TOSHIBA

 TOSHIBA CORPORATION
 DIGITAL MEDIA NETWORK COMPANY

 OME COMPLEX
 2-9, SUEHIRO-CHO, OME, TOKYO 198-8710, JAPAN

 PHONE: +81(428)34-1050
 FAX: +81(428)30-7911

Date : April 3, 2003 Issued in : Tokyo, Japan

REPORT OF MEASUREMENT OF DIGITAL DEVICE

| 1. Manufacturer | : Toshiba Corporation Digital Media Network company, Ome Operations - Digital Media Equipment 2-9, Suehiro-cho, Ome-shi, Tokyo 198-8710 Japan and/or Toshiba America Information Systems, Inc., Irvine Works 9740 Irvine Boulevard, Irvine, CA 92618-1697 USA and/or Toshiba Europe GmbH, Regensburg Operations Center Leibnitzstrasse 2, D-93055, Regensburg, Germany and/or Toshiba Computer Systems (Shanghai) Co., Ltd. No.33 Bldg., 351 Jinzang Road, Pudong New Area, Shanghai, China and/or |
|--------------------------|--|
| | Toshiba Information Equipment (Hangzhou) Co., Ltd. M12-19-1 Hangzhou Export Processing Zone of Zhejiang, Hanzhong, The People's Republic of China and/or Toshiba Information Equipment (Philippines), Inc. 103 East Main Avenue Extention, Special Export Processing Zone, Laguna Technopark, Binan, Lagna, The Philippines |
| 2. Description on device | : Personal Computer a) Category b) Trade name c) Model No. d) Power supply : Class B digital device : TOSHIBA : PS201U : 15 Vdc, 3 A (supplied by AC Adaptor) |
| 3. Date of measurement | : March 24, 2003 (completed) |
| 4. Regulation applied | : FCC rules and regulations Part 15 Subpart B Canada ICES-003 |
| 5. Measurement procedure | : ANSI C63.4-1992 |
| 6. Measurement place | : Anechoic Chamber No. 2 and 3 of Ome Operations, Toshiba Corporation. (NVLAP Lab Code: 200107-0) |
| 7. Measurement results | The results obtained from the measuring of the above-mentioned device are as shown in the attached sheets. Test results in this test report are applicable to the sample tested. Test results in this test report are traceable to the National/ International Standards. |
| I HEREBY CERTIFY THAT | : The data shown in this report was made in accordance with the procedures given in ANSI C63.4-1992 and the energy emitted by the device was found to be within the applicable limits. This report was made in accordance with NVLAP requirements. |

Document No.: OFA-H3630

2/

NVLAP LAB CODE 200107-0

K. Takenaka, Specialist Quality Assurance Group Technology & Quality Management Div. Identify NVLAP Signatory

"The report must not be used by the client to claim product endorsement by NVLAP or any agency of U.S. Government."

The report shall not be reproduced except in full, without the written approval of the laboratory.

TABLE OF CONTENTS

| [Title] | [Page] |
|---|--|
| 1. MEASUREMENT CONDITION AND CONFIGURATION OF EUT | 3 |
| 2. COMMENT ON THE MEASUREMENT | 9 |
| [MEASUREMENT RESULTS] Conduction measurement | 11 |
| Radiation measurement | 14 |
| [MEASUREMENT SET-UP] | 19 |
| [MEASUREMENT INSTRUMENTATION USED] Conduction Measurement Radiation Measurement | 21 22 |
| [APPENDIX] A - System factor (for conduction measurement) : 150 kHz - 30 MHz B - System loss (for radiation measurement) : 30 MHz - 40 GHz C - Antenna factor (for tunable dipole antenna) : 30 MHz - 1 GHz D - Antenna factor (for broadband antenna) : 30 MHz - 40 GHz F - System Block Diagram G - Label Information H - Details of units I - Photographs of components or units | 24 25 26 29 31 32 33 37 |

Total page: 45

1. MEASUREMENT CONDITION AND CONFIGURATION OF EUT

The Personal Computer (EUT) with the memory module was measured as a system consisting of the Equipment Under Test (EUT) and a Docking connector, an External Monitor, two USB port, and a LAN jack attached to operating Class B certified peripherals as indicated in the 9/18/86 clarification of rules for measuring computing devices (Public Notice) and a PC Card, a SD card slots, a Microphone, a Headphone, a Modem jacks attached to appropriate operating peripherals or cables.

During the measuring, all available modes, all cabling and peripheral layouts were arranged to achieve the "WORST" case emissions in accordance with FCC recommended notebook computer system measurement configuration. The measurement data presented is representative of the system measurement.

1.1. The Equipment Under Test (EUT) information

The measurement data in this report was taken under the following EUT.

| [Product] | [Manufacturer] | [Model No.] |
|-------------------|---------------------|-------------|
| Personal Computer | Toshiba Corporation | PP201U |

Notes:

The EUT was operated with an Universal AC Adaptor supplied by Toshiba Corporation. A non-shielded DC output cable assembled with the Universal AC Adaptor. A non-shielded AC power cable is provided with the EUT.

Please refer to the Table 1 for EUT measurement configurations

- Table 1, EUT configurations -

| Data No. | А |
|-------------------|-------------------------------|
| Model No. | PP201U |
| (Serial No.) | (CS#1) |
| Type of Equipment | Pre-Production |
| CPU module | Pentium III 866 MHz |
| 1.8 inch HDD | 40GB: Toshiba Corp. (HDD1524) |
| AC Adaptor | PA3241U-1ACA |

Notes:

Details of alternative units refer to the Table 2.

1.2. Product information

(Model Designation of Personal Computer)

| · · · · · · · · · · · · · · · · · · · | | |
|---------------------------------------|---|---|
| Model Name | : | Portege 2000 and 2010 series |
| Model No. | : | PP200* and PP201* (*: suffix = U, E, L, Q, C, Z, A, K, T, J or N) |
| - CPU | : | Pentium III- 866 MHz, 800MHz, 750MHz or Celeron- 650MHz |
| - Memory | : | 128MB or 256MB |
| - HDD | : | 20GB, 30GB or 40GB |

(Unit information which constitutes Personal Computer)

This Personal computer consists of the following units.

| - | | |
|---|---|-----|
| * | System Board | x 1 |
| * | Sound Board | x 1 |
| * | Sound I/F flexible board | x 1 |
| * | Mini-PCI I/F Board | x 1 |
| * | Touch Pad module | x 1 |
| * | In Touch Button | x 1 |
| * | LED flexible board | x 1 |
| * | PC card I/F flexible board | x 1 |
| * | 12.1 inch Color LCD (Toshiba Corp., Type LTM12C328) | x 1 |
| * | FL Inverter | x 1 |
| * | LCD cable | x 1 |
| * | RTC Battery | x 1 |
| * | Speaker | x 1 |
| * | CPU Fan | x 1 |
| * | 1.8 inch HDD: # | x 1 |
| * | HDD I/F flexible board | x 1 |
| * | Keyboard unit | x 1 |
| * | Main Battery Pack (Model No. PA3154U) | x 1 |
| * | Modem module (Model No. 1456VQL4) | x 1 |
| * | Modem & LAN Connector cable | x 1 |
| * | RX Antenna | x 1 |
| * | TX/ RX Antenna | x 1 |
| * | Wireless LAN module Kit (Model No. PA3231U) | x 1 |
| * | Universal AC Adaptor: # | x 1 |
| | - | |

Notes:

#: This unit has alternative units. Information of alternative units refers to the Table 2.

Table 2

- Alternative Units -

| Units | Description, Manufacture or Distributor (Model No.) | | | |
|---------------------------|---|----------------------------------|----------------------------------|--|
| CPU (on the system board) | Pentium III- 800 MHz | Pentium III- 750 MHz | Celeron- 650 MHz | |
| | Pentium III- 866 MHz | | | |
| 1.8 inch HDD | 20GB: Toshiba Corp. (HDD1364) | 30GB: Toshiba Corp. (HDD1384) | 40GB: Toshiba Corp. (HDD1524) | |
| AC Adaptor | PA3153U-1ACA | PA3241U-1ACA | | |

(Details of units)

Generated frequencies and radio suppression components of all units refer to the Appendix G. Photographs of all units refer to the Appendix H.

(System Block Diagram)

Please refer to the Appendix E

(Label Information)

Please refer to the Appendix F

1.3. The measurement was carried out with the following equipment connected:

| - Table 5, Co | onnecting peripherals - | | | |
|-----------------|-------------------------------|--------------------------------|-------------------------------|-----------|
| Equipment No. | Kind of Equipment | Manufacturer or Distributor | Model No. (Serial No.) | FCC ID |
| 1 | High Capacity Battery Pack | Toshiba Corp. | PA3155U (PCC#1) | N/A |
| 2 | External Monitor | EIZO | FlexScanL371 (61996041-JA) | FCC DoC |
| 3* ¹ | External CD-RW Drive | PLEXTOR | PXW2410TV (503880045940) | FCC DoC |
| 4 | FDD Kit | Toshiba Corp. | PA3109U (1240000651) | FCC DoC |
| 5 | Keyboard | Logitech | Y-BE22 (MCT14906958) | FCC DoC |
| 6 | Headphone | Toshiba Corp. | HR-SP1-W (PCC#1) | N/A |
| 7 | Microphone | Foster Electric | M336E01T1711 (PCC#1) | N/A |
| 8 | Line Emulator | Toshiba Corp. | TLE101-II (408549) | N/A |
| 9* ² | Personal Computer | Toshiba Corp. | PT820U (CS-#1) | FCC DoC |
| 10 | PC Card HDD | Calluna | CT260T2 (PCC#1) | N/A |
| 11 | SD Bluetooth | Toshiba Corp. | SD-BT2 (0232TC0500A) | CJ6MSDB01 |
| 12 | Memory Kit (256MB) | Toshiba Corp. | PA3158U (PCC#1) | N/A |

- Table 3, Connecting peripherals -

Notes:

*¹ The external CD-RW Drive was operated with an AC Adaptor (Model No. SQ36W12P-03) supplied by PLEXTOR.

