



RADIO TEST REPORT

Test Report No. : 27FE0369-HO-A

Applicant : Panasonic Communications Co., Ltd.
Type of Equipment : Cordless Telephone (Handset)
Model No. : BB-GTA150
FCC ID : ACJ96NBB-GT1540
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247: 2006
Test Result : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.

Date of test:

February 20 to March 2, 2007

Tested by:

Kenichi Adachi
EMC Services

Makoto Kosaka
EMC Services

Approved by :

Hironobu Shimoji
Assistant Manager of EMC Services



NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
*As for the range of Accreditation in NVLAP, you may refer to the WEB address, <http://ulapex.jp/emc/nvlap.htm>

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(14.06.06)

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SECTION 1: Client information

Company Name	Panasonic Communications Co., Ltd.
Brand name	Panasonic
Address	1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka, 812-8531 Japan
Telephone Number	+81-92-477-1405
Facsimile Number	+81-92-477-1487
Contact Person	Kunihiko Nawata

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	Cordless Telephone (Handset)
Model No.	BB-GTA150
Serial No.	Ant001 for Antenna Terminal Conducted test Air001 for Conducted Emission / Radiated Emission tests
Rating	DC 3.6V (Ni-MH Battery Pack)
Country of Manufacture	Japan
Condition of EUT	Engineering prototype (Not for sale: This sample is equivalent to mass-produced items.)
Receipt Date of Sample	February 19, 2007
Modification of EUT	No modification by the test lab.

2.2 Product Description

Equipment Type	Transceiver
Frequency band	Lower Channel : 5741.865MHz Upper Channel : 5838.187MHz
Bandwidth & Channel spacing	Bandwidth: 97MHz(96.322MHz) Channel spacing: 892kHz
Type of Modulation	FHSS
Antenna Type	5/8 lambda Pattern-Antenna
Antenna Gain	4dBi (Typ.)
Power Supply (RF Part)	DC3.6V
Method of Frequency Generation	Synthesizer
Operation Clock	Main clock:13.824 MHz

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C : 2006
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2006
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz : 2006

FCC 15.31 (e)

The EUT provides stable voltage(DC3.6V) constantly to RF Module regardless of input voltage. Therefore, the EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
1	Conducted emission	FCC: ANSI C63.4:2003 7. AC powerline conducted emission measurements	FCC: Section 15.207	-	N/A	41.1dB 27.64829MHz AV, N	Complied
2	Carrier Frequency Separation	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(a)(1)	Conducted	N/A	See data.	Complied
3	20dB Bandwidth	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(a)(1)	Conducted	N/A		Complied
4	Number of Hopping Frequency	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(a)(1)(ii)	Conducted	N/A		Complied
5	Dwell time	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(a)(1)(ii)	Conducted	N/A		Complied
6	Maximum Peak Output Power	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(b)(1)	Conducted	N/A		Complied
7	Band Edge Compliance	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(d)	Conducted	N/A		Complied
8	Spurious Emission	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators	FCC: Section 15.247(d)	Conducted/ Radiated	N/A		4.0 dB, 172.020MHz 172.030MHz Horizontal, QP

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.

*These tests were also referred to FCC Public Notice DA 00-705 "Guidance on Measurement for Frequency Hopping Spread Spectrum Systems".

*These tests were performed without any deviations from test procedure except for additions or exclusions.

3.3 Addition to standards

No addition, deviation, nor exclusion has been made from standards.

3.4 Uncertainty

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is ± 2.66 dB.
The data listed in this test report has enough margin, more than the site margin.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ± 4.59 dB(3m)/ ± 4.58 dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ± 4.62 dB(3m)/ ± 4.60 dB(10m).

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ± 5.27 dB.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is ± 3.0 dB.

3.5 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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Telephone: +81 596 24 8116 Facsimile: +81 596 24 8124

	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	313583	IC4247A	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	655103	IC4247A-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	148738	IC4247A-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	134570	IC4247A-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	-
No.4 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 semi-anechoic chamber	-	-	6.0 x 6.0 x 3.9m	N/A	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	2.0 x 2.0 m	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	4.75 x 5.4 m	-
No.7 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.8 measurement room	-	-	3.1 x 5.0 x 2.7m	N/A	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1, No.2, No.3 and No.4 semi-anechoic chambers and No.7 shielded room.

3.6 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

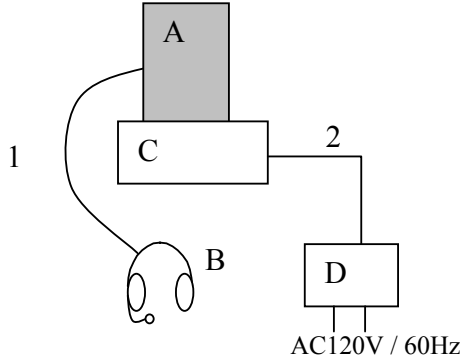
The mode is used : Transmitting mode
- Low Channel : 5741.865MHz
- Mid Channel : 5790.026MHz
- High Channel : 5838.187MHz

[Remarks]

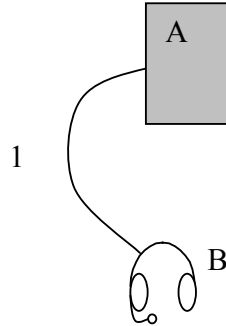
The EUT has 2 antennas (Antenna 1 and 2). The Antenna 2 is used for the Antenna Terminal Conducted tests and Radiated emission test since Antenna 2 has the higher output power level than Antenna 1. As for Conducted emission test, both Antenna 1 and 2 were used.

4.2 Configuration and peripherals

[for Conducted emission test]



[for Other test]



* Cabling and setup were taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Cordless Telephone (Handset)	BB-GTA150	Ant001 *1) Air001 *2)	Panasonic Communications Co., Ltd.	EUT
B	Headphone	KX-TCA88HA	-	Panasonic Communications Co., Ltd.	-
C	Battery Charger	PQLV30054PAB	-	Panasonic Communications Co., Ltd.	- *3)
D	AC Adapter	PQLV208	0645E	Panasonic Communications Co., Ltd.	- *3)

List of cables used

No.	Name	Length (m)	Shield	
			Cable	Connector
1	Headset Cable	1.45	Shielded	Shielded
2	DC Cable *3)	1.9	Unshielded	Unshielded

*1) Used for Antenna Terminal Conducted test

*2) Used for Conducted Emission and Radiated Emission tests

*3) The test was performed without Battery charger and AC Adapter in Radiated emission test since the test result (for EUT without Battery charger) had a higher output power level.

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SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a urethane platform of nominal size, 1.0m by 0.5m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

For the tests on EUT with other peripherals (as a whole system)

I/O cable and AC cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. All unused 50ohm connectors of the LISN(AMN) were resistivity terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

Detector	: CISPR quasi-peak and average detector (IF BW 9 kHz)
Measurement range	: 0.15-30MHz
Test data	: APPENDIX 2
Test result	: Pass

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SECTION 6: Spurious Emission

[Conducted]

Test Procedure

The Out of Band Emission was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 2

Test result : Pass

[Radiated]

Test Procedure

EUT was placed on a urethane platform of nominal size, 1.0m by 1.0m, raised 80cm above the conducting ground plane.

The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz) and 0.5m (Upper 26.5GHz) and 0.2m (Upper 30GHz).

The height of the measuring varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer (in linear mode).

The test was made with the detector (RBW/VBW) in the following table.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

The result also satisfied with the general limits specified in section 15.209(a).

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
Detector	QP: BW 120kHz	PK: RBW:1MHz/VBW: 1MHz
IF Bandwidth		AV: RBW:1MHz/VBW:10Hz

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Test data : APPENDIX 2

Test result : Pass

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SECTION 7: Bandwidth

Test Procedure

The bandwidth was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 2
Test result : Pass

SECTION 8: Maximum Peak Output Power

Test Procedure

The Maximum Peak Output Power was measured with a power meter (tested bandwidth: 50MHz) connected to the antenna port.

Test data : APPENDIX 2
Test result : Pass

SECTION 9: Carrier Frequency Separation

Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 2
Test result : Pass

SECTION 10: Number of Hopping Frequency

Test Procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 2
Test result : Pass

SECTION 11: Dwell time

Test Procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 2
Test result : Pass

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APPENDIX 1: Photographs of test setup

Conducted Emission

This page has been submitted in a separate sheet.

Spurious Emission (Radiated)

This page has been submitted in a separate sheet.

Worst Case Position (Horizontal: X-axis/ Vertical:Z-axis)

This page has been submitted in a separate sheet.

APPENDIX 2: Data of EMI test

Conducted Emission

(Tx, Ant1, Low)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
 Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-HO
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg. C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx Low 5741.865MHz, + charging, Ant-port: Ant1.

LIMIT : FCC15.207 QP
 FCC15.207 AV

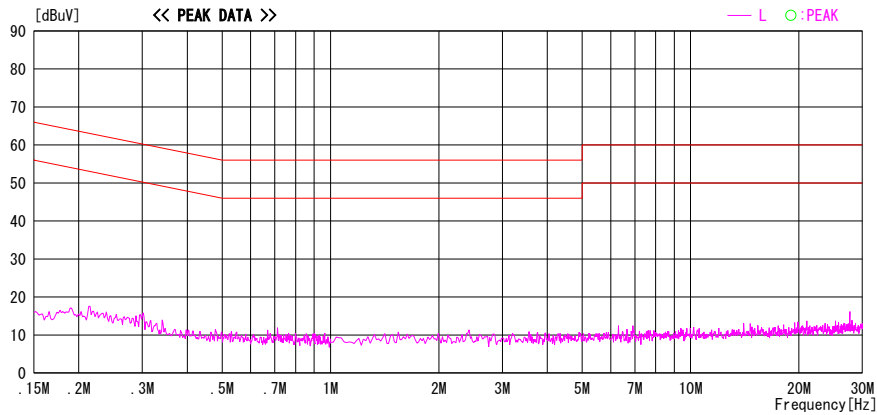
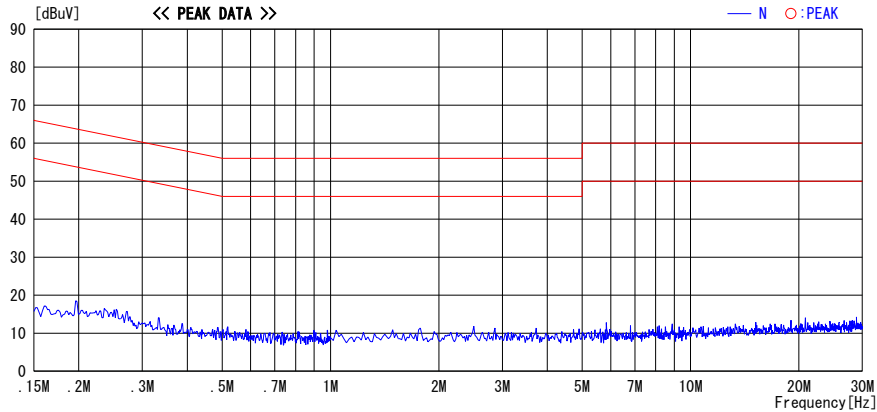


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission
 (Tx, Ant2, Low)
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
 Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-HO
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg.C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx Low 5741.865MHz, + charging, Worst-Ant-port: Ant2.

