

**dward**

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**From:** dward [dward@atcb.com]  
**Sent:** Thursday, November 20, 2008 2:30 PM  
**To:** 'Mayuko.Morikita@jp.ul.com'  
**Cc:** 'customerservice@atcb.com'  
**Subject:** www.AmericanTCB.com ATCB007014 | MMFMB200I-B2 | | MMFMB200I-B2  
\_ATCB007014

Regarding [www.AmericanTCB.com](http://www.AmericanTCB.com) application:

ATCB ID: ATCB007014

FCC ID: MMFMB200I-B2

IC:

TCF:

Account name: Mayuko

Hi Mayuko

A couple issues with this application.

- 1 While it is OK to include a duty cycle correction factor in a BT device, it must be done correctly and in accordance with the FCC rules. In this case you must use 15.35C. It is very specific in this section that the sweep time used to measure duty cycle is to be 100ms. While the data showing the 2.92ms pulse is OK, the actual span must still be 100ms and not made on an assumption based on 5 second plots. In this case you basically measure the on time as shown in your plots (i.e. 2.92ms), but then you must set the device into hopping mode, select a specific channel center frequency, set the span to 0Hz and the sweep time to 100ms. Then trigger on the first pulse and determine how long in comparison to 100ms the signal is present. It is this 100ms that is the basis that is used to determine duty cycle. Please re-measure/re-verify duty cycle in accordance with the allowed 100ms method for BT devices and please correct the associated data if necessary. Please provide the 100ms plot of this test in the report.
- 2 The schematics do not appear to line up with the block diagram. For example the block diagram shows the BT chip and the antenna chip; however, I cannot see on the BT schematics where the antenna is located. Please show on the schematics where the antenna is located. Is it an integral part of the BT chip itself?
- 3 Please note that the manual indicates that this device also contains a WLAN device. Please explain and address accordingly.
- 4 Please note that the setup photos show two ferrite beads, one on each cable going to the printer. Please confirm that the manufacturer is aware that these ferrites must be provided on the associated cables and must be provided to the end user when the device is purchased along with installation instructions on how to install these EMC control devices if the cables do not already come with these control devices installed. This confirmation should be in the form of an attestation that all EMI fixes/solutions will be incorporated in the final product as tested.
- 5 FYI – no action as I have extracted the parts list from the schematics – but if the confidentiality request is to include a parts list, please provide a separate parts list exhibit.
- 6 FYI – no action required this time – please note that BT devices under 15.247 are not equipment code DTS but are under equipment code DSS.

Thank you for choosing American TCB for your certification needs.

*Dennis Ward*

Director of Engineering

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