*² The Personal Computer was operated with an AC Adaptor (Model No. PA3048U-1ACA) supplied by Toshiba Corporation.

1.4. Information of installed or connected peripherals

| | Connected peripherals | Interface of | able informati | on |
|--|-----------------------|---------------------------|----------------|-----------|
| Connector name of EUT. | (Equipment No.*1) | Cable type | Connector | Length |
| Connector name of EOT. | Data | | type | [m] |
| | Data | Sup | oly method | |
| Docking connector | 1 | N/A | Metallic | Direct |
| | 1 | N/A | | |
| External Monitor $*^2$ | 2 | Shielded | Metallic | 1.7 |
| | 2 | Provided with Extern | nal Monitor | |
| USB port $1 *^2$ | 3 | Shielded | Metallic | 1.0 |
| | 5 | General USB cable | 1 | |
| USB port $2 *^2$ | 4 | Shielded | Metallic | 1.7 |
| | т | Assembled with US | B Mouse | |
| Headphone | 5 | Non-shielded | N/A | 1.5 |
| Treadphone | | Assembled with Headphone | | |
| Microphone | 6 | Shielded | N/A | 2.0 |
| Microphone | | Assembled with Microphone | | |
| Madam | 7 | Non-shielded | Plastic | 2.0 |
| Modelli | / | General Modular cable | | |
| (BI11 port of Line Emulator) | 0 | Non-shielded | Plastic | 2.0 |
| (KJ11 port of Line Emulator) | 0 | General Modular cable | | |
| $\mathbf{I} \mathbf{A} \mathbf{N} \mathbf{I} \mathbf{*}^2$ | 0 | Non-shielded | Plastic | 2.0 |
| LAN | 9 | General LAN cable | | |
| BC aard alat | 10 | N/A | N/A | Installed |
| r C card slot | | N/A | | |
| SD aard slat | 11 | N/A | N/A | Installed |
| SD card slot | | N/A | | |
| Momory Slot | 12 | N/A | N/A | Installed |
| Wennory Slot | 12 | N/A | | |

| - Table 4. | Connecting | information | for peri | pherals and | interface cables - |
|------------|------------|-------------|----------|-------------|--------------------|
| | Conneeeing | , | p | | |

Notes:

 $*^1$ The Equipment numbers refers to the Table 3.

*² when the connected to the Slime Port Replicator (Equipment No. 1- Table 2), this port cannot be used physically. Therefore, peripherals were not connected to this port, in the measurement data.

1.5. Operating conditions

(CPU clock speeds)

The EUT has two kinds of processing speed, however the CPU clock speed is not changed, only 650 MHz, 750 MHz, 800 MHz or 866 MHz. And also input clock speed is not changed only 133 MHz. The users can choose the processing speed by keyboard operation. Therefore, the following conditions were checked to maximize emission.

(1) Processing speed: Low mode

(2) Processing speed: High mode

The measurement data in our report represents emissions at High mode and 133MHz input clock (worst case).

(Display modes and Video modes)

This EUT supports many video modes. The users can choose the video mode by keyboard operation. Therefore, the following conditions were checked to maximize emission. Our report represents measurement data taken during the worst case EUT operations.

- SXGA video mode, 1024 X 768 (non-interlaced, maximum resolution)

(Operating programs)

- Table 5, Operation items -

| Item | Operation |
|----------------------------|---|
| LCD | display "H" (on full screen) |
| External Monitor | display "H" (on full screen) |
| FDD | write and read data |
| HDD | write and read data |
| HDD (PC Card) | write and read data |
| External CD-RW | write and read data |
| LAN | send and receive data (100MBPS transfer rate) |
| Modem | send and receive data (56 KBPS transfer rate) |
| Bluetooth and Wireless LAN | Transmitting test |

Notes:

These operations are performed repeatedly by program in order.

(Operating environment)

Power Supply

| - EUT | : 120 Vac, 60 Hz |
|---------------|------------------|
| - Peripherals | : 120 Vac, 60 Hz |

(Measurement set-up)

Please refer to page 21 and 22

- Sketches : Figure 1 and 2
- Photographs : Figure 3 and 4

2. COMMENT ON THE MEASUREMENT

2.1. Measurement methodology

Both conduction and radiation measurement are performed in accordance with the procedures in ANSI 63.4-1992.

2.2. Deviation from standard

None

2.3. Measurement procedure

During the evaluation measurement, all available modes, all cabling and peripheral layouts were arranged to achieve the "WORST" case emissions.

The pre-measurement and final measurement were performed under the conditions (mode of operation and configuration) of EUT determined by evaluation measurement.

At least six highest emissions relative to the limits were recorded at the final measurement.

(Conduction measurement)

The investigated frequency range was 450 kHz to 30 MHz.

The pre-measurement was performed by peak detector function to determine the emission characteristics of the EUT. Based on the measurement results of the pre-measurement, the one EUT configuration, cable or wire configuration, and mode of operation that produces the emission that has the highest amplitude relative to the limit is selected for the final measurement by quasi-peak detector function.

The signal out port of the LISN (Model No. KNW341C) for peripherals was terminated with a 50-ohms termination.

(Radiation measurement)

The investigated frequency range was 30 MHz to 25 GHz.

The radiation measurement was performed at the measurement distance of 3 meter.

The pre-measurement was performed by peak detector function to determine the emission characteristics of the EUT. Based on the measurement results of the pre-measurement, the one EUT configuration, cable or wire configuration, and mode of operation that produces the emission that has the highest amplitude relative to the limit is selected for the final measurement by peak, quasi-peak and average detector functions.

2.4. Measurement place

Both conduction and radiation measurement was performed in the Anechoic Chamber as follows.

- Conduction Measurement : Anechoic Chamber No. 2
- Radiation Measurement : Anechoic Chamber No. 2 and 3

2.5. Ambient condition

The ambient conditions at the time the measurement was conducted were as follows:

- Temperature / Relative humidity: Please sees [Measurement Results] in this report.

2.6. Uncertainty

Derived from ISO Guide to the Determination of Uncertainties with a Coverage Factor K=2.

- Conduction measurement : +/- 2 dB
- Radiation measurement : +/- 4 dB

2.7. Reference page of measurement results

- (Conduction measurement)
- Final measurement: refer to page 11Pre-measurement: refer to page 12 and 13

(Radiation measurement)

- Final measurement: refer to page 14
- Pre-measurement: refer to page 15 to 18

2.9. Minimum margin to the limits

- Table 6, Minimum margin for Conduction Measurement

| Data | Ranking | Margin (dB) | Frequency (MHz) | Line | Detector | Operating frequency |
|------|---------|-------------|-----------------|------|----------|---------------------|
| | 1 | 10.0 | 0.15088 | L2 | QP | Un-known |
| А | 2 | 10.3 | 0.1505 | L1 | QP | Un-known |
| | 3 | 14.1 | 0.15088 | L2 | AV | Un-known |
| | 4 | 19.6 | 4.09531 | L2 | QP | Un-known |
| | 5 | 19.8 | 4.09589 | L1 | QP | Un-known |
| | 6 | 20.7 | 6.14362 | L1 | QP | Un-known |
| | 6 | 20.7 | 6.14296 | L2 | QP | Un-known |

- Table 7, Minimum margin for Radiation Measurement

| Data | Ranking | Margin (dB) | Frequency (MHz) | Polarization | Detector | Operating frequency |
|------|---------|-------------|-----------------|--------------|----------|---------------------|
| | 1 | 2.0 | 260.117 | Horizontal | QP | Un-known |
| Α | 2 | 4.1 | 7215.231 | Vertical | PK | Un-known |
| | 3 | 6.0 | 266.096 | Horizontal | QP | Un-known |
| | 3 | 6.0 | 794.503 | Vertical | QP | Un-known |
| | 5 | 6.1 | 799.498 | Vertical | QP | Un-known |
| | 6 | 6.3 | 260.117 | Horizontal | QP | Un-known |

2.10. Sample of calculation

(Conduction Measurement)

The emission level on page 11 to 13 in the measurement data includes the following system factor.

- Final measurement and Pre-measurement

* System Factor (includes the LISN factor and system loss)
 : Appendix A
 150 kHz - 30 MHz

- Example

Sample of calculation at 0.1505 MHz (L1/QP): <u>Receiver reading</u> + <u>System Factor</u> = <u>Emission level</u> 55.3 + 0.4 = 55.7 [dBuV] ##: Refer to page 11.

(Radiation measurement)

The emission level on page 14 to 18 in the measurement data includes the following system factors.

