



PCTEST ENGINEERING LABORATORY, INC.

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CERTIFICATE OF COMPLIANCE FCC PART 15.247 Class II Permissive Change

Applicant Name:
Panasonic Corporation of North America
One Panasonic Way, 4B-8
Secaucus, NJ 07094
United States

Date of Testing:
March 7 - 8, 2007
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Test Report Serial No.:
0702280119.ACJ

FCC ID:	ACJ9TGCF-193
APPLICANT:	Panasonic Corporation of North America

Model(s): CF-19
EUT Type: Toughbook with Car Dock Model: CF-WEB184
 14.25 dBm Conducted (802.11a)
Max. RF Output Power: 14.68 dBm Conducted (802.11b)
 14.24 dBm Conducted (802.11g)
Frequency Range: 2412 - 2462 MHz (DSSS/OFDM)
 5745 – 5825 MHz (OFDM)
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15.247
Test Device Serial No.: N/A
Class II Permissive Change: Add Car Mounter and External Antenna
Original Grant Date: 12/22/2006

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C-63.4-2003.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Grant Conditions: Listed output power is conducted.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.

Randy Ortanez
President



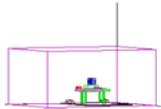
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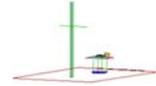
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MEASUREMENT REPORT

FCC Part 15.247



§ 2.1033 General Information

APPLICANT: Panasonic Corporation of North America

APPLICANT ADDRESS: One Panasonic Way, 4B-8
Secaucus, NJ 07094

TEST SITE: PCTEST ENGINEERING LABORATORY, INC.

TEST SITE ADDRESS: 6660-B Dobbin Road, Columbia, MD 21045 USA

FCC RULE PART(S): Part 15.247

MODEL NAME: CF-19

FCC ID: ACJ9TGCF-193

Test Device Serial No.: N/A Production Pre-Production Engineering

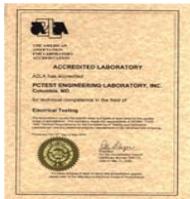
FCC CLASSIFICATION: Digital Transmission System (DTS)

DATE(S) OF TEST: March 7 - 8, 2007

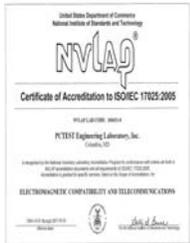
TEST REPORT S/N: 0702280119.ACJ

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21045, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (IC-2451).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (IC-2451) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.



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1.0 INTRODUCTION

1.1 Evaluation Procedure

The measurement procedure described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz (ANSI C63.4-2003) and FCC procedure dated March 23, 2005 entitled "Measurements of Digital Transmission Systems Operating Under Section 15.247" were used in the measurement of **Panasonic Toughbook with Car Dock Model: CF-WEB184 FCC ID: ACJ9TGCF-193.**

Deviation from measurement procedure.....None

1.2 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

1.3 PCTEST Test Location

The map at the right shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity are, the Baltimore-Washington Intern'tl (BWI) airport, the city of Baltimore and the Washington, DC area. (see Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 27, 2006 and Industry Canada.

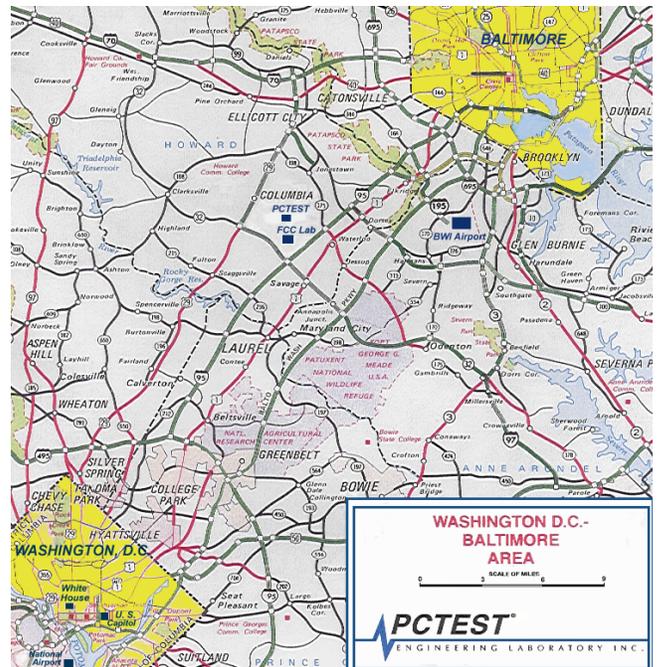


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Panasonic Toughbook (FCC ID: ACJ9TGCF-193) with Car Dock Model: CF-WEB184**. The Toughbook has been previously FCC certified under the aforementioned FCC ID and was tested using a base whip antenna with a gain of 5dBi in the 2.4GHz – 2.5GHz band. The antenna was connected to the WLAN TNC port on the underside of the car dock. The test setup consisted of the following component(s):