LIMIT : FCC15.207 QP
FCC15.207 AV

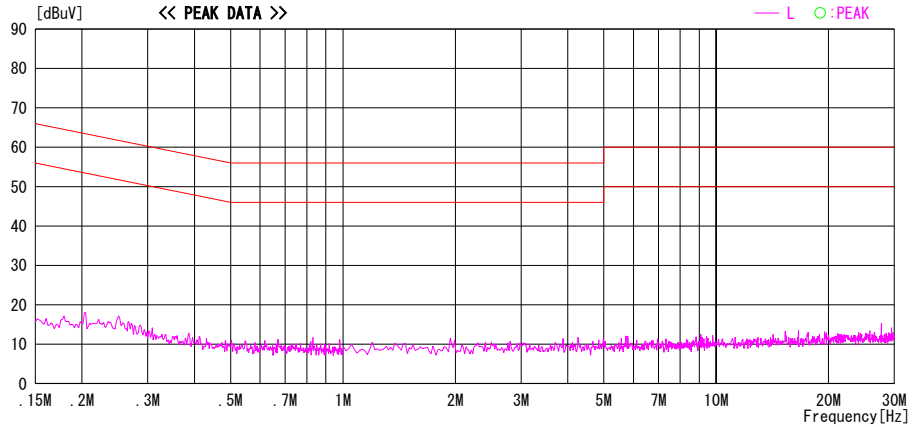
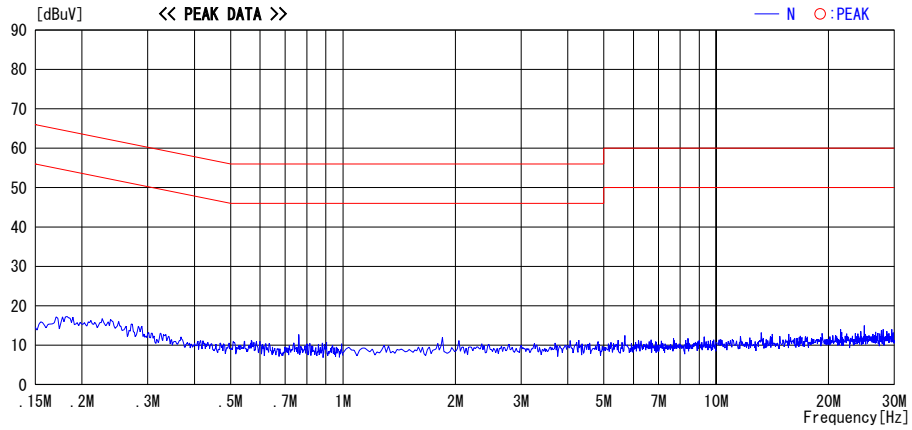


CHART: WITH FACTOR. Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F(L1SN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission
 (Tx, Ant1, Mid)
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
 Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-HO
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg.C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx Mid 5790.026MHz, + charging, Ant-port: Ant1.

LIMIT : FCC15.207 QP
 FCC15.207 AV

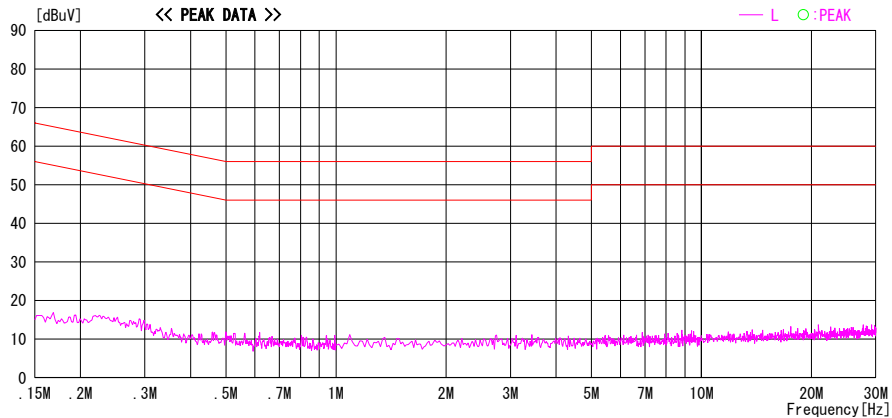
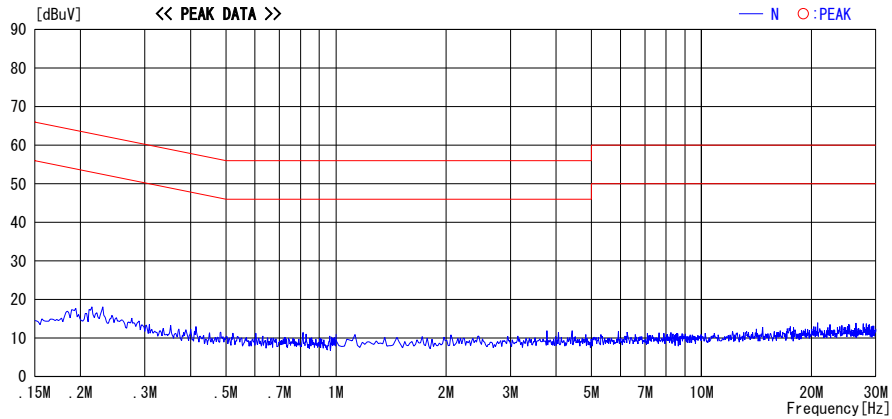


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission
 (Tx, Ant2, Mid)
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
 Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-HO
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg. C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx Mid 5790.026MHz, + charging, Worst-Ant-port: Ant2,

LIMIT : FCC15.207 QP
 FCC15.207 AV

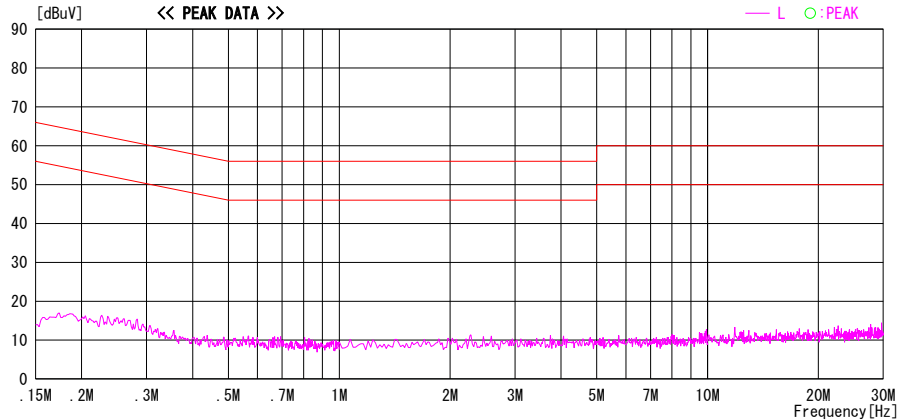
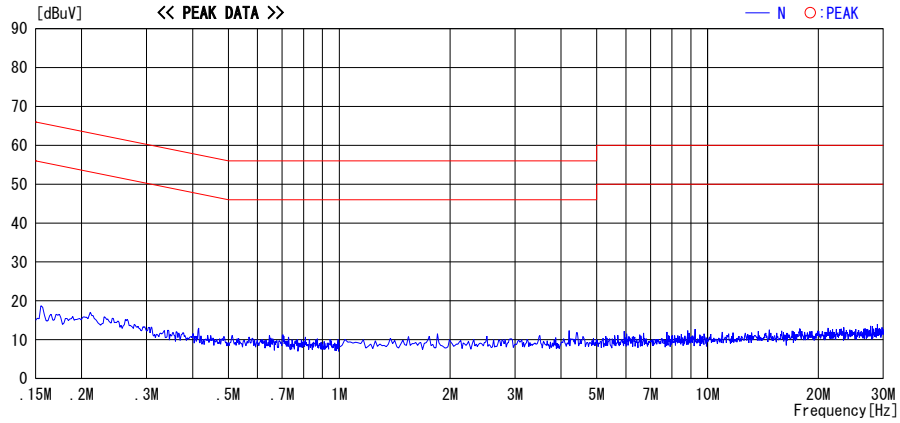


CHART:WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C. F (LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

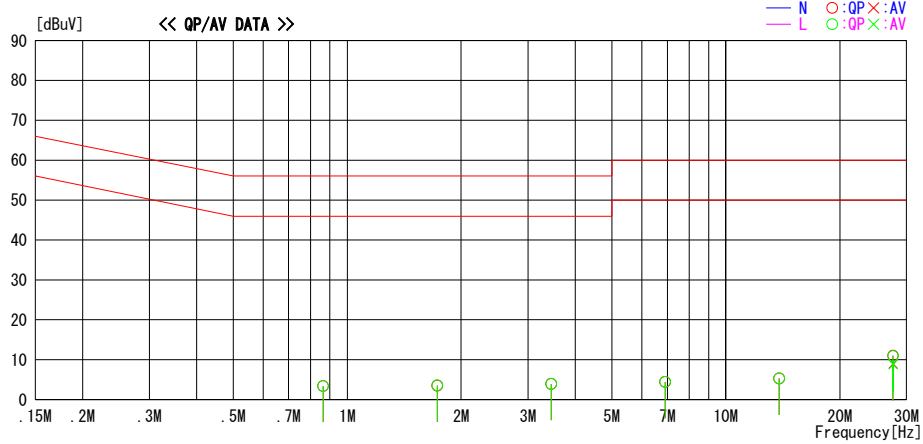
Conducted Emission
(Tx, Ant2, Mid)
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2007/03/02

Company : Panasonic Communications Co., Ltd. Report No. : 27FE0369-HO
Kind of EUT : Cordless Telephone (Handset) Power : AC 120V / 60Hz
Model No. : BB-GTA150 Temp./Humi. : 25 deg. C. / 30 %
Serial No. : Air001 Operator : Kenichi Adachi

Mode / Remarks : Tx Mid 5790.026MHz, + charging, Worst-Ant-port: Ant2.

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP	AV		QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
0.86399	3.0	---	0.4	3.4	---	56.0	---	52.6	---	N
0.86399	3.0	---	0.4	3.4	---	56.0	---	52.6	---	L
1.72798	3.0	---	0.5	3.5	---	56.0	---	52.5	---	N
1.72798	3.1	---	0.5	3.6	---	56.0	---	52.4	---	L
3.45596	3.1	---	0.8	3.9	---	56.0	---	52.1	---	N
3.45596	3.1	---	0.8	3.9	---	56.0	---	52.1	---	L
6.91119	3.2	---	1.2	4.4	---	60.0	---	55.6	---	N
6.91119	3.2	---	1.2	4.4	---	60.0	---	55.6	---	L
13.82382	3.4	---	1.9	5.3	---	60.0	---	54.7	---	N
13.82382	3.4	---	1.9	5.3	---	60.0	---	54.7	---	L
27.64829	8.5	6.4	2.5	11.0	8.9	60.0	50.0	49.0	41.1	N
27.64829	8.4	6.3	2.5	10.9	8.8	60.0	50.0	49.1	41.2	L

CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (L ISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

(Tx, Ant1, High)

DATA OF CONDUCTED EMISSION TEST

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Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-HO
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg.C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx High 5838.187MHz. + charging. Ant-port: Ant1.