- Final measurement

| * | System loss (includes the ca | able loss and/ or selector loss and / or Amplifier) | : Appendix B |
|---|------------------------------|---|--------------|
| | 30 MHz - 40 GHz | | |
| * | Antenna factor for: | | |
| | - Tunable dipole antenna | | : Appendix C |
| | 30 MHz - 500 MHz (E | Dipole Antenna: KBA-511A) | |
| | 500 MHz - 1 GHz (D | Dipole Antenna: KBA-611) | |
| | - Broadband antenna | | : Appendix D |
| | 1 GHz - 18 GHz (E | Double Ridged Waveguide Horn Antenna: 3115) | |
| | 18 GHz -26.5 GHz (S | Standard Gain Horn Antenna: 3160-9) | |
| | 26.5 GHz - 40 GHz (S | Standard Gain Horn Antenna: 3160-10) | |
| | | | |

- Example

Sample of calculation at 45.708MHz (Horizontal): <u>Receiver reading</u> <u>System loss + Antenna factor</u> <u>Emission level</u> 23.6 + 3.2 = 26.8 [dBuV/m] ##

##: Refer to page 15.

- Pre-measurement

| * | System loss (includes the | cable loss and/or selector loss and/or Amplifier) | : Appendix B |
|---|----------------------------|---|--------------|
| | 30 MHz - 40 GHz | | |
| * | Antenna factor for broadba | : Appendix D | |
| | 30 MHz - 1 GHz (| (BILOG Antenna: CBL6111A) | |
| | 1 GHz - 18 GHz (| (Double Ridged Waveguide Horn Antenna: 3115) | |
| | | | |

18 GHz - 26.5 GHz (Standard Gain Horn Antenna: 3160-9)

26.5 GHz - 40 GHz (Standard Gain Horn Antenna: 3160-10)

- Example

| Sample of calculation at 45.925 MHz (Horizontal): | | | | | | | | | |
|---|---|------------------------------|---|-------------------|--|--|--|--|--|
| Receiver reading | | System loss + Antenna factor | | Emission level | | | | | |
| 20.1 | + | 13.7 | = | 33.8 [dBuV/m] ### | | | | | |

###: Refer to page 16.

Document No.: OFA-H3630 Toshiba Corp., Ome Operations

Conduction Measurement Results

| | **** | <*********** | ******* | ******* | ******* < | * OME Open <conducted< th=""><th>rations * Emission>></th><th>************************************</th><th><***********</th><th>*********</th><th>*****</th></conducted<> | rations * Emission>> | * ******** *************************** | <*********** | ********* | ***** |
|---|--|--|--|---|--|--|----------------------------------|---|--|--|------------------------------|
| | Stan Mode Mode Seri Oper ACPc Temp Rema Rema Rema Fina | ndard 91 Name 91 No. aal No. ator wer 0, Humid rk1 rk2 ark3 ************************************ | : C. I. S. PORTEC : PP201U : CS#1 : M. Wa tz : 120Vac : 23.7de : : : ******* | P.R. Pub. E 2010 anabe e / 60Hz eg. / 48.0% | 22 Class ****** | B | **** | ***** | ****** | 20 March, C-Gua | 2003 21:58 m WLAN.dat |
| # | No. $\frac{1}{2}$ $\frac{1}{3}$ $\frac{4}{5}$ 6 | L1 Phase Frequency [MHz] 0.1505 0.2875 2.04876 4.09589 6.14362 14.680 | - Reading QP [dB (μ V)] 55.3 37.9 33.8 35.6 38.5 37.1 | Reading AV [dB(µV)] | c. f [dB] 0. 4 0. 3 0. 5 0. 6 0. 8 1. 3 | $\begin{array}{c} \text{Result} \\ \text{QP} \\ [\text{dB} (\ \mu \ V)] \\ \hline 55. \ 7 \\ 38. \ 2 \\ 34. \ 3 \\ 36. \ 2 \\ 39. \ 3 \\ 38. \ 4 \end{array}$ | Result AV [dB(µV)] | $ \begin{array}{c} \text{Limit} \\ \text{QP} \\ [\text{dB} (\mu \text{V})] \\ \hline 66.0 \\ 60.6 \\ 56.0 \\ 56.0 \\ 56.0 \\ 60.0 \\ 60.0 \end{array} $ | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB} (\mu \text{ V})] \\ \hline 56.0 \\ 50.6 \\ 46.0 \\ 46.0 \\ 46.0 \\ 50.0 \\ 50.0 \end{array}$ | Margin QP [dB] 10.3 22.4 21.7 19.8 20.7 21.6 | Margin AV [dB] |
| | No. 1 2 3 4 5 6 | L2 Phase Frequency [MHz] 0.15088 0.2875 2.0495 4.09531 6.14296 14.680 | - Reading QP [dB(μ V)] 55.6 37.6 33.7 35.8 38.5 37.4 | Reading AV [dB(µV)] 41.5 | c.f [dB] 0.4 0.3 0.5 0.6 0.8 1.3 | Result QP [dB(µV)] 56.0 37.9 34.2 36.4 39.3 38.7 | Result AV [dB(µV)] 41.9 | Limit QP [dB(µV)] 66.0 60.6 56.0 56.0 56.0 60.0 60.0 | Limit AV [dB(µV)] 56.0 50.6 46.0 46.0 46.0 50.0 50.0 | Margin QP [dB] 10.0 22.7 21.8 19.6 20.7 21.3 | Margin AV [dB] 14.1 |

