



## RF Exposure Evaluation

<b>FCC ID</b>	XBG-MDBT50Q
<b>Model No.</b>	MDBT50Q, MDBT50Q-1M, MDBT50Q-P1M, MDBT50Q-U1M
<b>Supports Radios Spec.</b>	1. Bluetooth Mode: V5.0 LE 2. IEEE 802.15.4 / ZigBee
<b>Frequency Range</b>	1. 2402~2480MHz 2. 2405~2480MHz

Note:

1. This case is change the following points from the original model, so the C2PC (Radiated Spurious Emission, Conducted Output Power) is executed. (Original Report Grant Date: 11/27/2020, FCC ID: XBG-MDBT50Q)

2. Add a host: **5.65" E-ink Bedside Card**, Brand: **Avalue**, Model No.: **EBC-05B1**.

According to FCC KDB 447498 Section 4.3 - General SAR test exclusion guidance

For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

where

1.  $f(\text{GHz})$  is the RF channel transmit frequency in GHz
2. Power and distance are rounded to the nearest mW and mm before calculation<sup>31</sup>
3. The result is rounded to one decimal place for comparison
4. The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

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 according to 4.1 f) is applied to determine SAR test exclusion.



**Calculation Result:**

Mode	Frequency Band (MHz)	Average Output Power (dBm)	Output Power (mW)	SAR Test Exclusion Threshold (mW)
BLE	2402~2480	7.853	6.1	10
Zigbee	2405~2480	7.847	6.1	10

So, this device can complies the SAR test exclusion.