

Apple 3G iPhone

Quad-band GSM/Tri-band W-CDMA with EDGE/HSDPA

Report #11000-080711-BCg

Weight: 134.8 grams measured
(1.8 grams more than spec)



Product Description:

Accompanied by media frenzy, the July 2008 release of the Apple 3G iPhone proved to be an event of worldwide significance. Retaining the sleek glass-faced bar form and touchscreen interface of its predecessor, the new iPhone builds on an established platform by doubling available memory and adding functionality. Of particular interest is the addition of W-CDMA/HSDPA capability and Assisted GPS, improvements that propel the 3G iPhone into the "World Phone" arena. Both the 8GB and 16GB models were examined for this report. With the exception of memory capacity, the two are essentially identical. The now-familiar feature set, including orientation-sensitive display, 2.0MP camera, 802.11b/g WiFi, Bluetooth, music and video player, and games, is again integrated into a highly intuitive user environment.

Report Contents:

- Detailed external & internal photos
- Detailed step-by-step disassembly
- Power measurements
- Block Diagram
- Circuit board & packaging metrics
- Complete parts list & component count
- Manufacturing cost analysis
- Description of most interesting electronic features & packaging concepts

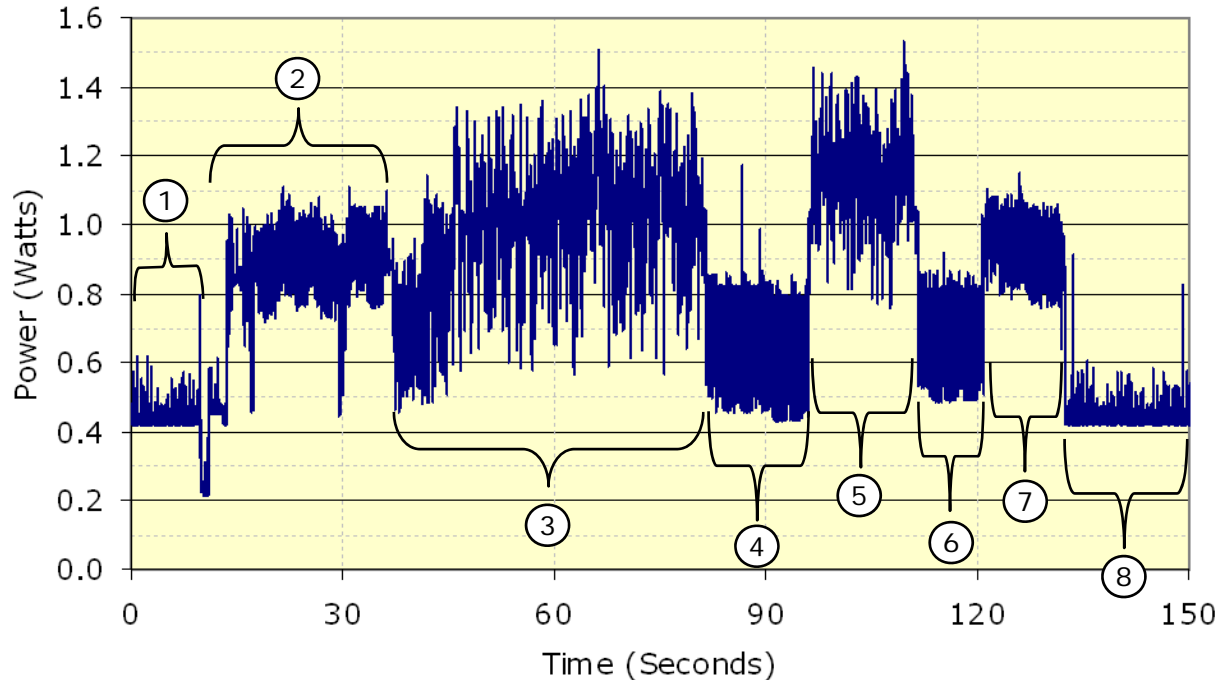
DISCLAIMER: All company names, product names, and service names mentioned are used for identification purposes only and may be registered trademarks, trademarks, or service marks of their respective owners. All analyses are done without participation, authorization, or endorsement of the manufacturer. Any cost analyses presented in this material are estimates prepared by UBM TechInsights from generally available data. While UBM TechInsights believes that these estimates reflect the probable costs, the actual producer did not supply the data, and therefore the actual costs may be different from these estimates. Furthermore, UBM TechInsights extends no warranties with respect to any information in this document, and shall bear no liability whatsoever for the use of the information.

