

Chris Harvey

From: September Radecki [september.radecki@ccsemc.com]
Sent: Tuesday, June 26, 2007 12:47 PM
To: Chris Harvey
Cc: Michael Heckrotte; September Radecki
Subject: RE: ATHEROS COMMUNICATIONS, INC., FCC ID: PPD-AR5BXB72-L, Assessment NO.: AN07T6919, Notice#2
Attachments: MPE Information.pdf; 07U11066-1B1 FCC UNII C2PC Report.pdf; AR5BXB72-L FCC C2PC cover letter from Atheros 2007-6-26.pdf

Hi Chris,

Here are the replies to your questions on the above application.

1. According to the Class II Permissive Change (C2PC) Cover Letter exhibit, this application has been filed to include DFS capabilities and co-locate with a UWB transmitter in one configuration. The C2PC Cover Letter states that the DFS is to be added in the 5250 - 5350 MHz and 5470 - 5725 MHz bands. Please note that this device has not yet been approved for operation in the 5470 - 5725 MHz band. Apparently, this C2PC application is also being submitted to add the 5470 - 5725 MHz UNII band, but the C2PC Cover letter does not state so. Please confirm and then update the C2PC Cover Letter to include the fact that the 5470 - 5725 MHz band is being added by a change of firmware controlled/installed by the Grantee or their authorized representative.
<CCS ANSWER:> Please remove the UWB report from the exhibits. Please see attached revised C2PC Cover Letter.

2. The Class II Permissive Change implies that the DFS testing of FCC ID: PPD-AR5BXB72 was applicable to this device. However, the test report contains DFS testing data for operation at the 5300 MHz channel without an indication of which device was tested. Please confirm if the DFS testing was performed on the sample for FCC ID: PPD-AR5BXB72 or FCC ID: PPD-AR5BXB72-L, and whether the testing at the 5300MHz channel is representative of all channels in the 5250 - 5350 MHz and 5470 - 5725 MHz bands. Also, please confirm that DFS testing was tested in all channel bandwidths (legacy, HT20 and HT40).
<CCS ANSWER:> Testing was performed on the sample for FCC ID: PPD-AR5BXB72-L. The testing at the 5300MHz channel is representative of all channels in the 5250 - 5350 MHz and 5470 - 5725 MHz bands. DFS testing was only performed in the 20 MHz bandwidth. The Class II Permissive Change Cover Letter attests that 40 MHz operation is disabled on all channels subject to DFS requirements.

3. The RF Exposure Justification maximum antenna gains in each band are lower than the maximum antenna gain listed in the RF test report exhibit. Please confirm that the RF testing was actually performed with the highest gain antennas approved for use with this device and update the RF Exposure Justification to reflect the highest effective gain (in 2x3 MIMO operations) in the co-location configurations.
<CCS ANSWER:> Please remove the existing RF Exposure Statement exhibit. Instead please use the attached file "MPE Information."

4. The Form 731 for this application lists the wrong Equipment Class (DTS) and frequencies and power levels for this UNII application. The following seem to be appropriate based on the previous approvals and the data in this RF test report:

Grant Notes, FCC Rule Parts, Frequency Range (MHZ), Output Watts

CC	15E	5180.0 - 5240.0	0.0157
CC, ND	15E	5260.0 - 5320.0	0.0635
CC, MO	15E	5180.0 - 5240.0	0.0433
CC, MO, ND	15E	5260.0 - 5320.0	0.1327
CC, ND	15E	5500.0 - 5700.0	0.037
CC, MO, ND	15E	5500.0 - 5700.0	0.117

Please update the Form 731 to correctly reflect the Equipment Class, Frequencies and combined average powers for this application.

Please note that previous approvals of this modular device included SAR testing for portable configurations. This application adds the 5470 - 5725 MHz band, but does not include portable configurations. Therefore use of the 5470 - 5725 MHz band is restricted to Mobile RF Exposure configurations.

<CCS ANSWER:> Per email exchanged with you, Chris, I understand that the equipment class, frequencies and powers issue has been corrected. My apologies for the confusion. This application is for a mobile configuration, so the grant should state that use of the 5470 - 5725 MHz band is restricted to Mobile RF Exposure configurations as you indicated above.

Best regards,

September

September Radecki
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-----Original Message-----

From: Chris Harvey
 Sent: Wednesday, June 20, 2007 4:31 AM
 To: Michael Heckrotte
 Cc: Chris Harvey; September Radecki
 Subject: ATHEROS COMMUNICATIONS, INC., FCC ID: PPD-AR5BXB72-L,
 Assessment NO.: AN07T6919, Notice#2

Dear Michael Heckrotte,

You are listed as the technical contact for the above referenced TCB application. The following items need to be addressed before the review can be continued:

1. According to the Class II Permissive Change (C2PC) Cover Letter exhibit, this application has been filed to include DFS capabilities and co-locate with a UWB transmitter in one configuration. The C2PC Cover Letter states that the DFS is to be added in the 5250 - 5350 MHz and 5470 - 5725 MHz bands. Please note that this device has not yet been approved for operation in the 5470 - 5725 MHz band. Apparently, this C2PC application is also being submitted to add the 5470 - 5725 MHz UNII band, but the C2PC Cover letter does not state so. Please confirm and then update the C2PC Cover Letter to include the fact that the 5470 - 5725 MHz band is being added by a change of firmware controlled/installed by the Grantee or their authorized representative.
2. The Class II Permissive Change implies that the DFS testing of FCC ID: PPD-AR5BXB72 was applicable to this device. However, the test report contains DFS testing data for operation at the 5300 MHz channel without an indication of which device was tested. Please confirm if the DFS testing was performed on the sample for FCC ID: PPD-AR5BXB72 or FCC ID: PPD-AR5BXB72-L, and whether the testing at the 5300MHz channel is representative of all channels in the 5250 - 5350 MHz and 5470 - 5725 MHz bands. Also, please confirm that DFS testing was tested in all channel bandwidths (legacy, HT20 and HT40).
3. The RF Exposure Justification maximum antenna gains in each band are lower than the maximum antenna gain listed in the RF test report exhibit. Please confirm that the RF testing was actually performed with the highest gain antennas approved for use with this device and update the RF Exposure Justification to reflect the highest effective gain (in 2x3 MIMO operations) in the co-location configurations.
4. The Form 731 for this application lists the wrong Equipment Class (DTS) and frequencies and power levels for this UNII application. The following seem to be appropriate based on the previous approvals and the data in this RF test report:

6/26/2007

Grant Notes, FCC Rule Parts, Frequency Range (MHZ), Output Watts

CC 15E 5180.0 - 5240.0 0.0157

CC, ND 15E 5260.0 - 5320.0 0.0635

CC, MO 15E 5180.0 - 5240.0 0.0433

CC, MO, ND 15E 5260.0 - 5320.0 0.1327

CC, ND 15E 5500.0 - 5700.0 0.037

CC, MO, ND 15E 5500.0 - 5700.0 0.117

Please update the Form 731 to correctly reflect the Equipment Class, Frequencies and combined average powers for this application.

Please note that previous approvals of this modular device included SAR testing for portable configurations. This application adds the 5470 - 5725 MHz band, but does not include portable configurations. Therefore use of the 5470 - 5725 MHz band is restricted to Mobile RF Exposure configurations.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

Best regards,

Chris Harvey
charvey-tcb@ccsemc.com

6/26/2007