LIMIT : FCC15.207 QP
FCC15.207 AV

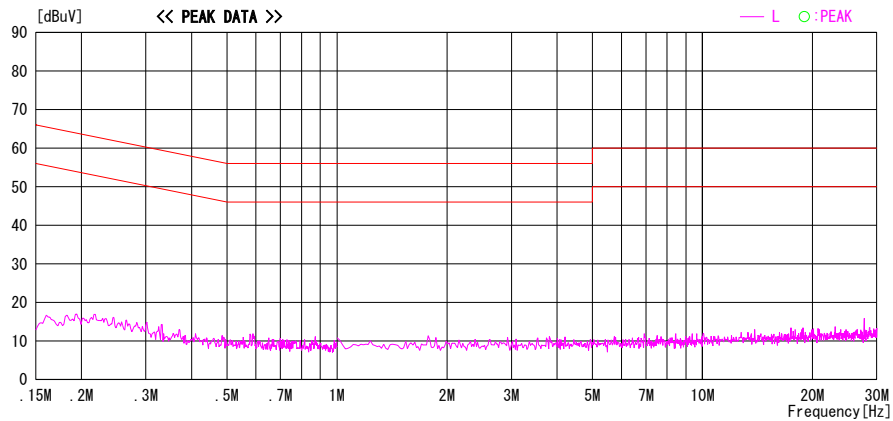
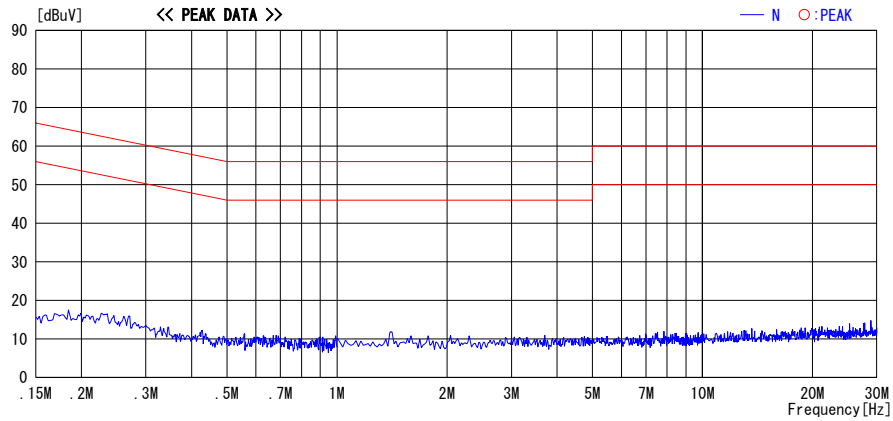


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
 (Tx, Ant2, High)
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
 Date : 2007/03/02

Company	: Panasonic Communications Co., Ltd.	Report No.	: 27FE0369-H0
Kind of EUT	: Cordless Telephone (Handset)	Power	: AC 120V / 60Hz
Model No.	: BB-GTA150	Temp./Humi.	: 25 deg. C. / 30 %
Serial No.	: Air001	Operator	: Kenichi Adachi

Mode / Remarks : Tx High 5838.187MHz, + charging, Worst-Ant-port: Ant2.

LIMIT : FCC15.207 QP
 FCC15.207 AV

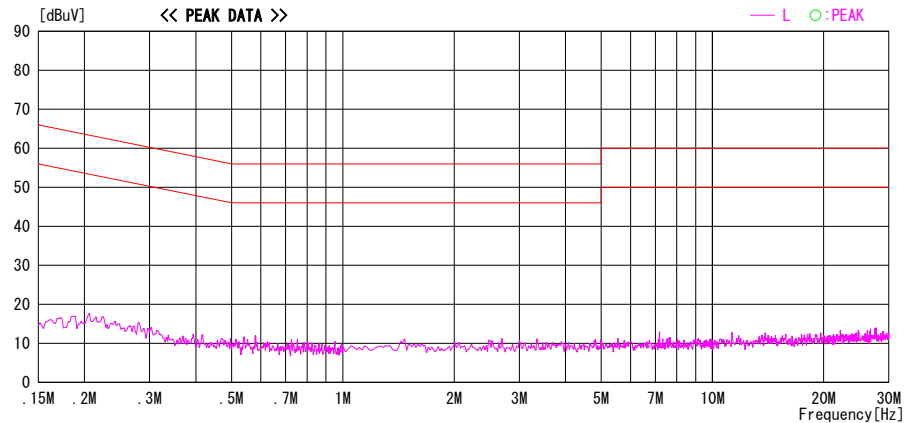
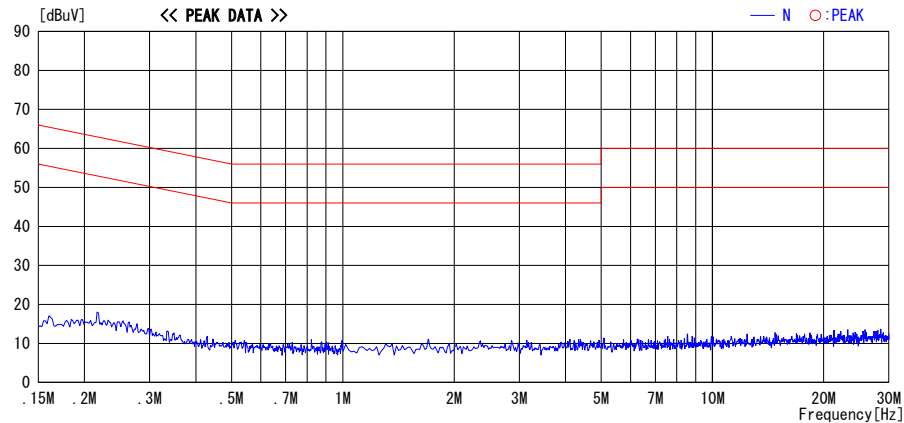


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

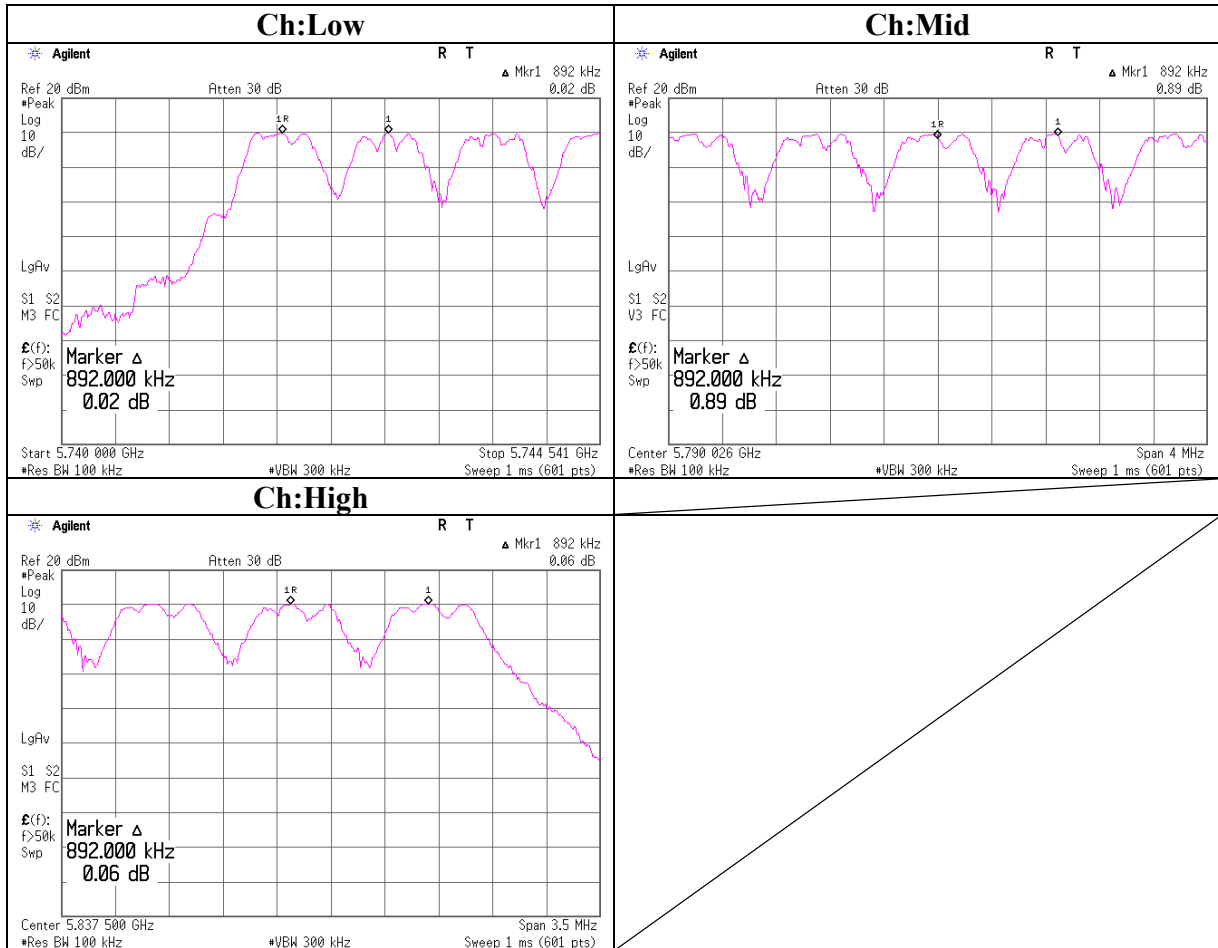
Carrier Frequency Separation

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150
S/N : Ant001
Power : DC3.6V
Mode : Tx (Hopping on), Ant2(Worst)

UL-Apex Co., Ltd.
Head Office EMC Lab. No.6 Shielded Room
Regulation : FCC 15.247(a)(1)(ii)
Test Distance : -
Date : 02/21/2007
Temperature : 21 deg.C.
Humidity : 49 %
Engineer : Makoto Kosaka

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	5759.702	0.892	> two-thirds of 0.729MHz (20dB Bandwidth) or 0.025MHz (whichever is greater)
Mid	5798.053	0.892	> two-thirds of 0.678MHz (20dB Bandwidth) or 0.025MHz (whichever is greater)
High	5838.187	0.892	> two-thirds of 0.874MHz (20dB Bandwidth) or 0.025MHz (whichever is greater)