Spectrum Selection

| | Frequency | Reading | c.f | Result | Limit | Limit | Margin | Margin | Remark |
|--|--|---|--|---|--|---|--|--|--------|
| | , | 0 | | PK | QP | AV | QP | AV | |
| | [MHz] | $[dB(\mu V)]$ | [dB] | [dB(µV)] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | [dB] | |
| 1 | 0.28475 | 41.9 | 0.3 | 42.2 | 60.7 | 50.7 | 18.5 | 8.5 | |
| 2 | 0.30138 | 40.2 | 0.3 | 40.5 | 60.2 | 50.2 | 19.7 | 9.7 | |
| 3 | 2.045 | 33.9 | 0.5 | 34.4 | 56.0 | 46.0 | 21.6 | 11.6 | |
| 4 | 4. 1075 | 37.0 | 0.6 | 37.6 | 56.0 | 46.0 | 18.4 | 8.4 | |
| 5 | 6.155 C 0795 | 39.8 | 0.8 | 40.6 | 60.0 | 50.0 | 19.4 | 9.4 | |
| 67 | 6.9725 | 39.4 | 0.8 | 40.2 | 60.0 | 50.0 | 19.8 | 9.8 | |
| (| 6.995 7.990 | 39.9 | 0.8 | 40.7 | 60.0 | 50.0 | 19.3 | 9.3 | |
| 0 | 12 055 | 37.4 30.1 | 0.0 | 30. Z | 60.0 | 50.0 | $\frac{21.0}{10.7}$ | 11.0 | |
| 10 | 12.000 | 39.1 | 1.2 1.2 | 40.5 | 60.0 | 50.0 | 19.7 | 9.7 | |
| 11 | 12.0025 12.12375 | 37 1 | 1.2 1.2 | 38 3 | 60.0 | 50.0 | 21.4 | 117 | |
| 12 | 14 255 | 42 7 | 1.2 | 44 0 | 60.0 | 50.0 | 16.0 | 6.0 | |
| 13 | 14, 73625 | 43.0 | 1.3 | 44.3 | 60.0 | 50.0 | 15.7 | 5.7 | |
| 14 | 15, 9325 | 40.6 | 1.4 | 42.0 | 60.0 | 50.0 | 18.0 | 8.0 | |
| 15 | 16.44125 | 38.3 | 1.4 | 39.7 | 60.0 | 50.0 | 20.3 | 10.3 | |
| | L2 Phase | _ | | | | | | | |
| | LL I HGOC | | | | | | | | |
| No. | Frequency | Reading | c.f | Result | Limit | Limit | Margin | Margin | Remark |
| No. | Frequency | Reading | c.f | Result PK | Limit QP | Limit AV | Margin _QP | Margin _AV | Remark |
| No. | Frequency [MHz] | Reading [dB(µV)] | c.f [dB] | Result PK [dB(µV)] | Limit QP [dB(µV)] | Limit AV [dB(µV)] | Margin QP [dB] | Margin AV [dB] | Remark |
| No. | Frequency [MHz] 0.2725 | Reading [dB(μV)] 37.8 | c.f [dB] 0.3 | Result PK [dB(μV)] 38.1 | Limit QP [dB(µV)] 61.0 | Limit AV [dB(µV)] 51.0 | Margin QP [dB] 22.9 | Margin AV [dB] 12.9 | Remark |
| No. | Frequency [MHz] 0.2725 0.28213 | Reading [dB(μV)] 37.8 38.7 | c.f [dB] 0.3 0.3 | Result PK [dB(µV)] 38.1 39.0 | Limit QP [dB(µV)] 61.0 60.8 | Limit AV [dB(µV)] 51.0 50.8 | Margin QP [dB] 22.9 21.9 | Margin AV [dB] 12.9 11.9 | Remark |
| No. | Frequency [MHz] 0.2725 0.28213 0.29263 | Reading [dB(μV)] 37.8 38.7 41.5 | c. f [dB] 0. 3 0. 3 0. 3 | Result PK [dB(µV)] 38.1 39.0 41.8 27.7 | Limit QP [dB(µV)] 61.0 60.8 60.4 | Limit AV [dB(µV)] 51.0 50.8 50.4 | Margin QP [dB] 22.9 21.9 18.7 | Margin AV [dB] 12.9 11.9 8.7 | Remark |
| No. 1 2 3 4 | Image: Frequency [MHz] 0.2725 0.28213 0.29263 2.045 | Reading [dB(μV)] 37.8 38.7 41.5 35.2 | c. f [dB] 0. 3 0. 3 0. 3 0. 5 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 | Limit QP [dB(µV)] 61.0 60.8 60.4 56.0 | Limit AV [dB(µV)] 51.0 50.8 50.4 46.0 | Margin QP [dB] 22.9 21.9 18.7 20.3 | Margin AV [dB] 12.9 11.9 8.7 10.3 | Remark |
| No. 1 2 3 4 5 | Frequency [MHz] 0. 2725 0. 28213 0. 29263 2. 045 3. 6725 4. 1075 | Reading [dB(µV)] 37.8 38.7 41.5 35.2 31.5 26.0 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 27.5 | Limit QP [dB(µV)] 61.0 60.8 60.4 56.0 56.0 | Limit AV $[dB(\mu V)]$ 51.0 50.8 50.4 46.0 46.0 46.0 | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 | Remark |
| No. 1 2 3 4 5 6 7 | Frequency [MHz] 0.2725 0.28213 0.29263 2.045 3.6725 4.1075 4.425 | Reading [dB(µV)] 37.8 38.7 41.5 35.2 31.5 36.9 31.6 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 7 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.2 | Limit QP [dB(µV)] 61.0 60.8 60.4 56.0 56.0 56.0 56.0 | Limit AV $[dB(\mu V)]$ 51.0 50.8 50.4 46.0 46.0 46.0 46.0 | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 | Remark |
| No. 1 2 3 4 5 6 7 8 | Frequency [MHz] 0. 2725 0. 28213 0. 29263 2. 045 3. 6725 4. 1075 4. 4825 4. 5425 | Reading [dB(µ V)] 37.8 38.7 41.5 35.2 31.5 36.9 31.6 32.5 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 7 0. 7 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.3 33.2 | Limit QP [dB(µV)] 61.0 60.8 60.4 56.0 56.0 56.0 56.0 56.0 | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\mu \text{ V})] \\ 51.0 \\ 50.8 \\ 50.4 \\ 46.0 \\ 40.0 \\$ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 | Remark |
| No. 1 2 3 4 5 6 7 8 9 | Frequency [MHz] 0. 2725 0. 28213 0. 29263 2. 045 3. 6725 4. 1075 4. 4825 4. 5425 4. 685 | Reading [dB(μ V)] 37. 8 38. 7 41. 5 35. 2 31. 5 36. 9 31. 6 32. 5 31. 5 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 7 0. 7 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.3 33.2 32.2 | Limit QP $[dB(\mu V)]$ 61.0 60.8 60.4 56.0 56.0 56.0 56.0 56.0 56.0 56.0 | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\mu \text{V})] \\ 51.0 \\ 50.8 \\ 50.4 \\ 46.0 \\ 40.0 \\ $ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 | Remark |
| No. 1 2 3 4 5 6 7 8 9 10 | Frequency [MHz] 0.2725 0.28213 0.29263 2.045 3.6725 4.1075 4.4825 4.5425 4.685 4.8875 | Reading [dB(µ V)] 37.8 38.7 41.5 35.2 31.5 36.9 31.6 32.5 31.5 33.6 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 6 0. 7 0. 7 0. 7 0. 7 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.3 33.2 32.2 34.3 | | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\mu \text{V})] \\ 51.0 \\ 50.8 \\ 50.4 \\ 46.0 \\ 40.0 \\ $ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 23.8 21.7 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 13.8 11.7 | Remark |
| No. 1 2 3 4 5 6 7 8 9 10 11 | Frequency [MHz] 0.2725 0.28213 0.29263 2.045 3.6725 4.1075 4.4825 4.5425 4.5425 4.685 5.315 | Reading [dB(µV)] 37.8 38.7 41.5 35.2 31.5 36.9 31.6 32.5 31.5 33.6 35.4 | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 7 0. 7 0. 7 0. 7 0. 7 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.3 33.2 32.2 34.3 36.1 | | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\mu \text{V})] \\ 51.0 \\ 50.8 \\ 50.4 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 50.0 \end{array}$ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 23.8 21.7 22.9 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 13.8 11.7 13.9 | Remark |
| No. 1 2 3 4 5 6 7 8 9 10 11 12 | Frequency [MHz] 0.2725 0.28213 0.29263 2.045 3.6725 4.1075 4.4825 4.5425 4.5425 4.685 4.8875 5.315 6.155 | Reading $[dB(\mu V)]$ 37.8 38.7 41.5 35.2 31.5 36.9 31.6 32.5 31.5 33.6 35.4 40.7 | c.f [dB] 0.3 0.3 0.5 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.8 | Result PK [dB(µV)] 38.1 39.0 41.8 35.7 32.1 37.5 32.3 33.2 32.2 32.2 34.3 36.1 41.5 | Limit QP $[dB(\mu V)]$ 61.0 60.8 60.4 56.0 | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\mu\text{V})] \\ 51.0 \\ 50.8 \\ 50.4 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 46.0 \\ 50.0 \\ 50.0 \end{array}$ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 21.7 23.9 18.6 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 13.8 11.7 13.9 8.6 | Remark |
| No. 1 2 3 4 5 6 7 8 9 10 11 12 13 | Frequency [MHz] 0.2725 0.28213 0.29263 2.045 3.6725 4.1075 4.4825 4.5425 4.5425 4.685 4.8875 5.315 6.155 7.1975 | Reading $[dB(\mu V)]$ 37.8 38.7 41.5 35.2 31.5 36.9 31.6 32.5 31.6 32.5 31.5 33.6 35.4 40.7 38.9 | c.f [dB] 0.3 0.5 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.8 0.8 | $\begin{array}{c} \mbox{Result} \\ \mbox{PK} \\ \mbox{[dB (} \mu \mbox{V)]} \\ \mbox{38. 1} \\ \mbox{39. 0} \\ \mbox{41. 8} \\ \mbox{35. 7} \\ \mbox{32. 1} \\ \mbox{37. 5} \\ \mbox{32. 2} \\ \mbox{32. 2} \\ \mbox{32. 2} \\ \mbox{32. 2} \\ \mbox{34. 3} \\ \mbox{36. 1} \\ \mbox{41. 5} \\ \mbox{39. 7} \end{array}$ | Limit QP $[dB(\mu V)]$ 61.0 60.8 60.4 56.0 | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\ \mu \ \text{V})] \\ 51. \ 0 \\ 50. \ 8 \\ 50. \ 4 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 50. \ 0 \\ 50. \ 0 \\ 50. \ 0 \end{array}$ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 21.7 23.9 18.6 20.3 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 13.8 11.7 13.9 8.6 10.3 | Remark |
| No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 | Frequency [MHz] 0. 2725 0. 28213 0. 29263 2. 045 3. 6725 4. 1075 4. 4825 4. 5425 4. 5425 4. 685 4. 8875 5. 315 6. 155 7. 1975 14. 6125 | Reading $\begin{bmatrix} dB (\mu V) \\ 37.8 \\ 38.7 \\ 41.5 \\ 35.2 \\ 31.5 \\ 36.9 \\ 31.6 \\ 32.5 \\ 31.6 \\ 32.5 \\ 31.5 \\ 33.6 \\ 35.4 \\ 40.7 \\ 38.9 \\ 42.4 \end{bmatrix}$ | c. f [dB] 0. 3 0. 3 0. 5 0. 6 0. 6 0. 6 0. 7 0. 7 0. 7 0. 7 0. 7 0. 8 0. 8 1. 3 | $\begin{array}{c} \mbox{Result} \\ \mbox{PK} \\ \mbox{[dB (} \mu \mbox{V)]} \\ \mbox{38. 1} \\ \mbox{39. 0} \\ \mbox{41. 8} \\ \mbox{35. 7} \\ \mbox{32. 1} \\ \mbox{37. 5} \\ \mbox{32. 2} \\ \mbox{33. 2} \\ \mbox{32. 2} \\ \mbox{32. 2} \\ \mbox{34. 3} \\ \mbox{36. 1} \\ \mbox{41. 5} \\ \mbox{39. 7} \\ \mbox{43. 7} \end{array}$ | | $\begin{array}{c} \text{Limit} \\ \text{AV} \\ [\text{dB}(\ \mu \ \text{V})] \\ 51. \ 0 \\ 50. \ 8 \\ 50. \ 8 \\ 50. \ 4 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ 50. \ 0 \\ 50. \ 0 \\ 50. \ 0 \\ 50. \ 0 \\ 50. \ 0 \end{array}$ | Margin QP [dB] 22.9 21.9 18.7 20.3 23.9 18.5 23.7 22.8 23.8 21.7 23.9 18.6 20.3 16.3 | Margin AV [dB] 12.9 11.9 8.7 10.3 13.9 8.5 13.7 12.8 13.8 11.7 13.9 8.6 10.3 6.3 | Remark |

