

November 16, 2006

ITPD-06-F017A: BT Part 15C / DSS / EA128023

ITPD-06-F017B: WLAN Part 15C / DTS / EA460520

ITPD-06-F017C: EVDO Parts 22H, 24E / PCB / EA380026

ITPD-06-F017D: UNII Part 15E / NII / EA354913

To: Steven Dayhoff and Andy Lyles / FCC Application Processing Branch
FCC ID: ACJ9TGCF-192
Applicant: Panasonic Corporation of North America
731 Confirmation Numbers: EA380026 and EA354913
Correspondence Ref Numbers: 32028 and 32036
Subject: Laptop Computer, Model CF-19 with BT, WLAN(a+b+g) and EVDO

FCC comments issued on November 13 and 15, 2006

1) If not in filing already, please describe any operating modes in which EVDO and WLAN transmit simultaneously, and amend SAR data where appropriate.

2) If not in filing already, please describe how filing addresses FCC EVDO test procedures, excerpt repeated below for convenience, or amend filing where appropriate.

{1x Ev-Do Data Devices

The following procedures are applicable to Access Terminals (AT) operating under CDMA 2000 High Rate packet Data, Rev. 0 and Rev. A, 1x Ev-Do protocols. Body exposure conditions are typically applicable to devices with Ev-Do capabilities, including handsets and data modems operating in various electronic devices. When VOIP is available for Ev-Do devices to operate in configurations next to the ear, head exposure conditions are applicable.⁹ The default test configuration is to measure SAR with an established radio link between the AT and a communication test set according to 3GPP2 Test Application Protocols (TAP), FTAP/RTAP for Rev. 0 and FETAP/RETAP for Rev. A.¹⁰ If an air link cannot be established due to limitations in the communication test set, Factory Test Mode (FTM) should be used to establish the equivalent AT operating configurations, including the code channel configurations.¹¹ The code channel power levels, RF channel output power (All Bits Up) and other operating !

parameters should be actively monitored and controlled with a communication test set during the SAR measurement. Maximum output power is verified according to procedures defined in 3GPP2 C.S0033 and TIA-866, and SAR must be measured according to these maximum output conditions.

Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to procedures in section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rev. 0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A. The equivalent test configurations should be established under FTM when air link and/or call processing is not supported by the communication test set. For Rev. A, maximum output power for both Subtype 0/1 and Subtype 2 Physical Layer configurations should be measured. The device operating configurations under TAP/ETAP and FTM should be documented in the test report, including power control, code channel and RF channel output power levels. The measurement results should be tabulated in the SAR report with any measurement difficulties and equipment limitations clearly identified.}

Answer:

Refer to separate uploaded SAR and test data pages.

6.1 Conducted Output Power

S2.1046

This device was tested under all R.C.s and S.O.s and the worst case is reported with EvDO FTAP with "All Up" power control bits.

SAR Measurement Conditions for CDMA2000

The following procedures were followed according to FCC "SAR Measurement Procedures for 3G Devices", June 2006.

Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices", June 2006.

1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 6-2 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH0 and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 6-3 was applied.
5. FCHs were configured at full rate for maximum SAR with "All Up" power control bits.

Parameter	Units	Value
$\bar{I}_{or}$	dBm/1.23 MHz	-104
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

Table 6-2
Parameters for Max. Power for RC1

Parameter	Units	Value
$\bar{I}_{or}$	dBm/1.23 MHz	-86
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

Table 6-3
Parameters for Max. Power for RC3

Band	Channel	SO55	TDSO SO32	1x EvDO Rev. 0	1x EvDO Rev. 0
		RC3/3	RC3/3	(FTAP)	(RTAP)
Cellular	1013	24.91	24.83	25.03	24.98
	384	24.84	24.91	25.08	25.01
	777	24.53	24.50	25.02	24.96
PCS	25	25.11	25.09	25.12	25.09
	600	24.54	24.31	25.16	25.02
	1175	24.38	24.27	24.98	24.93

Table 6-4
Maximum Power Output Table for CF-19

FCC ID: ACJ9TGCF-192		FCC Pt. 22/24 CDMA (EvDO) MEASUREMENT REPORT		Reviewed by: Quality Manager
Test Report S/N: 0608220697	Test Dates: September 29 - October 3, 2006	EUT Type: Toughbook Model: CF-19		Page 12 of 28

PCTEST ENGINEERING LABORATORY, INC.

DUT: CF-19; Type: Panasonic Notebook PC with WLAN + Bluetooth + EVDO; Sample #2

PCS EVDO Test Date: 09-18-2006; Ambient Temp: 23.6°C; Tissue Temp: 21.7°C

802.11b Test Date: 09-15-2006; Ambient Temp: 23.8°C; Tissue Temp: 21.6°C

Tablet position, Right Side, LCD Flip

Volume Scan (8x23x5): Measurement grid: dx=10mm, dy=10mm, dz=10mm

Multi Band Result:

SAR(1 g) = 0.774 mW/g; SAR(10 g) = 0.442 mW/g

Maximum value of SAR (measured) = 0.885 mW/g