Manufacturer / Model	FCC ID	Description
Panasonic / Model: CF-19	ACJ9TGCF-193	Toughbook with EvDO and WLAN modules
Intel / Model: WM3945ABG	PD9WM3945ABG	Wireless Network Connection
Model: CF-WEB184	N/A	Car Dock for use with Panasonic Toughbook Model: CF-19
Radiall/Larsen / Model: NMO5E2400BKTNC	N/A	Base Whip Antenna

Table 2-1. EUT Equipment Description

Mode	FCC Rule Part	Frequency [MHz]	Notes
802.11a, 802.11b, 802.11g	15C	2412 – 2462 (b/g) 5745 – 5825 (a)	This report contains data pertaining only to the 802.11a, 802.11b, and 802.11g transmitters.
802.11a (UNII)	15E	5150 – 5250 (UNII-1)	Data can be found in a separate report under the same FCC ID.
EvDO (Rev. A)	22 / 24	824.7 – 848.31 1851.25 – 1908.75	Data can be found in a separate report under the same FCC ID.

Table 2-2. Supported EUT Modes

2.2 EMI Suppression Device(s)/Modifications

EMI suppression device(s) added and/or modifications made during testing.

- None

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3.0 DESCRIPTION OF TEST

3.1 Radiated Emissions

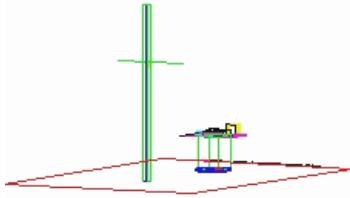


Figure 3-1. 3-Meter Test Site

Preliminary measurements were made indoors at 1-meter using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, and turntable azimuth with respect to the antenna was noted for each frequency found. The spectrum was scanned from 30 to 200 MHz using a bi-conical antenna and from 200 to 1000 MHz using a log-spiral antenna. Above 1 GHz, linearly polarized double ridge horn antennas were used.

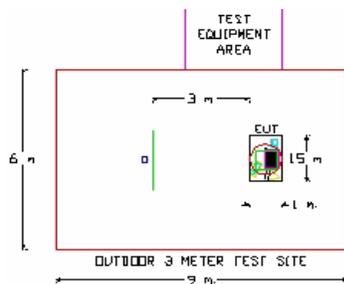


Figure 3-2. Dimensions of Outdoor Test Site

Final measurements were made outdoors at 3-meter test range using Roberts™ Dipole antennas or horn antennas (see Figure 3-1). The test equipment was placed on a wooden and plastic bench situated on a 1.5m x 2m area adjacent to the measurement area (see Figure 3-2). Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The detector function was set to CISPR quasi-peak mode and the bandwidth of the spectrum analyzer was set to 100kHz for frequencies below 1GHz or 1MHz for frequencies above 1GHz. Above 1GHz the detector function was set to average mode (RBW = 1MHz, VBW = 10Hz).

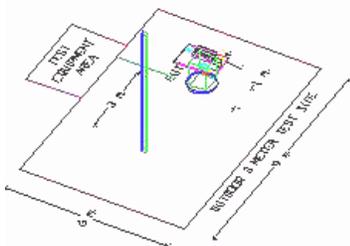


Figure 3-3. Turntable and System Setup

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table (see Figure 3-3). The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet, if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in Test Setup Photographs. Each EME reported was calibrated using the Agilent E8257D (250kHz – 20GHz) PSG Signal Generator. The Theoretical Normalized Site Attenuation Curves for both horizontal and vertical polarization are shown in Figure 3-4.

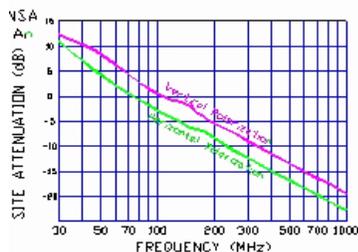


Figure 3-4. Normalized Site Attenuation Curves (H&V)

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4.0 ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- A base whip external antenna was connected to the TNC port of the car dock.

Conclusion:

The **Panasonic Toughbook with Car Dock Model: CF-WEB184 FCC ID: ACJ9TGCF-193** unit is a professionally installed system and is marketed only to dealers that use professional installers who ensure that an approved antenna is used. As the device is professionally installed, the requirements of §15.203 are not applied.

Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

Ch.	Frequency (MHz)	Ch.	Frequency (MHz)
-	:	157	5785
-	:	-	:
-	:	-	:
-	:	-	:
-	:	-	:
149	5745	165	5825

Table 4-1. Frequency/ Channel Operations

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5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model / Equipment	Calibration Date	Cal Interval	Calibration Due	Serial No.
Agilent	E4404B/E4407B ESA Spectrum Analyzer	04/20/06	Annual	04/20/07	US39210313
Agilent	N4010A Wireless Connectivity Test Set	06/11/06	Annual	06/11/07	GB46170464
EMCO	Model 3115 (1-18GHz) Horn Antenna	08/24/06	Biennial	08/23/08	9203-2178
EMCO	Model 3115 (1-18GHz) Horn Antenna	08/25/06	Biennial	08/24/08	9704-5182
Gigatronics	8657A Universal Power Meter	04/07/06	Annual	04/07/07	8650319
Gigatronics	80701A (0.05-18GHz) Power Sensor	04/11/06	Annual	04/11/07	1833460
Rohde & Schwarz	NRVS Power Meter	06/01/05	Biennial	06/01/07	835360/079
Rohde & Schwarz	NRV-Z53 Power Sensor	06/01/05	Biennial	06/01/07	846076/007
Agilent	HP 8566B (100Hz-22GHz)	12/21/06	Annual	12/21/07	3638A08713
Agilent	HP 8591A (9kHz-1.8GHz)	09/20/06	Annual	09/20/07	3144A02458
Agilent	E4448A (3Hz-50GHz)	09/22/06	Annual	09/22/07	US42510244
Gigatronics	80701A (0.05-18GHz) Power Sensor	08/04/06	Annual	08/04/07	1835299
Aitech/Eaton	NM 37/57A (30MHz-1GHz)	06/07/06	Annual	06/07/07	0805-03334
Agilent	HP 85650A Quasi-Peak Adapter	12/21/06	Annual	12/21/07	2043A00301
Agilent	HP 8449B (1-26.5GHz) Pre-Amplifier	12/12/06	Annual	12/12/07	3008A00985
Agilent	HP 11713A Attenuation/Switch Driver	12/12/06	Annual	12/12/07	N/A
Agilent	HP 85685A (20Hz-2GHz) Preselector	12/12/06	Annual	12/12/07	N/A
Agilent	HP 8566B Opt. 462 Impulse Bandwidth	12/12/06	Annual	12/12/07	3701A22204
EMCO	3115 (1-18GHz) Horn Antenna	04/04/05	Biennial	04/04/07	9205-3874
Compliance Design	A100 Roberts Dipoles	08/31/05	Biennial	08/31/07	5118
EMCO	Dipole Pair	09/21/06	Biennial	09/20/08	23951
SOLAR	8012-50 LISN (2)	11/18/05	Biennial	11/18/07	0313233, 0310234
-	No.165 (30MHz - 1000MHz) RG58 Coax Cable	N/A		N/A	N/A
-	No.166 (1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No.167 (100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A

Table 5-1. Annual Test Equipment Calibration Schedule

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6.1 Radiated Measurements

§15.247(d) / §15.205 & §15.209

The EUT was tested from 9kHz to the tenth harmonic of the fundamental frequency of the transmitter. Below 1GHz a CISPR quasi peak detector was used. Above 1 GHz average measurements were taken, using RBW= 1MHz, VBW= 10Hz, and linearly polarized horn antennas. In addition, peak measurements (RBW= 1MHz, VBW= 1MHz) were taken to ensure that the peak levels are not more than 20dB above the average limit. No harmonics/spurs peak emissions are more than 20dB above the average limit. Special attention is taken for the EUT's harmonic and spurious radiated emissions in the restricted bands of operations, as defined in Section 15.205.

Frequency	Field Strength [μ V/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 6-2. Radiated Limits

FCC ID: ACJ9TGCF-193		FCC Pt. 15.247 WLAN 802.11a/b/g TEST REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
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Radiated Measurements (Cont'd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11b
 Transfer Rate: 1 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2412MHz
 Channel: 01

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dB μV/m]	Field Strength [μV/m]	Margin [dB]
* 4824.00	-106.88	38.8	V	38.93	88.41	-15.07
7236.00	-114.75	42.4	V	34.66	54.08	-45.64
9648.00	-105.67	45.2	V	46.53	212.08	-33.77
* 12060.00	-135.00	46.6	V	18.63	8.54	-35.37

Table 6-3. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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Radiated Measurements (Cont'd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11b
 Transfer Rate: 1 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2437MHz
 Channel: 06