Document No.: OFA-H3630 Toshiba Corp., Ome Operations



Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 13 of 45

Radiation Measurement Results

| **** | ****** | ****** | ********* | ***** OME (< <radiat< th=""><th>)perations * ted Emission></th><th>**************************************</th></radiat<> |)perations * ted Emission> | ************************************** | |
|--|--|--|--|---|--|--|-------------|
| Stan Mode Seri: Oper: AC Ma Temp Rema: Rema: Rema: Fina | dard 1 Name 1 No. al No. ator ains , Humid rk1 rk2 rk3 *********************************** | : FCC Pa : PORTEC : PP201U : CS#1 : M. Wata : AC 120 : 22.8 c : : : ********** | art 15B Cla GE 2010 J Wac / 60 H deg. / 48.(| ass B (3m) Hz % ********* | **** | ***** | **** |
| 1 No. 1 2 3 4 5 6 | Horizontal Frequency [MHz] 45.708 195.084 243.863 260.117 266.096 799.498 | Polarizatio Reading [dB(µV)] 23.6 18.8 18.3 23.5 19.2 2.8 | on (QP) c. f [dB(1/m)] <u>3. 2</u> 17. 6 19. 9 20. 5 20. 8 34. 5 | Result [dB(µV/m)] 26.8 36.4 38.2 44.0 40.0 37.3 | $\begin{array}{c} \text{Limit} \\ [\text{dB} (\ \mu \ \text{V/m})] \\ \hline 40. \ 0 \\ \hline 43. \ 5 \\ 46. \ 0 \\ 46. \ 0 \\ 46. \ 0 \\ \hline 46. \ 0 \\ \hline 46. \ 0 \end{array}$ | Margin [dB] <u>13.2</u> 7.1 7.8 2.0 6.0 8.7 | Remark - |
| No. 1 2 3 4 5 6 | Vertical Po Frequency [MHz] 33.613 45.708 260.117 632.000 794.503 799.498 | larization Reading [dB(µV)] 23.2 25.8 19.2 3.6 5.6 5.4 | (QP) c. f [dB(1/m)] 0. 5 3. 2 20. 5 30. 7 34. 4 34. 5 | Result [dB(µV/m)] 23.7 29.0 39.7 34.3 40.0 39.9 | Limit [dB(µV/m)] 40.0 40.0 46.0 46.0 46.0 46.0 46.0 | Margin [dB] 16.3 11.0 6.3 11.7 6.0 6.1 | Remark |

##

Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 14 of 45

| | ***** | ***** | ****** | ********* | ****** OME (< <radia< th=""><th>Operations > ted Emission</th><th>******** >></th><th>******</th><th>**************************************</th><th></th></radia<> | Operations > ted Emission | ******** >> | ****** | ************************************** | |
|---|--|--|--|---|---|---|---|--------|--|--|
| | Standar Model N Serial Operato AC Main Temp, H Remark1 Remark2 Remark3 ****** | d Jame Jo. No. rr Is Jumid ************************************ | : FCC Pa : PORTEC : PP201U : CS#1 : M. Wata : AC 120 : 22.8 c : : : : : : : : : : : : : | art 15B Cla GE 2010 J DVac / 60 H deg. / 48.(| ass B (3m) Iz % | ****** | ***** | ****** | ****** | |
| | Hor No. Fr | izontal H equency | Polarizatio Reading | on c.f | Result PK | Limit | Margin | Remark | | |
| ŧ | $ \begin{array}{r} 1 \\ 2 \\ $ | [MHz] 45.925 66.575 152.000 195.500 241.000 261.000 261.000 261.000 374.500 399.000 431.500 799.000 860.500 926.500 | $\begin{bmatrix} dB(\mu V) \\ 20.1 \\ 22.3 \\ 17.1 \\ 18.1 \\ 16.6 \\ 17.6 \\ 22.1 \\ 16.8 \\ 18.3 \\ 19.3 \\ 18.3 \\ 19.3 \\ 18.3 \\ 14.1 \\ 11.4 \\ 9.1 \\ 6.1 \\ \end{bmatrix}$ | $\begin{bmatrix} dB(1/m) \\ 13.7 \\ 10.3 \\ 17.8 \\ 19.6 \\ 21.9 \\ 22.1 \\ 23.5 \\ 19.6 \\ 19.7 \\ 20.1 \\ 24.3 \\ 28.1 \\ 30.0 \\ 31.6 \end{bmatrix}$ | $\begin{bmatrix} dR & (\mu & V/m) \end{bmatrix} \\ \underline{33.8} \\ 32.6 \\ 34.9 \\ 37.7 \\ 38.5 \\ 39.7 \\ 45.2 \\ 40.3 \\ 37.9 \\ 39.0 \\ 38.4 \\ 38.4 \\ 38.4 \\ 39.5 \\ 39.1 \\ 37.7 \end{bmatrix}$ | $\begin{bmatrix} dB (\mu V/m) \\ 40. 0 \\ 40. 0 \\ 43. 5 \\ 43. 5 \\ 43. 5 \\ 46. 0$ | [dB] 6.3 7.4 8.6 5.8 7.5 6.3 0.8 5.7 8.1 7.0 7.6 7.6 7.7 6.5 6.9 8.3 | | | |
| | Ver No. Fr 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | Itical Poi requency [MHz] 45.925 195.500 261.000 543.000 559.500 563.000 588.000 603.500 633.500 646.000 665.500 794.500 927.250 | larization Reading $[dB(\mu V)]$ 21.5 15.5 17.3 15.1 16.0 15.3 16.2 15.2 15.8 13.0 15.8 13.0 12.4 13.4 6.5 | $\begin{array}{c}\\ \text{c. f} \\ \begin{bmatrix} dB \left(1/m \right) \end{bmatrix} \\ 13. 7 \\ 19. 6 \\ 23. 1 \\ 22. 9 \\ 23. 0 \\ 23. 1 \\ 23. 1 \\ 23. 1 \\ 23. 1 \\ 23. 4 \\ 23. 7 \\ 24. 3 \\ 24. 5 \\ 24. 9 \\ 25. 7 \\ 28. 0 \\ 31. 6 \\ \end{array}$ | $\begin{array}{c} \text{Result} \\ \text{PK} \\ \left[\text{dB} \left(\begin{array}{c} \mu \text{ V/m} \right) \right] \\ 35.2 \\ 35.1 \\ 40.4 \\ 38.0 \\ 39.0 \\ 38.4 \\ 39.3 \\ 38.6 \\ 39.5 \\ 37.3 \\ 40.3 \\ 37.9 \\ 38.1 \\ 41.4 \\ 38.1 \end{array}$ | Limit $[dB(\mu V/m)]$ 40.0 43.5 46.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0 47.0 4 | Margin [dB] 4.8 8.4 5.6 8.0 7.0 7.6 6.7 7.4 6.5 8.7 5.7 8.1 7.9 4.6 7.9 | Remark | | |



Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 16 of 45

24 March, 2003 12:17 $\langle\langle Radiated Emission \rangle\rangle$ Guam SDBT. dat : FCC Part 15B Class B (3m) : PORTEGE 2010 : PP201U Standard Model Name Model No. : #1 Serial No. : M. Watanabe Operator ÷ 120Vac/60Hz AC Power Temp, Humid : 22.7deg./ 37% Remark1 Remark2 Remark3 Final Result --- Horizontal Polarization (AV)--- $\begin{array}{ccc} \text{Reading} & \text{c.f} & \text{Result} & \text{Limit} \\ \left[\text{dB} \left(\mu \text{ V} \right) \right] & \left[\text{dB} \left(1/\text{m} \right) \right] & \left[\text{dB} \left(\mu \text{ V/m} \right) \right] & \left[\text{dB} \left(\mu \text{ V/m} \right) \right] \end{array}$ c.f Limit Margin Remark No. Frequency [MHz] [dB] 1 1260.120 56.4-25.3 31.1 74.0 42.92 7215.231 39.6 -8.9 30.7 74.0 43.33 9636.643 36.2 -6.0 30.2 74.0 43.8--- Horizontal Polarization (PK)--- $\begin{array}{ccc} \text{Reading} & \text{c.f} & \text{Result} & \text{Limit} \\ \left[\text{dB} \left(\mu \text{ V} \right) \right] & \left[\text{dB} \left(1/\text{m} \right) \right] & \left[\text{dB} \left(\mu \text{ V/m} \right) \right] & \left[\text{dB} \left(\mu \text{ V/m} \right) \right] \end{array}$ Result No. Frequency Margin Remark [MHz] [dB]1260. 120 73.9 25.4 1 -25.3 48.6 74.0 2 7215.23174.0-8.9 65.174.0 8.9 3 9636.643 51.5-6.045.574.0 28.5--- Vertical Polarization (AV)--- $\begin{array}{ccc} \text{Reading} & \text{c. f} & \text{Result} & \text{Limit} \\ \left[\text{dB} \left(\mu \text{ V} \right) \right] & \left[\text{dB} \left(1/\text{m} \right) \right] & \left[\text{dB} \left(\mu \text{ V}/\text{m} \right) \right] & \left[\text{dB} \left(\mu \text{ V}/\text{m} \right) \right] \end{array}$ No. Frequency Margin Remark [MHz] $[d\bar{B}]$ 1 1260.12059.5 -25.3 34.2 74.0 39.8 -25.2 1326.3222 56.3 31.174.0 42.93 -15.3 47.5 4874.44941.826.574.0 4 7215.231 41.3-8.9 32.474.0 41.65 9636.643 41.3 -6.0 35.3 74.0 38.7 --- Vertical Polarization (PK)---No. Frequency Reading c. f Result Limit $[MHz] [dB(\mu V)] [dB(1/m)] [dB(\mu V/m)] [dB(\mu V/m)]$ Margin Remark [dB] 22.3 1260.120 1 77.0 -25.3 51.774.0 2 1326.322 71.1 -25.245.974.028.1 3 4874.449 59.9 -15.3 44.6 74.0 29.44 7215.231 78.8-8.9 69.9 74.0 4.1 5 9636.643 68.1-6.0 62.1 74.0 11.9

