



**Compliance Testing, LLC**  
Previously Flom Test Lab  
EMI, EMC, RF Testing Experts Since 1963

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Prepared for: Thornwave Labs

Model: BT-DCPM

Description: Bluetooth Smart DC Power Meter

Serial Number: N/A

FCC ID: 2AM22-BTDCPM

To

FCC Part 1.1310

Date of Issue: August 8, 2017

On the behalf of the applicant:

Thornwave Labs  
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Attention of:

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Project No: p1770019



Poona Saber  
Project Test Engineer

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### Test Report Revision History

<b>Revision</b>	<b>Date</b>	<b>Revised By</b>	<b>Reason for Revision</b>
1.0	July 26, 2017	Poona Saber	Original Document



**ILAC / A2LA**

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The tests results contained within this test report all fall within our scope of accreditation, unless below

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Testing Certificate Number: **2152.01**



**FCC Site Reg. #349717**

**IC Site Reg. #2044A-2**

**Non-accredited tests contained in this report:**

**N/A**

**EUT Description**

**Model:** BT-DCPM

**Description:** Bluetooth Smart DC Power Meter

**Firmware:** N/A

**Software:** N/A

**Serial Number:** N/A

**Additional Information:** Device is incorporating a Nordic Bluetooth version 4.0 chip with frequency range of 2402-2480



## Source Based Time Averaged Power Calculation

### Average Power calculations

Average Power = Peak Power \* duty-cycle%

Tuned Frequency (MHz)	Peak Output power EIRP (dBm)	Antenna Gain (dBi)	Peak Output Power Conducted (mW)	Duty Cycle (%)	Average Power (mW)
2402	2.86	4	0.769	15.48	0.118



EUT comes to close proximity of human's body and is investigated below for SAR exclusion per KDB 447498

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

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, 25 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 26
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

$$(0.118/5) \times \sqrt{2.402} = 0.036 \leq 3.0$$

**Note:** 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 5) in section 4.1 is applied to determine SAR test exclusion.

END OF TEST REPORT