Memo

No: memo111

To: Timothy Johnson ATCB.

From: Roland Croteau, Bay Computer Associates, Dick Wiedeman Test Site Services.

CC: Mary Ellen Heinen,

Date: July 17, 2005

Re: Response to ATCB Comments on 7/16/05 relative to FCC submission S5Y1234

Tim

The following is our combined response to your comments relative to our submittal for the Pepper Wireless Pad FCC ID: S5Y1234.

Comment 1 Answer : To expidite things, I have uploaded only pertinent areas of the Pepper Unit and Assembly level Bill of Materials. If you feel this is ok, then we do not need to request confidentiality. If the full BOM's are required then we will request confidentiality and I will have Pepper Computer update their confidentiality request on Monday A.M. to include parts lists.

Comment 2 Answer : Though we do not consider it appropriate for us to take internal pictures of a Gemtek proprietary device, as requested we have done so, and will consolidate all pictures first thing on Monday and upload them to the ATCB website on Monday A.M. our time.

Comment 3 Answer : OK, TSS will provide updated test reports on Monday, which will be uploaded to the ATCB website.

Comment 4 Answer : TSS was also concerned that both the DTS and DSS power levels measured were exceptionally low and re-measured these values three different times (re-setting up the same EUT, different days, etc.) and still came up with approx. the same values. Note that EIRP measurements are far field radiated measurements and reflect any attenuation due to EUT shielding, etc. It was determined that a conductive coating that was added to the inside of the case of this EUT to provide an E-field shield in order to meet the unintentional radiator requirements. This appears to be the reason for the subsequent attenuation of the DTS/DSS emissions as well. Further, please note that the power levels listed on the 731 apparently are the ideal values from the

manufacturers spec. and not the measured values from the actual testing. Form 731 will be updated on Monday morning by BCA to capture actual values.

Comment 5 Answer : See item 4. Also, note that the manufacturers' spec. is from -4 dBm to +4 dBm

Comment 6 Answer : For all the power measurements, EIRP was the method and the RBW=1MHz. and the VBW=1MHz. Peak measurements were made with these settings and zero span; these are the values used for the substitution reference value. As indicated in the report, further corrections were then made for the cable loss, substitution antenna gain and the 26dB bandwidth factor (see pages 20-22 of the report for additional detail).

Comment 7 Answer : Regarding the lower band edge determination, the delta method was used whereby the difference (in dB) between the carrier peak and the nearest emission just outside the band is determined from the plot. This delta value is 33 dB. The corrected peak value of the carrier for ch.00 is taken from the table on pg 35 of the report and is 62.1 dBuV/m.

62.1dBuV/m-33dB=**29.1dBuV/m(peak)**
(This is the final value listed in the report on page 27)

Regarding the upper band edge determination, the same delta method is used and the delta is determined to be 29 dB.. The corrected peak value of the carrier for ch.78 is taken from the table on pg. 37 of the report and is 61.6 dBuV/m

61.6dBuV/m-29dB=**32.6dBuV/m(peak)**
(This is the final value listed in the report on page 27.)

See pages 35 and 37 for the correction factors used (cable loss, antfac, preamp, etc.) for the base measurements referred to above.

Please note that both of the band edge measurements are peak values and therefore meet both the required average limit of 54 dBuV/m and the implied peak limit of 74 dBuV/m.

Comment 8 Answer : The 1Hz.VBW measurements shown on pages 35, 36 and 37 are typos and will be corrected to 10Hz. accordingly. These RBW and VBW data are entered manually on the spreadsheet. Also, please note that when using a spectrum analyzer (in this case the HP8566B) that the procedure for *video averaging* (as opposed to "trace" averaging) is to set the RBW and the VBW to the same value and then progressively decrease the VBW until the signal being

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measured stops dropping in value; the alternative to this is to go directly to the VBW required by the standard (in this case 10Hz.). The average measurements were taken at zero span. Most importantly, please note that any average measurements taken on pages 35-37 were for the band-edge cross-check to the delta method *only* and are not used in the final analysis.

Comment 9 Answer : Based on your feedback, Roland will upload an updated 731 form on Monday A.M. and send you and email when it is complete.

Please do not hesitate if any further information is needed from either Dick or myself.

Regards

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