Carrier Frequency Separation

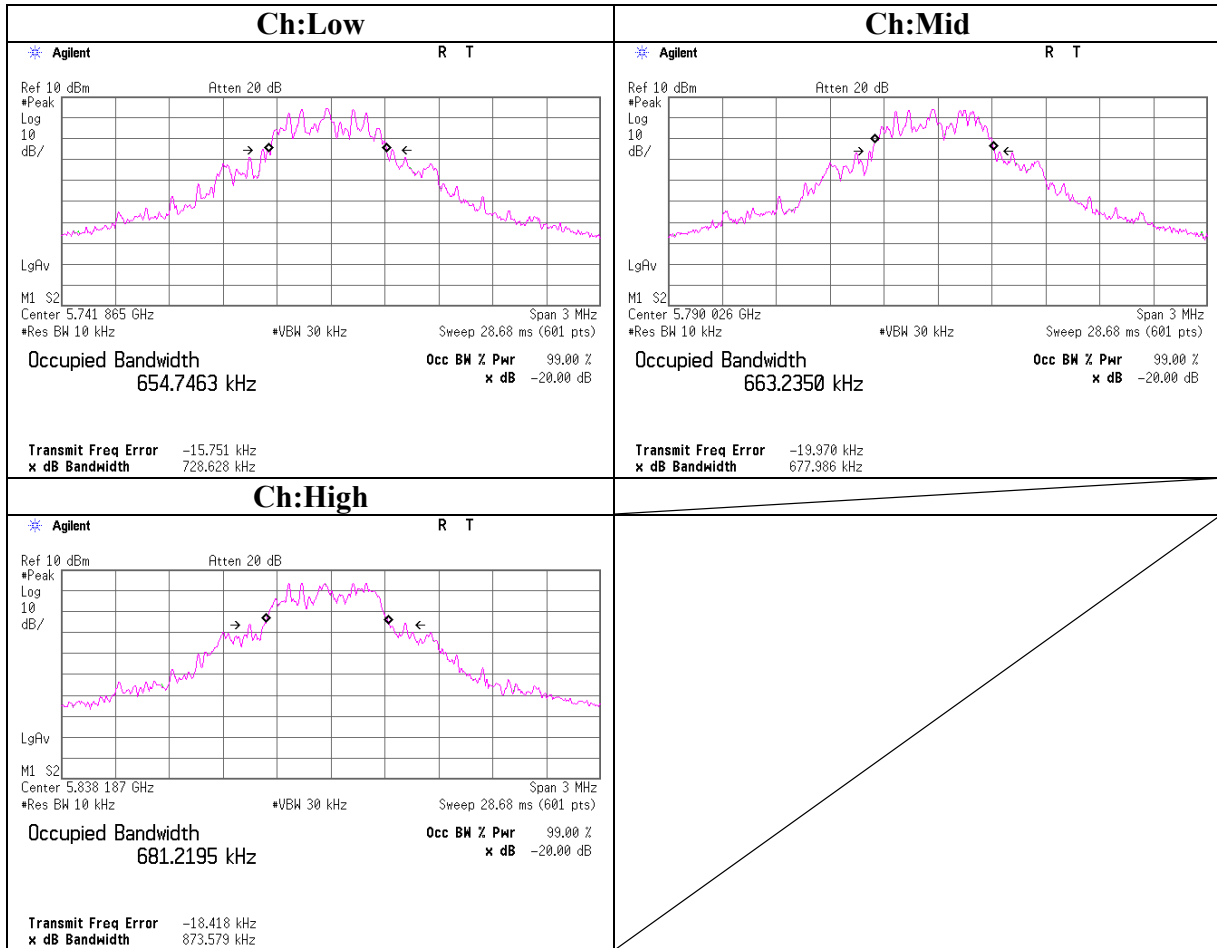


20dB Bandwidth

Company	: Panasonic Communications Co., Ltd.	UL-Apex Co., Ltd.
Equipment	: Cordless Telephone (Handset)	Head Office EMC Lab. No.6 Shielded Room
Model	: BB-GTA150	Regulation : FCC15.247(a)(1)
S/N	: Ant001	Test Distance : -
Power	: DC3.6V	Date : 02/21/2007
Mode	: Tx (Hopping off), Ant2(Worst)	Temperature : 21 deg.C.
		Humidity : 49 %
		Engineer : Makoto Kosaka

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	5741.865	0.729	-
Mid	5790.026	0.678	-
High	5838.187	0.874	-

20dB Bandwidth

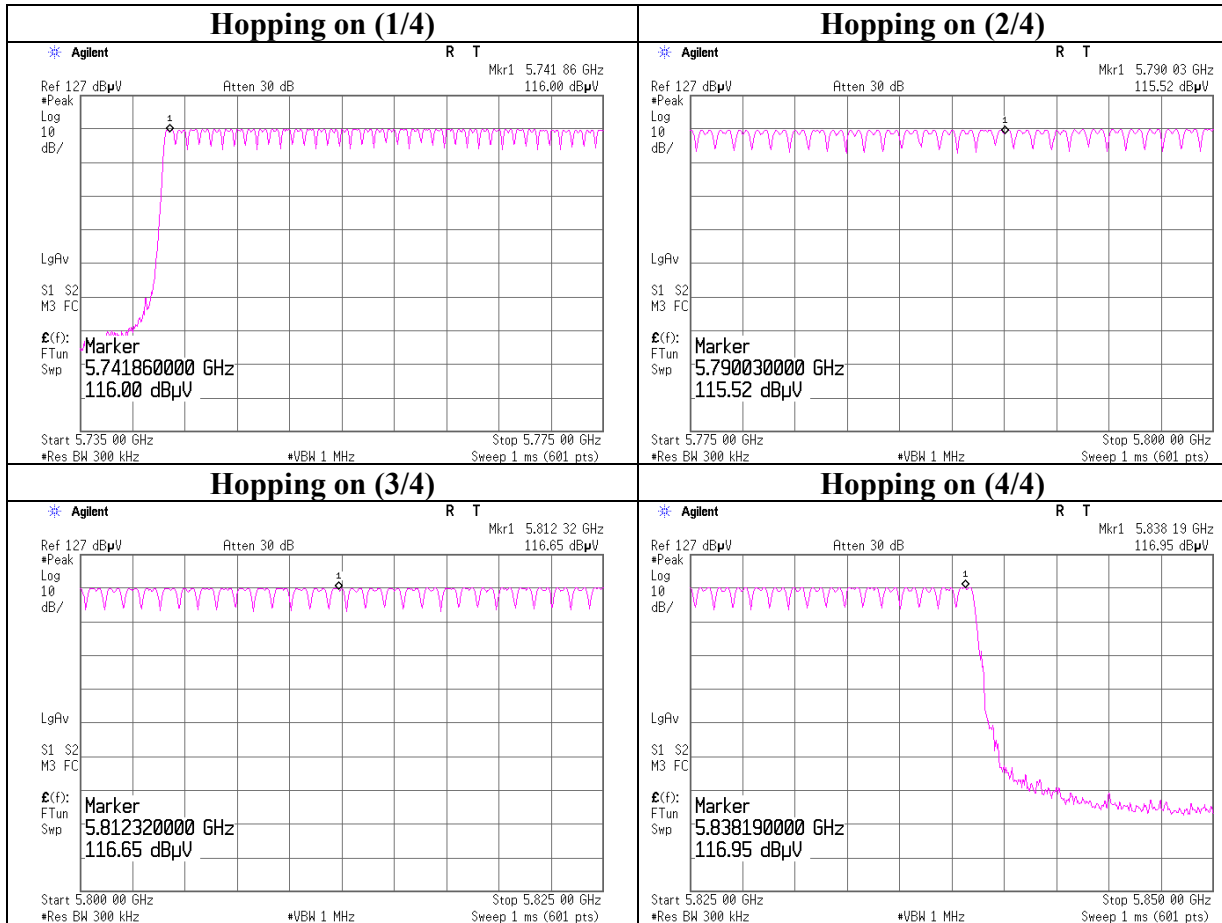


Number of Hopping Frequency

Company	: Panasonic Communications Co., Ltd.	UL-Apex Co., Ltd.
Equipment	: Cordless Telephone (Handset)	Head Office EMC Lab. No.6 Shielded Room
Model	: BB-GTA150	Regulation : FCC15.247(a)(1)(ii)
S/N	: Ant001	Test Distance : -
Power	: DC3.6V	Date : 02/21/2007
Mode	: Tx (Hopping on), Ant2(Worst)	Temperature : 21 deg.C.
		Humidity : 49 %
		Engineer : Makoto Kosaka

Mode	Number of channel [time]	Limit [time]
Tx(Hopping on)	109	≥ 75

Number of Hopping Frequency

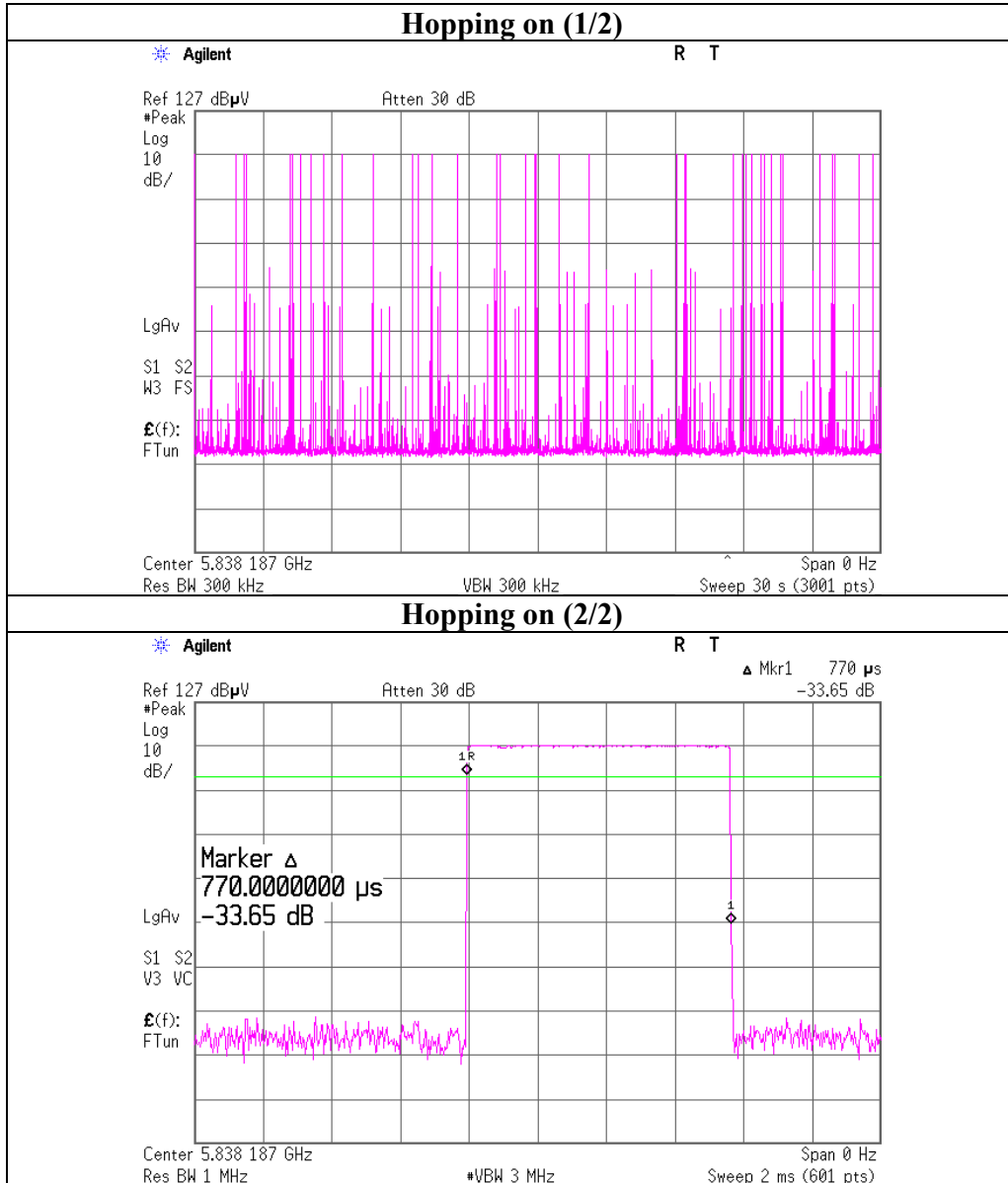


Dwell time

Company	: Panasonic Communications Co., Ltd.	UL-Apex Co., Ltd.
Equipment	: Cordless Telephone (Handset)	Head Office EMC Lab. No.6 Shielded Room
Model	: BB-GTA150	Regulation : FCC15.247(a)(1)(ii)
S/N	: Ant001	Test Distance : -
Power	: DC3.6V	Date : 02/21/2007
Mode	: Tx (Hopping on), Ant2(Worst)	Temperature : 21 deg.C.
		Humidity : 49 %
		Engineer : Makoto Kosaka

Mode	Number of transmission in a 30 second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
Tx (Hopping on)	36 times / 30 sec. x 30.0 sec. = 36 times	0.770	28	400

Dwell time



Maximum Peak Output Power

UL-Apex Co., Ltd.

