




Canada

## **Exhibit: RF Exposure – FCC Mobile Transmitters**

FCC ID: 2ADCB-HALEON

Report File #: 7169009808R-000

Client	<b>Acuity Brands Lighting, Inc</b>	
Product	<b>Haleon BTP</b>	
Standard(s)	FCC Part 15 Subpart 15.247 FCC KDB 447498:2015	

## **RF Exposure – FCC**

The device is a mobile 2400 – 2483.5 MHz BLE transmitter with 1 Mbps and 2 Mbps operating modes. It is intended to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure and the body of the user or nearby persons.

## **Radiofrequency Radiation Exposure Evaluation: Mobile Devices**

Mobile devices shall be evaluated for RF radiation exposure according to the provisions of FCC §2.1091 and the MPE guidelines identified in FCC §1.1310.

As per FCC §1.1310 Table 1(ii), the limit for Maximum Permissible Exposure (MPE) of radiofrequency electromagnetic fields for General Population/Uncontrolled Exposure in the frequency range of 1.5GHz to 100GHz is 1.0 mW/cm<sup>2</sup>. Where f = frequency in MHz.

The power density formula is given by:

$$P_d = (P_{out} * G) / (4 * \pi * R^2)$$

Where,

$P_d$  = Power density in mW/cm<sup>2</sup>

$P_{out}$  = Conducted output power to antenna in mW

G = Numeric Antenna Gain

$\pi$  = 3.1416

R = Separation distance in cm

## **MPE Calculation: 2402 – 2480 MHz transmitter**

The DTS transmitter has a maximum conducted output power of 10.01dBm (or 10.02mW) out of both 1Mbps and 2Mbps modes. The peak antenna gain is 0.5dBi or 1.12 numerically. For a distance of 20cm, the power density is:

$$P_d = (25mW * 2.0) / (4 * 3.1416 * (20cm)^2)$$

$$P_d = \mathbf{0.000997 \text{ mW/cm}^2}$$

The device passes the requirement. The calculated power density of 0.000997mW/cm<sup>2</sup> is below the 1.0 mW/cm<sup>2</sup> limit.

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