



CB-7.2.1 – Technical Review RT Form

FCC ID: WCGP5EMB1

IC ID: 8751A-P5EMB1

CT Project: P14b0019

From: Shawn McMillen

Date: 1/15/15

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3--The block diagram and theory of operation files refer to several other model numbers that are not associated with this filing. This filing needs to be a standalone and only address the radios with this filing.

Alan 1/19/15 - I can only see this in the radio communications section. I will amend this and re post today. Revised docs in folder.

4--The FCC statement in the user's manual is confusing. It reads that it complies with both Class A and class B. The manual should only reflect the product as tested.

DW – 1/27/15 – Revised Manual provided.

5--The user's manual is missing the necessary RF exposure statements.

DW – 1/27/15 – Revised Manual provided.

6--The 2.4GHz radio was tested to a maximum power level of 0.246mW radiated however the specifications in the operational description list it at a maximum power of 0.398mW. The antenna data sheet does not include a gain value. The power level limit per 15.247 is a conducted value. Please include the antenna gain value in order to determine what the actual conducted power is.

Alan 1/19/15 - The antenna gain value was previously measured at 9 dBi.

CT - The gain value has been included.

7--The radiated restricted band measurements were performed using a 100kHz RBW however the 15.209 requirement is based on 1MHz RBW @ 3m.

CT – Test Report Updated.

8--Please include the occupied bandwidth plot in the test report for the 2.4GHz radio.

CT – Test Report Updated.

9--The dwell time for the 2.4GHz requires more information to determine that it meets the 0.4s limit. Also the timing plots should show the actual on time in the spectrum window.

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CT-- Due to the nature of the duty cycle of this device it is impractical to capture this data on a spectrum analyzer. A document has been supplied by the manufacturer detailing the timing of the radio

10--The test report should also address RF exposure if necessary. If the EUT is exempt from routine RF exposure this should be stated in the report.

CT – Completed - Alex

11--The power level recorded for the 900MHz radio was 195uW radiated however the radio is rated up to -2dBm conducted. The antenna data sheet does not include a gain value. The power level limit per 15.247 is a conducted value. Please include the antenna gain value in order to determine what the actual conducted power is.

CT - The gain value has been included.

12--Please note that in both 900MHz and 2.4GHz test reports the 15.209 radiated emissions data includes a statement that No other emissions were detectable. All emission were greater than -20dBc. Emissions >960MHz are based on an absolute value of 54dBuV average at 3m distance and not a -20dBc requirement. -20dBc is a 15.247 requirement for emission not falling into restricted bands and is based on a 100kHz RBW. You may want to consider revising that statement.

CT – Test Report Updated.

13--There is insufficient information in the 900MHz test report to demonstrate that the EUT meets the dwell time requirements.

CT-- Due to the nature of the duty cycle of this device it is impractical to capture this data on a spectrum analyzer. A document has been supplied by the manufacturer detailing the timing of the radio

14--If any simultaneous operation with the two radios exists this needs to be addressed. If not then this should be stated in the material provided.

Alan: These devices are intended to operate in constellations of many, even hundreds of units.

CT -

Response by:

Submitted by:

Date:

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