Head Office EMC Lab. No.6 Shielded Room

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150
S/N : Ant001
Power : DC3.6V
Mode : Tx (Hopping off)

Regulation : FCC15.247(b)(1)
Test Distance : -
Date : 02/20/2007
Temperature : 24 deg.C.
Humidity : 38 %
Engineer : Makoto Kosakai

Ant 2 (Worst)

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Atten.+ Cable [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
Low	5759.702	9.31	10.15	19.46	88.31	30.00	1000	10.54
Mid	5798.053	9.51	10.16	19.67	92.68	30.00	1000	10.33
High	5838.187	9.74	10.16	19.90	97.72	30.00	1000	10.10

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Ant 1

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Atten.+ Cable [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
Low	5759.702	8.98	10.15	19.13	81.85	30.00	1000	10.87
Mid	5798.053	9.23	10.16	19.39	86.90	30.00	1000	10.61
High	5838.187	9.44	10.16	19.60	91.20	30.00	1000	10.40

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Reference Data

Refer to SAR report (27FE0369-HO-E).

UL-Apex Co., Ltd.

Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150
S/N : Air001
Power : DC3.6V
Mode : Tx (Hopping off), Worst Ant : Ant2

Regulation : FCC15.247(b)(1)
Test Distance : 10m
Date : 02/28/2007
Temperature : 23 deg.C.
Humidity : 30 %
Engineer : Kenichi Adachi

No.	Frequency [MHz]	Electric Field Strength (3m) (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]	
		HOR	VER	HOR	VER				HOR	VER
1	5741.87	120.4	124.7	11.5	16.3	3.2	10.5	0.0	18.8	23.6
2	5790.03	119.4	124.0	10.5	15.6	3.2	10.5	0.0	17.8	22.9
3	5838.19	119.2	123.5	10.3	15.1	3.2	10.5	0.0	17.5	22.4

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30-300MHz), Logperriodic Antenna(300-1000MHz), Horn Antenna(1-12.75GHz)

Tx-ANTENNA : Shorted Dipole Antenna(30-120MHz), Dipole Antenna(120-1000MHz), Horn Antenna(1-12.75GHz)

Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

With the result above, the effective radiated power was calculated on the basis of the reference value

- for the calibration data on the substitution measurement.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(14.06.06)

Radiated Spurious Emission (below 1GHz)

(Tx, Ant2, Low)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

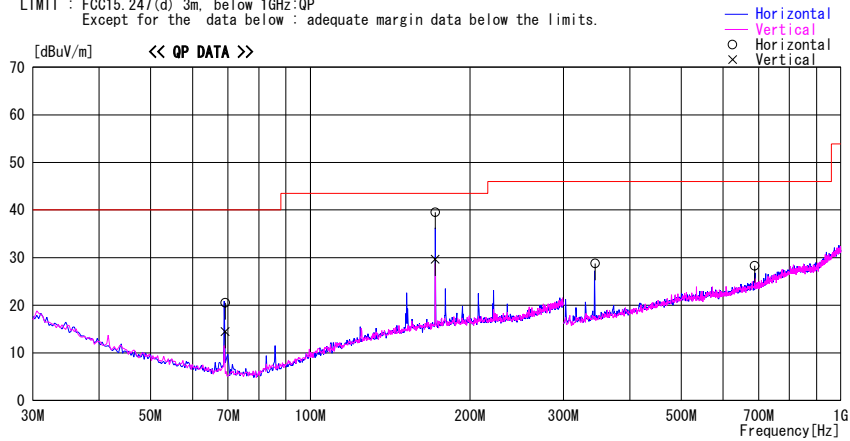
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2007/02/23

Company : Panasonic Communications Co.,Ltd. Report No. : 27FE0369-HO
Kind of EUT : Cordless Telephone (Handset) Power : DC3.6V
Model No. : BB-GTA150 Temp./Humi. : 24deg.C / 38%
Serial No. : Air001 Operator : Makoto Kosaka

Mode / Remarks : Tx Low 5741.865MHz EUT-max-axis(H: X, V: Z) Worst-Antport: Ant2

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss & Gain [dB]							
69.120	37.4	QP	7.3	-24.2	20.5	71	255	Hori.	40.0	19.5	
69.120	31.4	QP	7.3	-24.2	14.5	350	233	Vert.	40.0	25.5	
172.020	46.3	QP	16.1	-22.9	39.5	1	176	Hori.	43.5	4.0	
172.032	36.5	QP	16.1	-22.9	29.7	51	100	Vert.	43.5	13.8	
344.060	33.6	QP	16.8	-21.6	28.8	336	100	Hori.	46.0	17.2	
688.129	27.1	QP	21.0	-19.8	28.3	343	109	Hori.	46.0	17.7	

CHART: WITH FACTOR ANT TYPE : -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

Radiated Spurious Emission (below 1GHz)
(Tx, Ant2, Mid)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

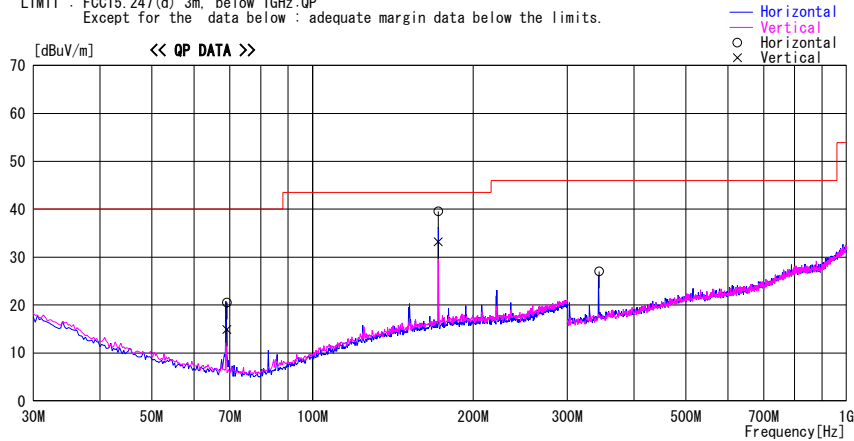
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2007/02/23

Company : Panasonic Communications Co.,Ltd. Report No. : 27FE0369-HO
Kind of EUT : Cordless Telephone (Handset) Power : DC3.6V
Model No. : BB-GTA150 Temp./Humi. : 24deg.C / 38%
Serial No. : Air001 Operator : Makoto Kosaka

Mode / Remarks : Tx Mid 5790.026MHz EUT-max-axis(H: X, V: Z) Worst-Antport: Ant2

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
69.120	37.4	QP	7.3	-24.2	20.5	254	267	Hori.	40.0	19.5	
69.120	31.8	QP	7.3	-24.2	14.9	342	225	Vert.	40.0	25.1	
172.030	46.3	QP	16.1	-22.9	39.5	1	180	Hori.	43.5	4.0	
172.030	40.0	QP	16.1	-22.9	33.2	48	189	Vert.	43.5	10.3	
344.060	31.8	QP	16.8	-21.6	27.0	323	100	Hori.	46.0	19.0	

CHART:WITH FACTOR ANT TYPE : -30MHz:LOOP, 30-300MHz:BICONICAL, 300MHz-1000MHz:LOGPERIODIC, 1000MHz-:HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

Radiated Spurious Emission (below 1GHz)
(Tx, Ant2, High)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

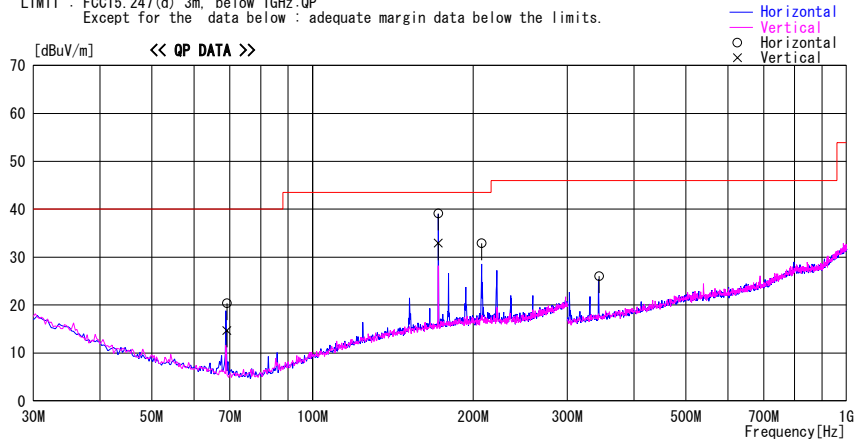
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2007/02/23

Company : Panasonic Communications Co., Ltd. Report No. : 27FE0369-HO
Kind of EUT : Cordless Telephone (Handset) Power : DC3.6V
Model No. : BB-GTA150 Temp./Humi. : 24deg.C / 38%
Serial No. : Air001 Operator : Makoto Kosaka

Mode / Remarks : Tx High 5838.187MHz EUT-max-axis(H: X, V: Z) Worst-Antport: Ant2

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss & Gain [dB]							
69.120	37.3	QP	7.3	-24.2	20.4	59	287	Hori.	40.0	19.6	
69.120	31.6	QP	7.3	-24.2	14.7	339	230	Vert.	40.0	25.3	
172.030	45.9	QP	16.1	-22.9	39.1	1	184	Hori.	43.5	4.4	
172.030	39.7	QP	16.1	-22.9	32.9	43	191	Vert.	43.5	10.6	
207.368	38.7	QP	16.8	-22.6	32.9	1	161	Hori.	43.5	10.6	
344.060	30.8	QP	16.8	-21.6	26.0	327	100	Hori.	46.0	20.0	

CHART: WITH FACTOR ANT TYPE : -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

Radiated Spurious Emission (above 1GHz)

(Tx, Ant2, Low)

UL-Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150
S/N : Air001
Power : DC3.6V
Mode : Tx Low 5741.865MHz
Position : H: X-axis, V: Z-axis, Worst Ant: Ant2

Regulation : FCC15.247(d)
Test Distance : 3m / 1m / 0.5m / 0.2m
Date : 02/26/2007, 02/27/2007
Temperature : 19 deg.C. , 23deg.C.
Humidity : 34 % , 33%
Engineer : Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	43.7	43.4	31.8	31.5	5.0	0.0	49.0	48.7	73.9	24.9	25.2
2	5725.00	42.5	43.8	32.0	31.5	5.0	0.0	48.0	49.3	73.9	25.9	24.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11483.73	51.0	48.7	40.2	31.1	6.9	0.7	58.2	55.9	73.9	15.7	18.0
4	17225.60	52.4	51.2	42.3	30.0	9.1	0.8	65.1	63.9	73.9	8.8	10.0
5	22967.46	48.7	53.3	41.0	30.7	10.4	0.5	60.4	65.0	73.9	13.5	8.9
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	28709.33	35.9	39.1	43.1	24.3	15.6	0.0	54.7	57.9	73.9	19.2	16.0
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	34451.19	41.0	41.0	43.4	24.6	16.4	0.0	52.7	52.7	73.9	21.2	21.2