© 2010, UBM LLC. All rights reserved. Do not reproduce, distribute, disseminate, photocopy, fax, transmit, download to a shared database, or otherwise copy, transfer, sell, publish, or send this material, or any portion thereof, by any means without the express written permission of UBM TechInsights.

Power Measurements

(Page 6 of 11)

Game – “Tap Tap” (Flight Mode On)



1. Navigation from Main Menu to Games menu.
2. Setup of options within game.
3. Game is played and includes background music along with sporadic vibrator signals.
4. Game is paused.
5. Play is resumed.
6. Game is paused.
7. Game is ended, followed by navigation to Main Menu.
8. Unit is idle at Main Menu.

Test Parameters

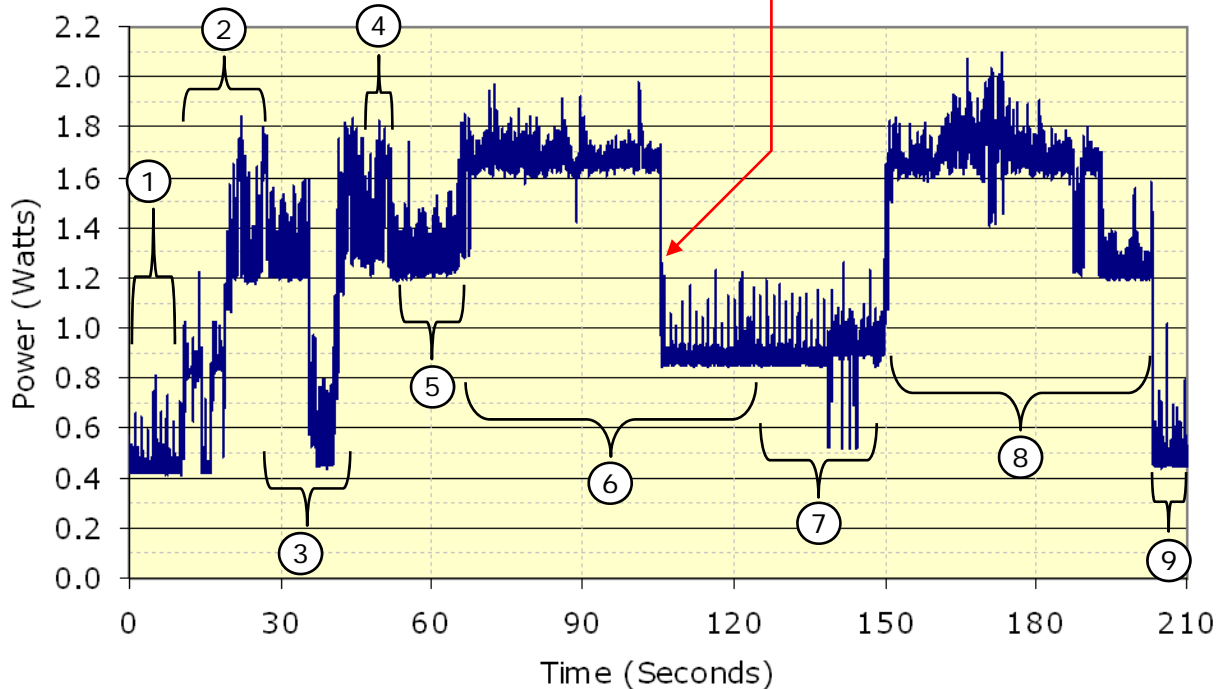
- Display Backlight Setting: ~50%
- Audio Setting: ~50%, through built-in speaker
- Mobile Network: off
- Bluetooth: off
- WLAN: off

Power Measurements

(Page 9 of 11)

Data Connection

Source of power drop in the middle of the data loading is not clear. Perhaps a step-down in Power Amplifier level setting?



1. Unit idling at Main Menu.
2. Safari is selected; application opens and reloads Google.
3. User enters search criteria, using touchscreen keypad.
4. User selects "Go"; search is active.
5. Search results are displayed.
6. A search result is selected; a web page with graphics, photos, text, and embedded music player loads.
7. Page appears partially loaded; user scrolls displayed content.
8. User selects link to another page; that page loads.
9. Page appears fully loaded.

Test Parameters

- Display Backlight Setting: ~50%
- Audio Setting: ~50%
- Mobile Network: on
- Bluetooth: off
- WLAN: off