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dB μV/m]	Field Strength [μV/m]	Margin [dB]
* 4874.00	-106.28	38.95	V	39.67	96.27	-14.33
* 7311.00	-110.50	42.67	V	39.17	90.89	-14.83
9748.00	-105.09	45.36	V	47.27	230.94	-32.40
* 12185.00	-135.00	46.68	V	18.68	8.59	-35.32

Table 6-4. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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Radiated Measurements (Cont'd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11b
 Transfer Rate: 1 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dB μV/m]	Field Strength [μV/m]	Margin [dB]
* 4924.00	-105.85	39.19	V	40.34	103.99	-13.66
* 7386.00	-108.17	43.01	V	41.84	123.59	-12.16
9848.00	-105.92	45.67	V	46.75	217.52	-33.78
* 12310.00	-135.00	46.61	V	18.61	8.52	-35.39

Table 6-5. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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Radiated Measurements (Contd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11a
 Transfer Rate: 6 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

	Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dBµV/m]	Field Strength [µV/m]	Margin [dB]
*	11490.00	-97.60	40.6	V	50.0	316.2	-3.98
	17235.00	-98.93	45.8	V	53.9	493.7	-14.03
*	22980.00	-135.00	49.6	V	21.6	12.0	-32.38
	28725.00	-135.00	52.1	V	24.1	16.0	-43.80

Table 6-6. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

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Radiated Measurements (Cont'd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11a
 Transfer Rate: 6 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dBμV/m]	Field Strength [μV/m]	Margin [dB]
* 11570.00	-96.38	40.5	V	51.1	359.7	-2.86
17355.00	-99.36	47.3	V	54.9	558.5	-12.41
23140.00	-135.00	50.1	V	22.1	12.7	-45.30
28925.00	-135.00	52.5	V	24.5	16.8	-42.85

Table 6-7. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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Radiated Measurements (Cont'd)
§15.247(d) / §15.205 & §15.209; RSS-210(A8.5)

Mode: 802.11a
 Transfer Rate: 6 Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dBμV/m]	Field Strength [μV/m]	Margin [dB]
* 11650.00	-96.35	40.6	V	51.3	365.2	-2.73
17475.00	-97.93	45.9	V	55.0	560.4	-14.03
23300.00	-135.00	49.4	V	21.4	11.7	-47.61
29125.00	-135.00	53.4	V	25.4	18.5	-43.65

Table 6-8. Radiated Measurements @ 3 meters

NOTES:

- All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table 6-2.
(Note: * = Restricted Band measured frequency)
- All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The peak emissions above 1GHz are not more than 20dB above the average limit.
- The antenna is manipulated through typical positions, polarity and length during the tests.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
- < - 135 dBm are below the analyzer floor level.
- Above 1GHz, the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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6.2 Radiated Restricted Band Measurements

§15.205 / §15.209; RSS-210(A8.5)

- Special attention is paid to the EUT's harmonic and spurious radiated emissions in the restricted bands of operations.

Mode: 802.11g

Transfer Rate: 1 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2462MHz

Channel: 11

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol. [H/V]	Field Strength [dBμV/m]	Field Strength [μV/m]	Margin [dB]
2483.50	-111.3	31.80	V	27.47	23.63	-26.51
2484.15	-112.3	31.80	V	26.47	21.06	-27.51
2486.72	-112.5	31.80	V	26.27	20.58	-27.71
2488.05	-113.2	31.80	V	25.57	18.99	-28.41
2491.47	-114.4	31.80	V	24.37	16.54	-29.61
2496.67	-115.6	31.80	V	23.17	14.40	-30.81

Table 6-9. Radiated Restricted Band Measurements at 3-meters

NOTES:

- The antenna is manipulated through typical positions, polarity and length during the testing.
- The EUT is supplied with the minimal AC voltage or/and a new/fully re-charged battery.
- The spectrum is measured from 9 kHz up to the 10th harmonic and the worst-case emissions are reported.
- Above 1 GHz the limit is 500μV/m.
- < -135 dBm is below the analyzer measurement floor level.
- The data in the table are Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz
- The peak emissions above 1 GHz are not more than 20 dB above the average limit.

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7.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Panasonic Toughbook with Car Dock Model: CF-WEB184 FCC ID: ACJ9TGCF-193** is in compliance with Part 15C of the FCC Rules.

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EXHIBIT A –TEST SETUP PHOTOGRAPHS

The Line-Conducted and Radiated Test Pictures show the worst-case configuration and cable placement with a minimum margin to the specifications.

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EXHIBIT B – EUT INTERNAL PHOTOGRAPHS

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EXHIBIT C – EUT EXTERNAL PHOTOGRAPHS

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EXHIBIT D – USER’S MANUAL

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