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	28.6	28.6	31.8	31.5	5.0	0.0	33.9	33.9	53.9	20.0	20.0
2	5725.00	28.7	28.7	32.0	31.5	5.0	0.0	34.2	34.2	53.9	19.7	19.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11483.73	32.1	31.8	40.2	31.1	6.9	0.7	39.3	39.0	53.9	14.6	14.9
4	17225.60	34.1	34.2	42.3	30.0	9.1	0.8	46.8	46.9	53.9	7.1	7.0
5	22967.46	31.9	33.2	41.0	30.7	10.4	0.5	43.6	44.9	53.9	10.3	9.0
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	28709.33	22.3	22.9	43.1	24.3	15.6	0.0	41.1	41.7	53.9	12.8	12.2
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	34451.19	27.1	27.2	43.4	24.6	16.4	0.0	38.8	38.9	53.9	15.1	15.0

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

Test Distance 0.2m : Distance Factor(Dfac) = 20log(3/0.2) = 23.52 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(14.06.06)

Radiated Spurious Emission (above 1GHz)

(Tx, Ant2, Mid)

UL-Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150
S/N : Air001
Power : DC3.6V
Mode : Tx Mid 5790.026MHz
Position : H: X-axis, V: Z-axis, Worst Ant: Ant2

Regulation : FCC15.247(d)
Test Distance : 3m / 1m / 0.5m / 0.2m
Date : 02/26/2007, 02/27/2007
Temperature : 19 deg.C , 23deg.C.
Humidity : 34 % , 33%
Engineer : Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	43.7	43.4	31.8	31.5	5.0	0.0	49.0	48.7	73.9	24.9	25.2
2	5850.00	35.8	35.9	32.2	31.4	5.0	0.0	41.6	41.7	73.9	32.3	32.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11580.05	51.6	51.5	40.0	31.1	7.0	0.7	58.7	58.6	73.9	15.2	15.3
4	17370.08	53.4	50.9	43.7	30.1	9.2	0.8	67.5	65.0	73.9	6.4	8.9
5	23160.10	50.3	50.0	41.0	30.7	10.4	0.6	62.1	61.8	73.9	11.8	12.1
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	28950.13	36.3	38.8	43.2	24.4	15.6	0.0	55.1	57.6	73.9	18.8	16.3
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	34740.16	41.3	42.6	43.3	24.5	16.5	0.0	53.1	54.4	73.9	20.8	19.5

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	28.6	28.6	31.8	31.5	5.0	0.0	33.9	33.9	53.9	20.0	20.0
2	5850.00	21.8	21.8	32.2	31.4	5.0	0.0	27.6	27.6	53.9	26.3	26.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11580.05	32.6	32.5	40.0	31.1	7.0	0.7	39.7	39.6	53.9	14.2	14.3
4	17370.08	34.6	33.7	43.7	30.1	9.2	0.8	48.7	47.8	53.9	5.2	6.1
5	23160.10	32.3	32.1	41.0	30.7	10.4	0.6	44.1	43.9	53.9	9.8	10.0
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	28950.13	22.7	22.6	43.2	24.4	15.6	0.0	41.5	41.4	53.9	12.4	12.5
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	34740.16	27.9	28.0	43.3	24.5	16.5	0.0	39.7	39.8	53.9	14.2	14.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

Test Distance 0.2m : Distance Factor(Dfac) = 20log(3/0.2) = 23.52 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(14.06.06)

Radiated Spurious Emission (above 1GHz)

(Tx, Ant2, High)

UL-Apex Co., Ltd.

Company : Panasonic Communications Co., Ltd.
Equipment : Cordless Telephone (Handset)
Model : BB-GTA150 (Handset)
S/N : Air001
Power : DC3.6V
Mode : Tx High 5838.187MHz
Position : H: X-axis, V: Z-axis, Worst Ant: Ant2

Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d)
Test Distance : 3m / 1m / 0.5m / 0.2m
Date : 02/26/2007, 02/27/2007
Temperature : 19 deg.C , 23deg.C.
Humidity : 34 % , 33%
Engineer : Makoto Kosaka

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	43.5	43.4	31.8	31.5	5.0	0.0	48.8	48.7	73.9	25.1	25.2
2	5850.00	36.0	36.5	32.2	31.4	5.0	0.0	41.8	42.3	73.9	32.1	31.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11676.37	51.7	51.6	39.8	31.1	7.1	0.7	58.7	58.6	73.9	15.2	15.3
4	17514.56	49.3	49.6	45.1	30.1	9.3	0.9	65.0	65.3	73.9	8.9	8.6
5	23352.75	49.1	53.6	40.9	30.7	10.5	0.7	61.0	65.5	73.9	12.9	8.4
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	29190.94	36.2	36.2	43.2	24.4	15.6	0.0	55.0	55.0	73.9	18.9	18.9
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	35029.12	42.4	41.9	43.3	24.4	16.6	0.0	54.4	53.9	73.9	19.5	20.0

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5460.00	28.6	28.6	31.8	31.5	5.0	0.0	33.9	33.9	53.9	20.0	20.0
2	5850.00	21.8	21.8	32.2	31.4	5.0	0.0	27.6	27.6	53.9	26.3	26.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
3	11676.37	33.3	33.4	39.8	31.1	7.1	0.7	40.2	40.4	53.9	13.7	13.5
4	17514.56	33.3	33.4	45.1	30.1	9.3	0.9	49.0	49.1	53.9	4.9	4.8
5	23352.75	32.3	33.2	40.9	30.7	10.5	0.7	44.2	45.1	53.9	9.7	8.8
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	29190.94	22.2	22.1	43.2	24.4	15.6	0.0	41.0	40.9	53.9	12.9	13.0
Test distance 0.2meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	35029.12	28.7	28.5	43.3	24.4	16.6	0.0	40.7	40.5	53.9	13.2	13.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

Test Distance 0.2m : Distance Factor(Dfac) = 20log(3/0.2) = 23.52 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

UL Apex Co., Ltd.

Head Office EMC Lab.

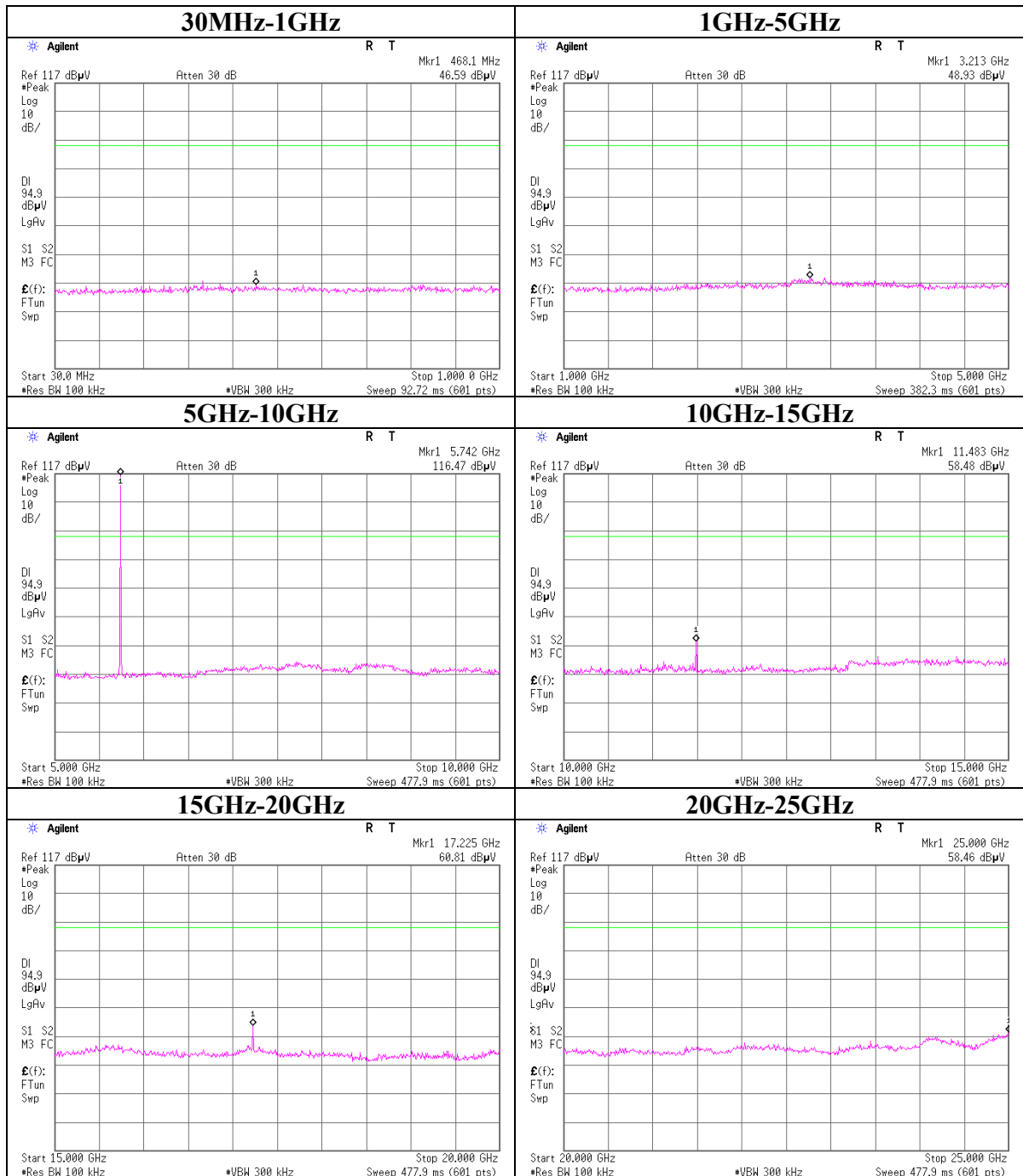
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