| ***** | ******** | ********* | ****** OME (< <radiat< th=""><th>Dperations * ted Emission></th><th>******** >></th><th>**************************************</th></radiat<> | Dperations * ted Emission> | ******** >> | ************************************** |
|--|---|---|---|---|--|--|
| ndard 91 Name 91 No. 92 No. 92 No. 92 No. 92 No. 92 No. 93 No. 94 | : FCC Pa : PORTEC : PP201U : #1 : M. Watz : 120Vac : 22.7de : : : ******************************* | art 15B Cla EE 2010 J anabe c/60Hz eg./ 37% | ass B (3m) ********** | ***** | ****** | Guam SDD1. dat |
| Horizontal Frequency | Polarizatio Reading | on c.f | Result | Limit | Margin | Remark |
| [MHz] 1258.517 2474.950 7224.449 7264.529 7334.669 7364.730 7404.810 17535.068 | $\begin{bmatrix} dB (\mu V) \\ 85.5 \\ 100.5 \\ 79.0 \\ 78.5 \\ 72.4 \\ 74.9 \\ 68.0 \\ 59.6 \end{bmatrix}$ | [dB(1/m)] -25.3 -19.6 -8.9 -8.7 -8.4 -8.3 -8.3 1.7 | $ \begin{array}{c} PK \\ \left[dB \left(\begin{array}{c} \mu \ V/m \right) \right] \\ 60. \ 2 \\ 80. \ 9 \\ \hline 70. \ 1 \\ 69. \ 8 \\ 64. \ 0 \\ 66. \ 6 \\ 59. \ 7 \\ 61. \ 3 \end{array} \right. $ | $ \begin{bmatrix} dB (\mu V/m) \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \\ 74.0 \end{bmatrix} $ | [dB] 13.8 -6.9 3.9 4.2 10.0 7.4 14.3 12.7 | _ |
| Vertical Po Frequency | larization Reading | c. f | Result | Limit | Margin | Remark |
| [MHz] 1258.517 1320.641 2474.950 4843.687 7204.409 7304.609 7384.770 7414.830 9629.258 9689.378 9729.459 | [dB(μ V)] 89.2 83.0 100.5 77.7 85.0 85.3 76.8 76.6 66.5 70.0 67.8 60.2 | [dB(1/m)] -25.3 -25.2 -19.6 -15.4 -9.0 -8.5 -8.3 -8.3 -6.0 -6.0 -6.0 -6.0 | $ \begin{smallmatrix} PK \\ [dB(\mu V/m)] \\ 63.9 \\ 57.8 \\ 80.9 \\ \hline 62.3 \\ 76.0 \\ 76.8 \\ 68.5 \\ 68.3 \\ 60.5 \\ 64.0 \\ 61.8 \\ 62.0 \\ \hline \end{array} $ | $\begin{bmatrix} dB (\mu V/m) \\ 74.0 \\$ | [dB] 10.1 16.2 -6.9 11.7 -2.0 -2.8 5.5 5.7 13.5 10.0 12.2 12.0 | |
| | <pre>************************************</pre> | $\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$ | $\begin{array}{rllllllllllllllllllllllllllllllllllll$ | $ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$ | ************************************* | ************************************* |

*: This frequency is operation frequency of the Wireless module.

Document No.: OFA-H3630 Toshiba Corp., Ome Operations



Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 19 of 45

MEASUREMENT SET-UP (Sketches)



Figure 1, Side View



Figure 2, Top view

Document No.: OFA-H3630 Toshiba Corp., Ome Operations

<section-header>

Figure 3, Front View



Figure 4, Rear View

Document No.: OFA-H3630 Toshiba Corp., Ome Operations

MEASUREMENT INSTRUMENTATION USED

| (Conduction | M | leasurement) |
|-------------|---|--------------|
|-------------|---|--------------|

| | Instrument | Manufacturer | Model No. | Serial No. |
|---|---|---|---------------------|--------------------------|
| * | EMI Receiver - Receiver RF Section | Hewlett Packard - Japan, Ltd | 8546A 85462A | 3549A00285 3549A00285 |
| | - RF Filter Section Frequency range Detector function IF bandwidth Calibration date | 9 k - 6.5 GHz CISPR Quasi Peak, Peak and Average 9 kHz May of 2002 | 85460A | 3548A00254 |
| * | Line Inpeadance Stabilization Network (LISN) (50uH / 50ohm), (for EUT) | Kyoritsu Electrical Works, Ltd. | KNW-407 | 8-794-14 |
| | Calibration date | : September of 2002 | | |
| * | Line Inpeadance Stabilization Network (LISN) (50uH / 50ohm), (for peripherals) | Kyoritsu Electrical Works, Ltd. | KNW-341C | 8-853-3 |
| | Calibration date | : September of 2002 | | |
| * | System Loss - Coaxial Cable Frequency range Calibration date | Toshiba Corp., Ome Operations FUJIKURA : 150 k - 30 MHz : December of 2002 | TOAC02-001 30-2W | N/A C004 |

All measurement instruments used for performing these tests were calibrated in accordance with manufacturer recommendations. All calibrations were current when the tests were performed and all instruments are calibrated at least once a year.

These measurement instruments used for the final measuremet and pre-measurement in the Anechoic Chamber No. 2.

MEASUREMENT INSTRUMENTATION USED

(Radiation Measurement)

| | Instrument | Manufacturer | Model No. | Serial No. |
|---|--|---|--------------------------------------|--|
| • | EMI Receiver - Receiver RF Section - RF Filter Section | Hewlett Packard - Japan, Ltd | 8546A 85462A 85460A | 3549A00285 3549A00285 3548A00254 |
| | Frequency range Detector function IF bandwidth Calibration date | 9 k - 6.5 GHz CISPR Quasi Peak, Peak and Average 9 kHz May of 2002 | | |
| * | Dipole antenna Tuning range Calibration date | Kyoritsu Electrical Works, Ltd. : 25 - 500MHz : July of 2002 | KBA-511A | 0-201-6 |
| * | Dipole antenna Tuning range Calibration date | Kyoritsu Electrical Works, Ltd. : 500 - 1000MHz : July of 2002 | KBA-611 | 0-215-1 |
| • | Biconical antenna: # Tuning Range Calibration date | CHASE : 30 - 300 MHz : July of 2002 | 11966C | 3110 |
| * | Log periodic antenna: # Tuning Range Calibration date | CHASE : 200 - 1000 MHz : September of 2002 | 3146 | 1592 |
| * | System Loss - Coaxial cable (2 cables) | Tohsiba Corp., Ome Operations SUHNER | TOAC02-002 S 04272 B S 04272 B | N/A C005 C006 |
| | Frequency range Calibration date | : 30 M - 2 GHz : December of 2002 | | |

All measurement instruments used for performing these tests were calibrated in accordance with manufacturer recommendations. All calibrations were current when the tests were performed and all instruments are calibrated at least once a year.

These measurement instruments used for the final measurements.

(#: This measurement instruments used only for the pre-measurements.)

| ٠ | Anechoic Chamber No. 2 | TI | DK Corp. | N/A | N/A |
|---|------------------------|----|----------------|-----|-----|
| | (NSA measurement) | | | | |
| | Calibration date | : | August of 2001 | | |

The Anechoic Chamber is calibrated (NSA measurement) at least once three years, for Registration of Measurement Facility to the the FCC or VCCI.

MEASUREMENT INSTRUMENTATION USED

(Radiation Measurement: above 1 GHz)

| | Instrument | Manufacturer | Model No. | Serial No. |
|---|---|---|--|---|
| • | EMI Tset Receiver Frequency range Detector function IF bandwidth Calibration date | ROHDE&SCHWARZ : 20 Hz - 40 GHz : CISPR Quasi Peak, Peak and Average : 9 kHz : September of 2002 | ESIB40 | 100127 |
| • | Double Redged Waveguide Horn Antenna Tuning Range Calibration date | EMCO : 1 - 18 GHz : August of 2002 | 3115 | 4949 |
| * | Standard Gain Horn Antenna Tuning Range | EMCO : 18 - 26.5 GHz | 3160-9 | 9910-1185 |
| • | Standard Gain Horn Antenna Tuning Range Tuning Range | EMCO : 26.5 - 40 GHz : 26.5 - 40 GHz | 3160-10 | 1153 |
| * | System Loss - Coaxial cable (5 cables) | Tohsiba Corp., Ome Operations SUHNER | TOAC03-003 SF102 SF102 SF102 SF102 SF102 SF102 | N/A C028 C030 C031 C032 C033 |
| | - Microwave System Amlifer | Agilent Technologies | 83051A 83051A | 3950M00213 MY39500304 |
| | Calibration date | : December of 2002 | | |
| • | System Loss - Coaxial cable (5 cables) | Tohsiba Corp., Ome Operations SUHNER | TOAC03-003 SF102 SF102 SF102 SF102 SF102 SF102 | N/A C029 C030 C031 C032 C033 |
| | - Microwave System Amlifer | Agilent Technologies | 83051A 83051A | 3950M00213 MY39500304 |
| | Frequency range Calibration date | : 18 - 40GHz : December of 2002 | | |

All measurement instruments used for performing these tests were calibrated in accordance with manufacturer recommendations. All calibrations were current when the tests were performed and all instruments are calibrated at least once a year. These measurement instruments used for the final measurements.

| ٠ | Anechoic Chamber No. 3 | Т | DK Corp. | N/A | N/A |
|---|---------------------------------------|---|---------------|-----|-----|
| | (NSA measurement) Calibration date | ; | April of 2002 | | |

The Anechoic Chamber is calibrated (NSA measurement) at least once three years, for Registration of Measurement Facility to the FCC or VCCI.

