



To:	ATCB	Fax:	
Attention:	Timothy R Johnson	Phone:	
From:	EMC Technologies Pty. Ltd.	No of pages:	2
EMC Ref:	ATCB Query-2 response	Date:	3 rd March 2004
Subject:	Information Request		

Question 1: Please see corrected document showing both front and rear of the host units.

Question 2: Correct. They are the 2 models ST5010 and ST5011.

Question 3:

As per page 11 of Test Report - M040123_Certification_Ocampa2_Calexico2:

"The field strength at 2400 MHz when the EUT was operating at its lowest channel (2412 MHz), was 36.7 dBµV/m peak (noise floor) and was > 20 dB below the maximum field strength of the in-band carrier".

Refer to supporting plot (1-7 GHz), Raw peak reading at 2400 MHz ~ 13 dBuV. Cable Loss, Antenna Factor & PreAmp Gain are 23.7 dB and Field Strength at 2400 MHz is 36.7 dBuV/m @ 3m (Peak). Therefore the peak reading in the restricted band 2310-2390 MHz is lower than the peak reading at 2400 MHz. This method is also applied to the restricted band 2483.5-2500 MHz.

Question 4:

Please refer to document comparing the 2 Ocampa model (supplied for Question 1). FCC ruling has been obtained that NO additional SAR tests are required for the change in Host LCD screen size. The WLAN module, The Antenna models and their locations are identical in both Ocampa models.

Question 5:

The EUT was configured for maximum power setting - 802.11b = 18 dBm and 802.11g = 15 dBm and the following tests were performed:

As required by SAR Test Procedures, an Average Power measurement is required. An Average Power meter was used to measure the Average Power at the Antenna (source point) port.

RESULTS:

Modulation Mode	Channel	Channel Frequency MHz	Antenna	Battery Type	Maximum Conducted Average Output Power Measured
802.11b - DSSS	01	2412	Aux	4400mAh	14.19dBm
802.11b - DSSS	06	2437	Aux	4400mAh	14.06dBm
802.11b - DSSS	11	2462	Aux	4400mAh	14.27dBm
802.11g - OFDM	01	2412	Aux	4400mAh	8.91dBm
802.11g - OFDM	06	2437	Aux	4400mAh	9.08dBm
802.11g - OFDM	11	2462	Aux	4400mAh	9.25dBm
802.11b - DSSS	01	2412	Main	4400mAh	14.54dBm
802.11b - DSSS	06	2437	Main	4400mAh	14.23dBm
802.11b - DSSS	11	2462	Main	4400mAh	14.38dBm
802.11g - OFDM	01	2412	Main	4400mAh	9.14dBm
802.11g - OFDM	06	2437	Main	4400mAh	9.18dBm
802.11g - OFDM	11	2462	Main	4400mAh	9.24dBm

As required by EMC Test Procedures, a Peak Power measurement was performed. A Spectrum Analyser was used to measure the Peak Power level at the same antenna port.

RESULTS:

Configuration 802.11b

Frequency MHz	Peak Power dBm
2412	16.61
2437	16.48
2462	16.35

Configuration 802.11g

Frequency MHz	Peak Power dBm
2412	18.62
2437	18.35
2462	18.59

To address your query (Item 5):

If Average Power measured for both EMC & SAR, then the power levels would be the same. Similarly if Peak power was measured for both EMC & SAR, then the power levels would be the same. The Power settings of the EUT were identical for SAR and EMC tests i.e configured for maximum setting.

For the same tune up procedure used.

Average Power (EMC) = Average Power (SAR)
Peak Power (EMC) = Peak Power (SAR)

The power setting on the EUT was set to maximum : 802.11b = 18 dBm & 802.11g = 15 dBm for SAR AND EMC tests.

This was confirmed by performing the conducted measurements at the antenna port before and after the SAR tests.

Question 6:

After additional inspection of the DASY4 configuration files it appears that a setup error has occurred and the lowest measurement point was 10mm from the phantom surface. In view of the low SAR values (0.605 W/kg) recorded as the worst case, we believe that the EUT will still easily comply at the required setup.

The reason for reporting 3.9mm in our test report is due to the fact that this spacing is used for all our tests so far. We are currently retesting the EUT to verify compliance at 3.9mm setup.