



February 21, 2011

Federal Communications Commission  
Authorization and Evaluation Division  
Office of Engineering and Technology Laboratory Division  
7435 Oakland Mills Rd.  
Columbia MD 21046-1609

Re: Class II Change FCC ID: BCG-E2380A  
Correspondence Reference Number: 39553

**1] Technical description exhibit indicates maximum output for GPRS 2 slot transmissions is restricted by 1.5 dBm (1.4 mW) from original grant. It is assumed that the restriction does not apply to 1 slot. Is this just for hotspot mode or for all 2-slot GPRS operations? Please include descriptions regarding how the power reduction is controlled. Also note a typo as the power reduction is 1.5 dB, not 1.5 dBm (1.4 mW).**

The Technical Exhibit did have a typo referencing the power back-off. The 1.5 dBm is incorrect and should have stated 1.5db. An updated Technical Exhibit will be uploaded.

The power back-off of 1.5dB applies in the following configurations:

Band: GSM850 and EGSM900

Modulation: GMSK (CS1 – CS4 and MCS1 – MCS 4)

Mode: GPRS and EGPRS

Number of uplink slots: 2

The power back-off is included in baseband firmware upgrade 04.10.01 which Apple will make available for users via through the iTunes website sometime after the Class II change is approved.

**2] Since this Class II is for iOS software update, please identify any applicable software revision number.**

The Baseband firmware version is 04.10.01. The user can check the Baseband Firmware version by navigating the following menus: Settings, General, About, scrolling down to Version.

**3] Verify if the device has DTM to confirm applicable test configurations.**

The iPhone 4 GSM device does not support Dual Transfer Mode (DTM) per 3GPP 51.010 specifications. Section 5 / Page 5 of revised SAR test report now includes this information as required.

**4] Explain why the output power values in Section 9.1 of SAR report do not seem to reflect the 1.5 dB output reduction identified for 850 MHz band 2-slot GPRS in this Class II filing.**

The output powers in Section 9.1, 2-slot mode, GSM 850 do reflect the 1.5 dB power reduction. See below.

Data from Original SAR Report

**GPRS (GMSK) - Coding Scheme: CS1**

Band	Ch No	f (MHz)	Avg burst Pwr (dBm)			
			1 slot	Frame Avg Pwr	2 slot	Frame Avg Pwr
GSM850	128	824.2	32.50	23.50	31.50	25.50
	190	836.6	32.40	23.40	31.50	25.50
	251	848.8	32.50	23.50	31.50	25.50
GSM1900	512	1850.2	30.40	21.40	28.60	22.60
	661	1880	30.40	21.40	28.70	22.70
	810	1909.8	30.30	21.30	28.70	22.70

Data from HotSpot Updated Report

**GPRS (GMSK) - Coding Scheme: CS1**

Band	Ch No.	f (MHz)	Avg burst Pwr (dBm)			
			1 slot	Frame Avg Pwr	*2 slot	*Frame Avg Pwr
GSM850	128	824.2	32.50	23.50	30.00	24.00
	190	836.6	32.40	23.40	30.00	24.00
	251	848.8	32.50	23.50	30.00	24.00
GSM1900	512	1850.2	30.40	21.40	28.60	22.60
	661	1880	30.40	21.40	28.70	22.70
	810	1909.8	30.30	21.30	28.70	22.70

Section 9.1 / page 22 of SAR test report included the original power without power reduction.

**5] Include 1900MHz GPRS and Wi-Fi SAR exclusion analysis in Section 12 of the SAR report.**

1900 GPRS with 2 slots with WiFi simultaneous assessment is included in section 12 of revised SAR test report .

**6] Need to identify the simultaneous transmission configurations applicable for this device with respect to the voice & data transmissions for the different**

**wireless mode operating configurations and exposure/use conditions (head, body-worn, hotspot etc.). WCDMA/HSDPA generally allows simultaneous voice and data, which would enable hotspot mode to transmit in conjunction with a voice call next to the ear. When this is the case, the earlier (original) head SAR data for all applicable modes (e.g. WCDMA/HSPA and Wi-Fi) relating to hotspot use at the head should be applied to determine simultaneous transmission SAR exclusion based on sum of 1-g or SAR to peak location ratio. If SAR exclusion does not apply, volume scan measurement may be necessary. If device allows DTM in GSM/GPRS/EDGE, similar issues may apply for hotspot in conjunction with voice call next to the ear. After addressing all these, the numbers in the SAR report may need revision.**

The iPhone 4 GSM does not support DTM mode. The table below shows the Simultaneous Transmission configurations for this device. This table is also included in section 5.1/ page 13 of revised SAR test report.

Simultaneous Transmission				
	GSM Voice	EGPRS or HSDPA but only one at a time	WiFi or Bluetooth but only one at a time	HotSpot Mode
GSM Voice		Yes	Yes	Yes
EGPRS or HSDPA but only one at a time	Yes		Yes	Yes
WiFi or Bluetooth but only one at a time	Yes	Yes		Yes
HotSpot Mode	Yes	Yes	Yes	

Notes:

1) This device supports Simultaneous Transmission in the modes shown above.

2) The single antenna for cellular has a separation distance of 8.7cm to the WiFi/Bluetooth antenna.

3) CONCLUSIONS:

o Simultaneous transmission SAR is not required for 3G & WiFi because the sum of the 1-g SAR is

< 1.6 W/kg

o Simultaneous transmission SAR is not required for WiFi & 3G because the the sum of the 1-g

SAR is < 1.6 W/kg.

**7] The 835 MHz and 1900 MHz dipole calibrations for over 1 year old, please follow KDB 450824 to include the required return-loss and impedance measurements to qualify for extended calibration interval.**

The impedance and return loss measured plots for 835 / 1900 MHz head and body are included in section 4.1 of revised test report. The impedance is within 5 ohms and return loss is within 20%.

**8] The original filing for this FCC ID contained only a minimal regulatory info excerpt of user instructions; per 2.1033(b)(3) and 2.10343(c)(3) for this filing (and all future filings) TCB please ensure to submit complete device operating instructions as will be furnished to users.**

The final revision of user manual is submitted.

Sincerely,



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