	OQPSK DSSS	GFSK
Data Rates	100kbps	1Mbps
Operating Voltage	3.3Vdc	3.3Vdc
Antenna Type / Gain	Chip / 1dBi (Combination Chip / Trace)	Surface Mount / 3dBi (On-board module)
Maximum Conducted Power	86.70mW	9.95mW
Maximum EIRP	109.14mW	19.86mW
Duty Factor*	29%	4.8%
Source-based Time-averaged Maximum Conducted Power	25.14mW	0.48mW
Source-based Time-averaged Maximum EIRP	31.65mW	0.96mW
Minimum Test** Separation Distance	3.0mm (5mm***)	12.3mm

* Duty factor determination is provided in the theory of operation in the original certification filing.

** Minimum separation distance is the smallest distance from the antenna and radiating structures to the user from all host models.

** Per KDB 447498 D01 General RF Exposure Guidance v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Justification for SAR Test Exclusion:**Standalone SAR Test Exclusion:**

Per KDB 447498 D01 General RF Exposure Guidance v06, the standalone 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

915MHz Radio -

$$= (25 / 5) * (\sqrt{0.926}) = 4.8$$

$$4.8 < 7.5$$

2.4GHz BLE Radio -

$$= (0.5 / 12) * (\sqrt{2.48}) = 0.1$$

$$0.1 < 7.5$$

Standalone SAR test exclusion is applied for both radios.

Simultaneous Transmission SAR Test Exclusion:

When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.

When the standalone SAR test exclusion is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

$$(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})}/x] \text{ W/kg for test separation distances } \leq 50 \text{ mm};$$

where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.

915MHz Radio -

$$= (25 \text{ mW} / 5 \text{ mm}) * [(\sqrt{0.926} \text{ GHz}) / 18.75] = 0.3 \text{ W/kg}$$

BLE Radio -

$$= (0.5 \text{ mW} / 12 \text{ mm}) * [(\sqrt{2.48} \text{ GHz}) / 18.75] = 0.004 \text{ W/kg}$$

$$\text{Sum of 10-g Estimated SAR} = 0.3 \text{ W/kg} < 4 \text{ W/kg}$$

Simultaneous transmission SAR test exclusion is applied.