Document No.: OFA-H3630 Toshiba Corp., Ome Operations



for Anechoic Chamber No.2

LISN: Model KNW-407



Document No.: OFA-H3630 Toshiba Corp., Ome Operations

SYSTEM LOSS (Radiation measurement) 30MHz - 1GHz

for Anechoic Chamber No. 2

| Frequency | System | Frequency | System |
|-----------|-----------|-----------|-----------|
| [MHz] | Loss [dB] | [MHz] | Loss [dB] |
| 30 | 0.9 | 225 | 2.9 |
| 40 | 1.1 | 250 | 3.1 |
| 50 | 1.1 | 275 | 3.4 |
| 60 | 1.4 | 300 | 3.6 |
| 70 | 1.5 | 350 | 4.0 |
| 80 | 1.6 | 400 | 4.2 |
| 90 | 1.7 | 450 | 4.5 |
| 100 | 1.8 | 500 | 4.8 |
| 110 | 1.9 | 550 | 5.0 |
| 120 | 2.0 | 600 | 5.3 |
| 130 | 2.1 | 650 | 5.9 |
| 140 | 2.2 | 700 | 6.1 |
| 150 | 2.3 | 750 | 6.4 |
| 160 | 2.4 | 800 | 6.5 |
| 170 | 2.4 | 850 | 6.8 |
| 180 | 2.6 | 900 | 7.3 |
| 190 | 2.6 | 950 | 7.4 |
| 200 | 2.7 | 1000 | 7.7 |

SYSTEM LOSS (Radiation measurement) 18GHz - 40GHz

| Frequency | System | Frequency | System | Frequency | System |
|-----------|-----------|-----------|-----------|-----------|-----------|
| [MHz] | Loss [dB] | [MHz] | Loss [dB] | [MHz] | Loss [dB] |
| 18000 | -38.3 | 25500 | -37.2 | 33000 | -35.7 |
| 18250 | -38.1 | 25750 | -37.5 | 33250 | -35.8 |
| 18500 | -37.6 | 26000 | -37.7 | 33500 | -35.6 |
| 18750 | -38.0 | 26250 | -37.3 | 33750 | -35.8 |
| 19000 | -37.5 | 26500 | -36.7 | 34000 | -35.7 |
| 19250 | -37.1 | 26750 | -36.8 | 34250 | -36.0 |
| 19500 | -37.5 | 27000 | -36.5 | 34500 | -35.9 |
| 19750 | -36.0 | 27250 | -36.6 | 34750 | -36.0 |
| 20000 | -37.8 | 27500 | -36.6 | 35000 | -36.1 |
| 20250 | -36.1 | 27750 | -37.0 | 35250 | -35.6 |
| 20500 | -37.0 | 28000 | -37.4 | 35500 | -35.6 |
| 20750 | -37.7 | 28250 | -37.2 | 35750 | -35.7 |
| 21000 | -37.0 | 28500 | -37.2 | 36000 | -36.2 |
| 21250 | -37.3 | 28750 | -37.3 | 36250 | -35.8 |
| 21500 | -36.5 | 29000 | -36.9 | 36500 | -36.3 |
| 21750 | -36.7 | 29250 | -37.2 | 36750 | -36.0 |
| 22000 | -36.1 | 29500 | -36.6 | 37000 | -36.0 |
| 22250 | -36.4 | 29750 | -36.7 | 37250 | -35.9 |
| 22500 | -36.3 | 30000 | -36.6 | 37500 | -36.1 |
| 22750 | -36.2 | 30250 | -36.4 | 37750 | -35.7 |
| 23000 | -36.8 | 30500 | -36.5 | 38000 | -35.7 |
| 23250 | -36.4 | 30750 | -36.5 | 38250 | -35.3 |
| 23500 | -36.3 | 31000 | -36.2 | 38500 | -35.1 |
| 23750 | -36.5 | 31250 | -36.4 | 38750 | -35.2 |
| 24000 | -36.2 | 31500 | -36.3 | 39000 | -34.8 |
| 24250 | -36.4 | 31750 | -35.9 | 39250 | -34.7 |
| 24500 | -37.0 | 32000 | -36.1 | 39500 | -34.9 |
| 24750 | -36.7 | 32250 | -36.2 | 39750 | -34.9 |
| 25000 | -37.1 | 32500 | -36.1 | 40000 | -34.8 |
| 25050 | .26.0 | 22750 | -36.0 | 40000 | -54.0 |





ANTENNA FACTOR

(Broadband Antenna)

for Anechoic Chamber No. 2

BICONICAL ANTENNA: MODEL 11966C

| Serial No.: 3110 Calibration date: July of 2002 | | | | | |
|--|-----------------------|--------------------|-----------------------|--|--|
| Frequency [MHz] | Antenna Factor[dB] | Frequency [MHz] | Antenna Factor[dB] | | |
| 30 | 16.2 | 140 | 14.9 | | |
| 40 | 14.4 | 150 | 15.4 | | |
| 50 | 11.4 | 160 | 15.6 | | |
| 60 | 9.4 | 170 | 15.9 | | |
| 70 | 8.8 | 180 | 16.2 | | |
| 80 | 9.0 | 190 | 16.6 | | |
| 90 | 10.0 | 200 | 17.2 | | |
| 100 | 11.9 | 225 | 18.2 | | |
| 110 | 12.2 | 250 | 19.3 | | |
| 120 | 13.2 | 275 | 20.7 | | |
| 130 | 14.1 | 300 | 22.0 | | |

LOG PERIODIC ANTENNA: MODEL

Serial No.: 1592

| Frequency [MHz] | Antenna Factor[dB] | Frequency [MHz] | Antenna Factor[dB] |
|--------------------|-----------------------|--------------------|-----------------------|
| 300 | 13.8 | 700 | 20.8 |
| 350 | 15.2 | 750 | 21.4 |
| 400 | 15.6 | 800 | 21.6 |
| 450 | 16.0 | 850 | 22.8 |
| 500 | 17.6 | 900 | 24.0 |
| 550 | 18.0 | 950 | 24.4 |
| 600 | 18.4 | 1000 | 25.4 |
| 650 | 19.2 | | |

ANTENNA FACTOR

(Broadband Antenna)

for Anechoic Chamber No.3

DOUBLE RIDGED WAVEGUIDE HORN ANTENNA: MODEL 3115

Serial No.: 4949

| Frequency | Antenna | Frequency | Antenna |
|-----------|------------|-----------|------------|
| [MHz] | Factor[dB] | [MHz] | Factor[dB] |
| 1000 | 24.3 | 10000 | 38.9 |
| 1500 | 25.5 | 10500 | 38.6 |
| 2000 | 27.6 | 11000 | 38.6 |
| 2500 | 28.7 | 11500 | 39.4 |
| 3000 | 30.7 | 12000 | 39.2 |
| 3500 | 31.8 | 12500 | 39.1 |
| 4000 | 33.0 | 13000 | 40.8 |
| 4500 | 32.9 | 13500 | 41.2 |
| 5000 | 34.0 | 14000 | 41.5 |
| 5500 | 34.8 | 14500 | 41.0 |
| 6000 | 35.1 | 15000 | 39.0 |
| 6500 | 35.3 | 15500 | 38.0 |
| 7000 | 36.4 | 16000 | 38.3 |
| 7500 | 37.5 | 16500 | 39.6 |
| 8000 | 37.5 | 17000 | 41.9 |
| 8500 | 38.2 | 17500 | 44.7 |
| 9000 | 38.5 | 18000 | 45.3 |
| 9500 | 38.7 | | |

| Serial | No.: | 991 | 10-1 | 185 | |
|--------|------|-----|------|-----|--|
| | | | | | |

| Frequency | Antenna | Frequency | Antenna | |
|-----------|------------|-----------|------------|--|
| [MHz] | Factor[dB] | [MHz] | Factor[dB] | |
| 18000 | 40.2 | 22500 | 40.4 | |
| 18500 | 40.2 | 23000 | 40.4 | |
| 19000 | 40.2 | 23500 | 40.4 | |
| 19500 | 40.3 | 24000 | 40.4 | |
| 20000 | 40.3 | 24500 | 40.4 | |
| 20500 | 40.3 | 25000 | 40.4 | |
| 21000 | 40.3 | 25500 | 40.5 | |
| 21500 | 40.3 | 26000 | 40.5 | |
| 22000 | 40.3 | 26500 | 40.5 | |

STANDARD GAIN HORN ANTENNA: MODEL 3160-10

Serial No.: 1153

| Frequency | Antenna | Frequency | Antenna |
|-----------|------------|-----------|------------|
| [MHz] | Factor[dB] | [MHz] | Factor[dB] |
| 26500 | 43.4 | 34000 | 43.6 |
| 27000 | 43.4 | 35000 | 43.6 |
| 28000 | 43.4 | 36000 | 43.6 |
| 29000 | 43.5 | 37000 | 43.7 |
| 30000 | 43.5 | 38000 | 43.7 |
| 31000 | 43.5 | 39000 | 43.7 |
| 32000 | 43.5 | 40000 | 43.8 |
| 33000 | 43.6 | | |

Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 30 of 45

[Appendix E]

SYSTEM BLOCK DIAGRAM Portege 2000/ 2010 series (Model PP200* and PP201*)



Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 31 of 45

LABEL INFORMATION

| TOSHIBA PORTEGE 2000 MODEL NO.PP200U | |
|---|-------|
| DC 15V 3.0A | |
| SERIAL NO. | |
| TOBHIBA CORPORATION MADE IN JAPAN | |
| Tested To Comply With FCC Standards FOR HOME OR OFFICE USE This product is covered by one or more of the following U.S Patents 4,864,523; 4,980,678;4,990,902;4990,904;5,090,913;5,140,183;5,151,992;5,222,231; 5,239,495;5,276,890;5,280,589;5,294,013;5,336,491:5,335,141;4,371,923; 4,471,385;4,672,457;;4,686,662;4,825,364;4,829,419;4,896,260;and 4,942,516 | |
| | |
| | |
| | |
| Rating | Label |

BOTTOM VIEW

Document No.: OFA-H3630 Toshiba Corp., Ome Operations Page 32 of 45

DETAILES OF UNITS

| | Frequencies | Radio interference |
|----------------------------|--------------|-------------------------------------|
| Designation / Kind of unit | generated by | suppression |
| | this unit | components used |
| System Board | 32.768 kHz | EMI filters: |
| | 450 kHz | FL9, 11, 13 |
| | 4 MHz | Murata Manufacturing Co., Ltd. |
| | 8 MHz | Type NMF51R20P207 |
| | 14.31818 MHz | Rated 25 V, 200 mA |
| | 24.576 MHz | FL835, 836, 846, 907 |
| | 25 MHz | Taiyo Yuden Co., Ltd. |
| | 33.3 MHz | Type FBMJ3216HS800-T |
| | 48 MHz | Rated 4 A, 80 ohm |
| | 66 MHz | FL15, 16 |
| | 133 MHz | Taiyo Yuden Co., Ltd. |
| | | Type BK1608HW470-T |
| | | Rated 100 mA, 47 ohm |
| | | L800 |
| | | TDK Corp. |
| | | Type ACM0908-801-2P-TLE01 |
| | | Rated 800 ohm at 100 MHz, 4 A |
| | | Inductors: |
| | | FL19 |
| | | Taiyo Yuden Co., Ltd. |
| | | Type BK1608HW101-T |
| | | Rated 100 mA, 100 ohm |
| | | |
| | | TDK Corp. |
| | | Type NL4532321-4R7J |
| | | Rated 4.7 uH |
| | | L7,8 |
| | | IDK Corp. |
| | | Type NL4532321-1RUM $D \neq 14.7$ H |
| | | Kated 4. / UH |
| | | |
| | | Turne ACM4522 801 2D T001 |
| | | Deted 200 above at 100 MHz 4.4 |
| | | Kated 800 01111, at 100 MHZ, 4 A |
| | | L 845, 908 Tokin Com |
| | | Turne DI EC0725D 2D2D |
| | | Poted 4 A = 2.2 µH |
| | | Каюц 4 А, 5.5 ин I 900 |
| | | L 070 Tokin Com |
| | | Type PI EC0735D $100A$ |
| | | Rated 2 A 10 uH |
| СРИ | 650 MHz or | none |
| | 750 MHz or | |
| | 800 MHz or | |
| | 866 MHz | |

Page 33 of 45

| | Frequencies | Radio interference |
|---|------------------|---|
| Designation / Kind of unit | geneRated by | suppression |
| | this unit | components used |
| Sound Board | | |
| | none | EMI filters (beads): |
| | | FL998, 999 |
| | | TDK Corp. |
| | | Type ACM4552-701-5P-1 Poted 700 ohm at 100MHz 20V 0.2A |
| Sound I/E floyible board | nono | |
| Mini-PCI I/F board | none | none |
| Touch Dad module | none | none |
| | lione | none |
| In Touch Button | none | none |
| LED flexible board | none | none |
| PC Card I/F flexible board | none | none |
| 12.1 inch Color LCD | | |
| - Toshiba Corp., Type LTM12C328 | 500 kHz | EMI filter: |
| | | FLIOU Semilteres Metal Indextrial |
| | | Sumitomo Metal Industrial |
| | | Pated 25V 2A 2200 pE |
| FI Inverter | 70 1/17 | none |
| (Nagano Japan Radio Type NID- 7099) | 70 KHZ | lione |
| LCD cable | none | none |
| PTC Battary | none | none |
| Speelcon | none | none |
| Speaker CDL E | lione | lione |
| | none | none |
| (20GP) Tashiha Corp | 20 MHz | nono |
| - (200B) Toshiba Corp., Type HDD1364 | 20 MHz 40 MHz | lione |
| - (30GB) Toshiha Corp | 20 MHz | none |
| Type HDD1384 | 40 MHz | lione |
| - (40GB) Toshiba Corp., | 20 MHz | none |
| Type HDD1524 | 40 MHz | |
| HDD I/F flexible board | none | none |
| Keyboard unit | none | none |
| Main Battery Pack | none | none |
| Modem module | 24.576 MHz | Chip coils: |
| (Model No. 1456VQL4) | | FB1- 4 |
| | | Murata Manufacturing Co., Ltd. |
| | | Type BLM31A601SPT |
| | | Rated 600ohm at 100 MHz, 200mA |

| | Frequencies | Radio interference |
|-----------------------------|--------------|------------------------------------|
| Designation / Kind of unit | geneRated by | suppression |
| | this unit | components used |
| Modem & LAN connector cable | none | <u>Ferrite core:</u> |
| | | Kitagawa |
| | | Type BE-4-10-2 |
| RX Antenna | none | none |
| TX/RX Antenna | none | none |
| Wireless LAN module | none | none |
| For Modular cable | none | <u>Ferrite core:</u> |
| | | Kitagawa |
| | | Type RFC-10 |
| Universal AC Adaptor | | |
| -Model PA3153U-1ACA | 60 kHz | <u>Capacitors:</u> |
| | | CY1 |
| | | Matsushita Electric Ind. Co., Ltd. |
| | | Type DE0910E102M-KX |
| | | Rated 1000 pF |
| | | or |
| | | TDK Corp. |
| | | Type CD85-E2GA102MYNS |
| | | Rated 1000 pF |
| | | CX1 |
| | | ISKRA |
| | | Type KNB1560 |
| | | Rated 0.33 uF |
| | | or |
| | | ARCOTRONICS |
| | | Type R46 |
| | | Rated 0.33 uF |
| | | or |
| | | BC Components |
| | | Type 222233820334 |
| | | Rated 0.33 uF |
| | | <u>Choke coils:</u> |
| | | FL1 |
| | | DELTA |
| | | Type CR-10-NB31 |
| | | Rated 600 uH, at 40kHz, 1V |
| | | FL51 |
| | | DELTA |
| | | Type CR-10-NB20 |
| | | Rated 110 uH, at 40kHz, 1V |
| | | Line filter: |
| | | FLZ |
| | | |
| | | Type LFZ2004H09A |
| | | Rated 5.6 mH, at 40kHz, 1V |

| | Frequencies | Radio interference |
|--|--------------|-----------------------|
| Designation / Kind of unit | geneRated by | suppression |
| | this unit | components used |
| Model PA3241U-1ACA, Toshiba Corp. 130kHz | | Choke coils: |
| | - | L1 |
| | | Tokin Corp. |
| | | Type 4476P04968 |
| | | Rated 1A, 10mH |
| | | L2 |
| | | Tokin Corp. |
| | | Type SBCS-0806-3R0 |
| | | Rated 3A |
| | | L3 |
| | | Tokin Corp. |
| | | Type 4476P04965A |
| | | Rated 1A, 10mH |
| | | EMI Filters (Beads): |
| | | FB1 |
| | | Taiyo Yuden Co., Ltd. |
| | | Type CP22RA030010020M |
| | | Rated 2A |
| | | FB2 |
| | | Taiyo Yuden Co., Ltd. |
| | | Type FBR06HA121NA |
| | | Rated 6A |

PHOTOGRAPHS OF COMPONENTS OR UNITS

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 37 of 45



[Front View]



[Rear View]





[Front]





[Front]

[Back]

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 38 of 45



[Front]



[Back]



Touch pad module



[Front]

[Back]

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations

In Touch Button



[Front]









PC card I/F flexible board



[Front]



Document No.: OFA-H3630 Toshiba Corporation, Ome Operations

12.1 inch Color LCD Toshiba Corp., Type LTM12C328



[Front]

[Back]

FL Inverter Nagano Japan Radio, Type NJD-7099



[Front]

LCD cable







Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 41 of 45

CPU Fan



[Front]



1.8 inch HDD (20GB) Toshiba Corp., Type HDD1364



1.8 inch HDD (30 GB)

[Front]

[Back]



[Back]

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations

Page 42 of 45

1.8 inch HDD (40 GB) Toshiba Corp., Type HDD1524



[Front]







[Front]







[Front]

[Back]

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 43 of 45

Main Battery Pack



[Front]

[Back]





[Front]





Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 44 of 45

Wireless LAN module Model No. PA3231U



[Front]



[Back]

Universal AC Adaptor Model PA3153U-1ACA



[Front]

[Back]

Universal AC Adaptor Model PA3241U-1ACA



[Front]



[Back]

Document No.: OFA-H3630 Toshiba Corporation, Ome Operations Page 45 of 45