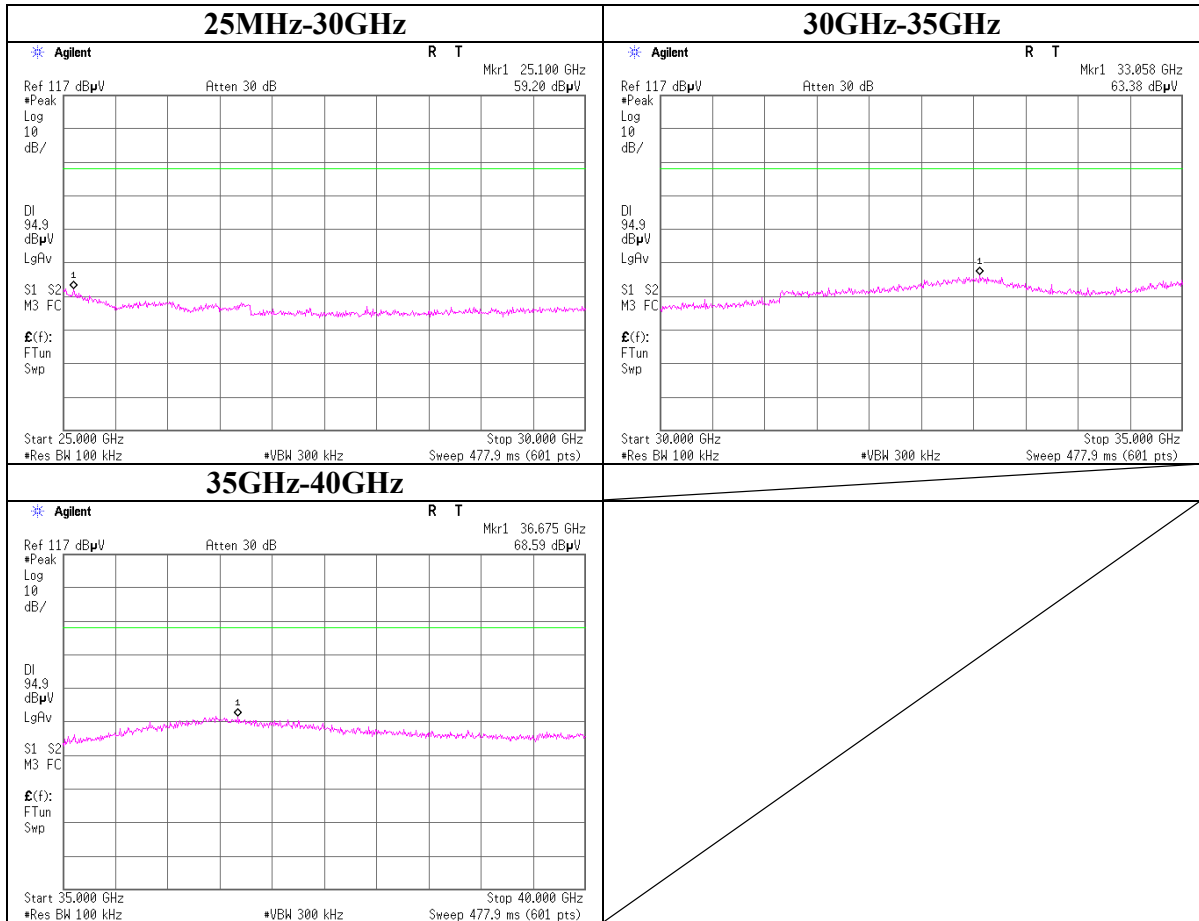
Facsimile : +81 596 24 8124

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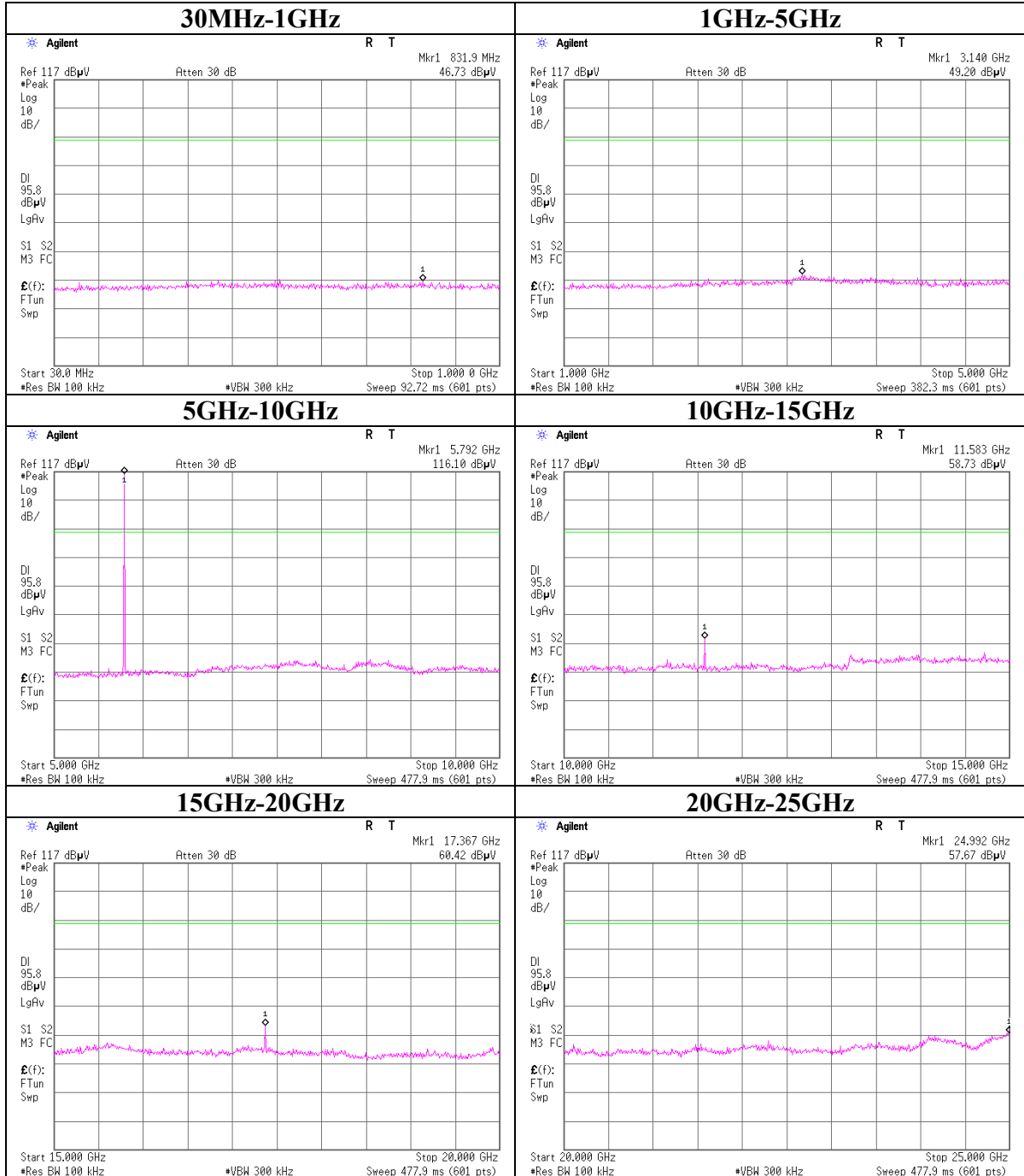
Conducted Spurious Emission
Ch:Low



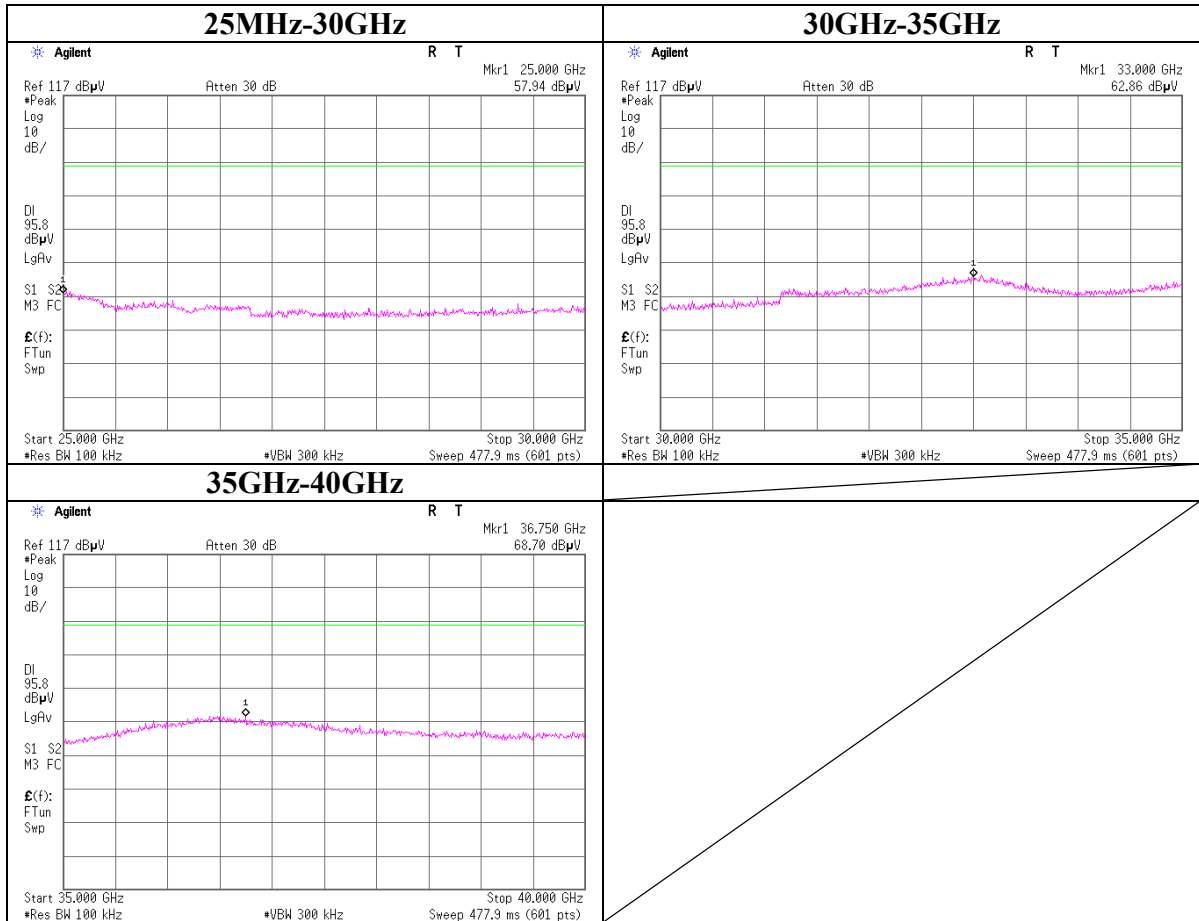
Conducted Spurious Emission
Ch:Low



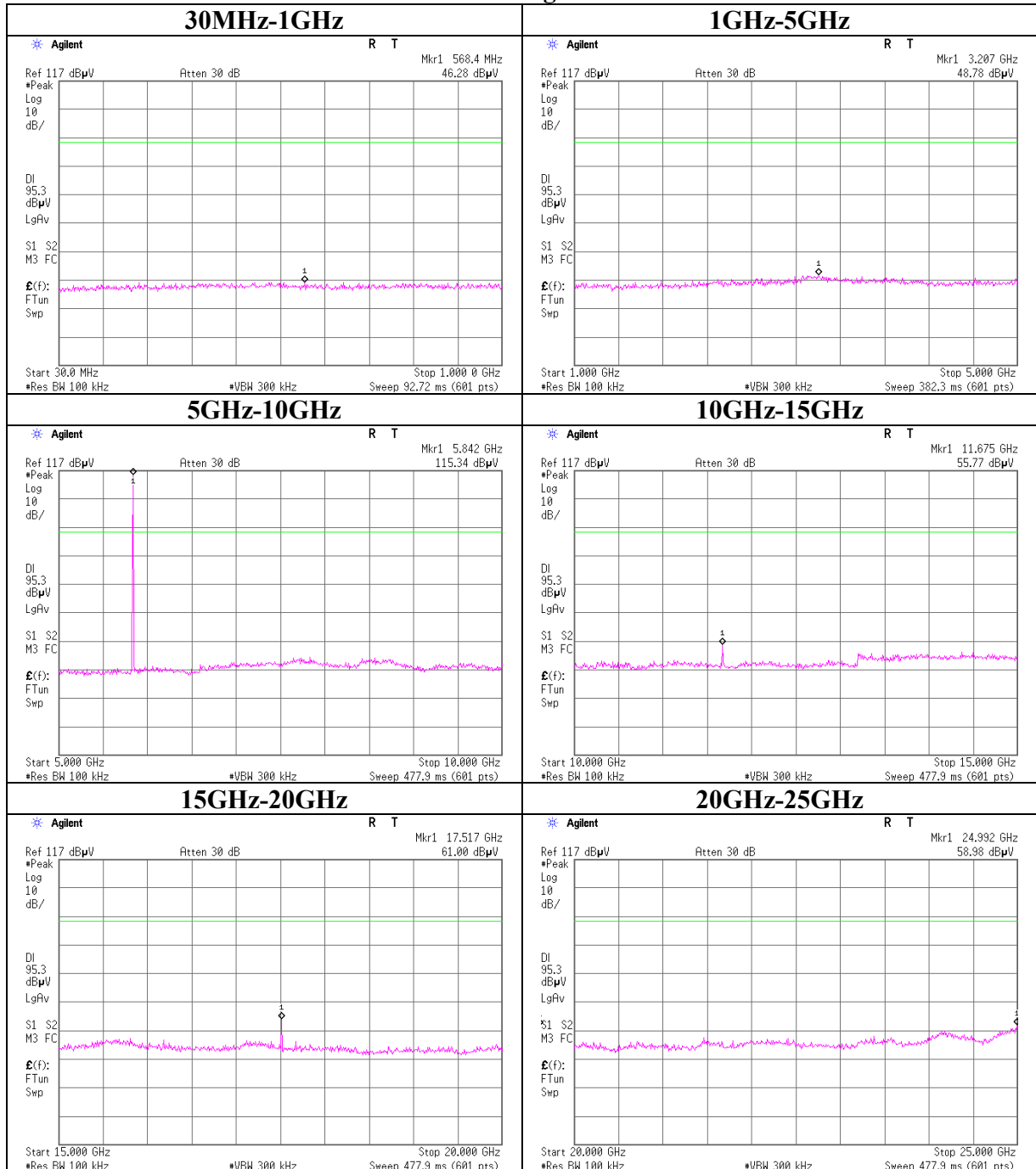
Conducted Spurious Emission
Ch:Mid



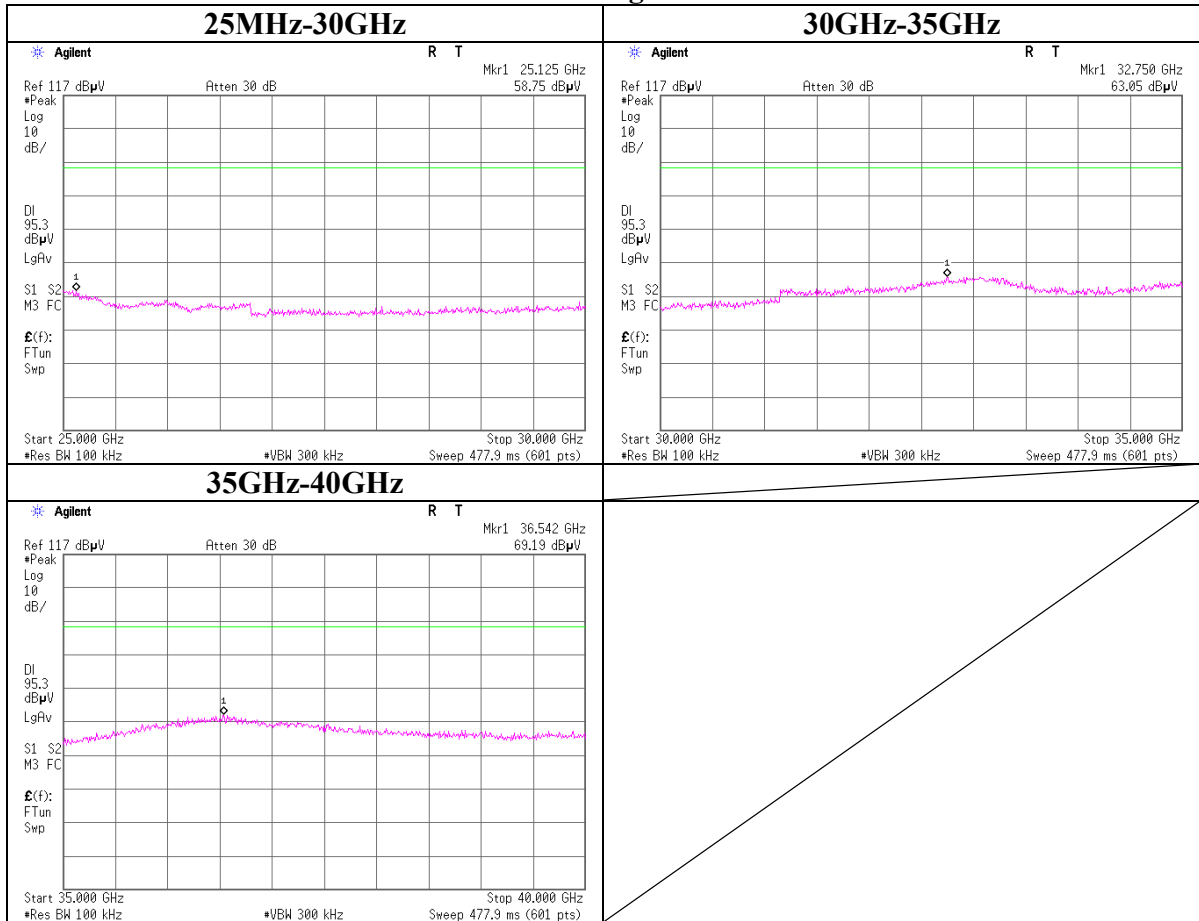
Conducted Spurious Emission
Ch:Mid



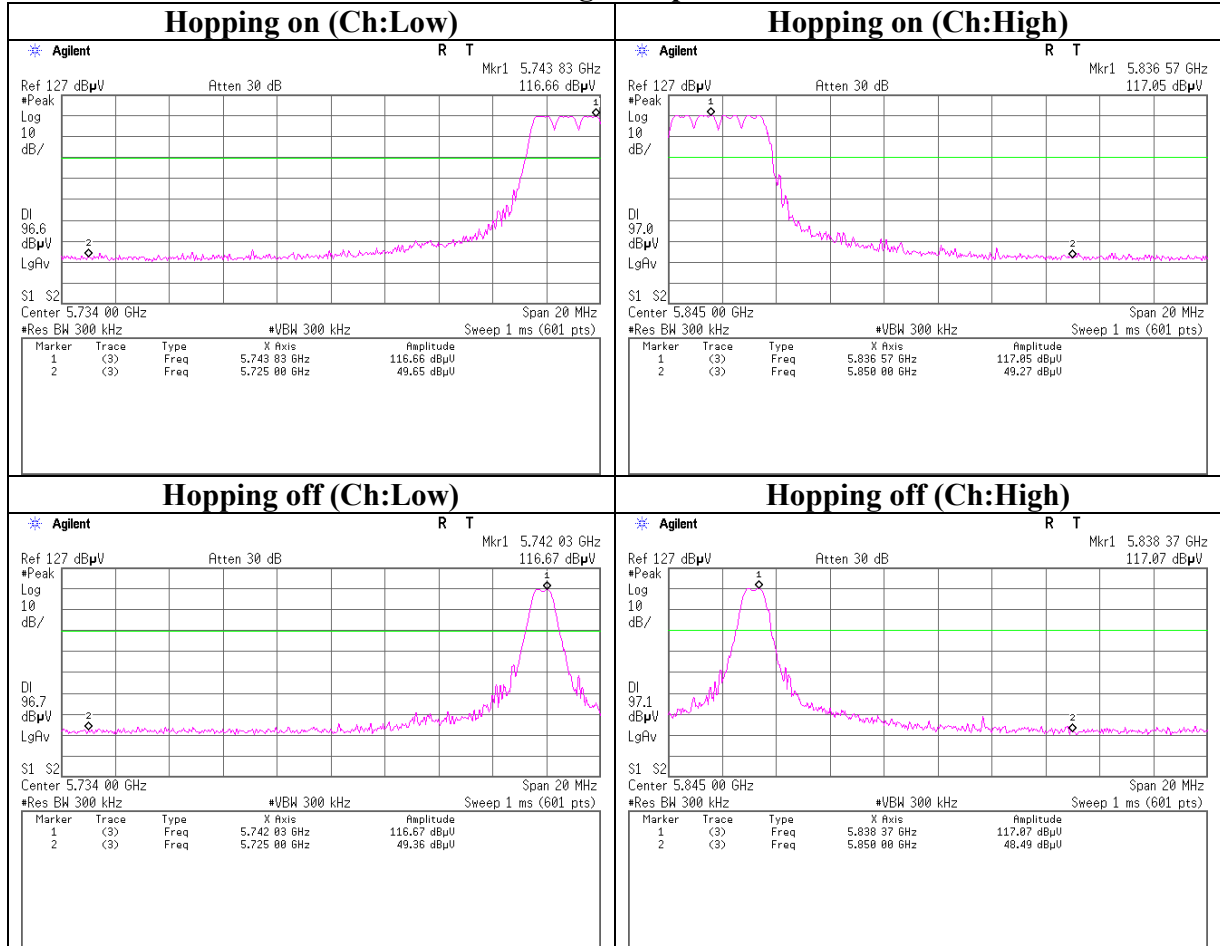
Conducted Spurious Emission
Ch:High



Conducted Spurious Emission
Ch:High



Conducted Spurious Emission
Band Edge compliance



APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2006/09/13 * 12
MAT-24	Attenuator(10dB)(above1GHz)	Agilent	8493C	AT	2006/06/02 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	AT	2006/01/19 * 24
MPM-08	Power Meter	Anritsu	ML2495A	AT	2006/09/20 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	AT	2006/09/20 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE / CE	2006/11/01 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	RE / CE	2006/11/27 * 12
MJM-01	Measure	KDS	ES19-55	RE / CE	-
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE / CE	2006/10/14 * 12
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2007/01/30 * 12
MCC-48	Microwave Cable 1G-26.5GHz 7m	Suhner	SUCOFLEX102	RE	2006/08/29 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2007/02/15 * 12
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2006/03/06 * 12
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/01/19 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2007/01/19 * 12
MAT-31	Attenuator(6dB)	TME	UFA-01	RE	2006/03/11 * 12
MCC-50	Coaxial cable	UL Apex	-	RE	2006/03/09 * 12
MPA-14	Pre Amplifier	SONOA INSTRUMENT	310	RE	2006/03/25 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	RE	2006/05/20 * 12
TR-07	Test Receiver	Rohde & Schwarz	ESCS30	RE	2006/09/12 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	RE	2006/01/19 * 24
MJM-07	Measure	PROMART	SEN1955	RE	-
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2006/04/10 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2007/01/30 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2007/02/22 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2006/08/29 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2006/09/11 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2006/06/02 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2006/11/27 * 12
MJM-05	Measure	PROMART	SEN1955	RE	-
MHF-09	High Pass Filter 7-30GHz	TOKIMEC	TF37NCCA	RE	2006/06/21 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2007/01/30 * 12
MHA-04	Horn Antenna	EMCO	3160-10	RE	2007/01/30 * 12
MCC-53	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX101	RE	2006/04/01 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	RE	2006/05/16 * 12
MAT-23	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	RE	2006/03/18 * 12
MCC-18	Microwave Cable 1G-26.5GHz 5m	Suhner	SUCOFLEX 104	RE	2007/02/22 * 12
MCC-15	Microwave Cable 1G-26.5GHz 1m	Suhner	SUCOFLEX 104	RE	2007/02/22 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE / CE	-
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent /TSJ	-	CE	2006/12/28 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2006/06/01 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Test Item:

CE: AC Main Conducted Emission test

RE: Radiated Spurious Emission test

AT: Antenna Terminal Conducted test

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

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