

RF Exposure / SAR Statement

No. : 26AE0255-HO-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Type of Equipment : Hands-Free Kit featuring Bluetooth® technology
Model No. : CY-BT100U
FCC ID : ACJ932CY-BT100U

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided with the “CY-BT100U” as calculated from FCC OET Bulletin 65 Appendix A, Table (B) Limits for General Population / Uncontrolled Exposure. This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering a 1.0mW/cm² uncontrolled exposure limit. The Friis formula used was:

$$S = (P * G) / (4 * \pi * r^2)$$

Where

P = 0.89 mW (Maximum peak output power)
G = 0.78 Numerical Antenna gain; equal -1.10 dBi
r = 20.0 cm

For: CY-BT100U

$$S = 0.00014 \text{ mW/cm}^2$$

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EMI TEST REPORT

Test Report No. : 26AE0255-HO-1

Applicant : Matsushita Electric Industrial Co., Ltd.
Type of Equipment : Hands-Free Kit featuring Bluetooth® technology
Model No. : CY-BT100U
FCC ID : ACJ932CY-BT100U
Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247: 2005
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. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.

Date of test: October 13, and 17 to 20, 2005

Tested by:


Yutaka Yosihda
EMC Services

Approved by :


Naoki Sakamoto
Group Leader of
EMC Services

UL Apex Co., Ltd.

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SECTION 1: Client information

Company Name : Matsushita Electric Industrial Co., Ltd.
Brand Name : Panasonic
Address : 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, JAPAN
Telephone Number : +81-45-939-1565
Facsimile Number : +81-45-938-2535
Contact Person : Junichi Sakai

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

2.1 Identification of E.U.T.

Type of Equipment : Hands-Free Kit featuring Bluetooth® technology
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Country of Manufacture : Taiwan
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Rating : DC12.0V
Receipt Date of Sample : October 12, 2005

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2.2 Product Description

Model No: CY-BT100U (referred to as the EUT in this report) is the Hands-Free Kit featuring Bluetooth® technology.

Equipment Type	:	Transceiver
Frequency band	:	Lower limit: 2400MHz Upper limit: 2483.5MHz
Frequency of Operation	:	2402-2480MHz
Bandwidth & Channel spacing	:	1MHz & 1MHz
Modulation	:	GFSK, FHSS
ITU code	:	F1D
Power Supply (Inner)	:	DC3.3V
Antenna Type	:	Chip Antenna
Antenna Connector Type	:	N/A
Antenna Gain	:	-1.1dBi

FCC 15.31 (e)

The stable voltage (DC3.3V) is constantly provided to RF part of the EUT regardless of the input voltage. Therefore, this 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.

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C : 2005

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2005
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz : 2005

3.2 Procedures and results

No.	Item	Specification	Test Procedure	Remarks	Deviation	Worst Margin*0)	Results
1	Conducted emission	<FCC>ANSI C63.4:2003 7. AC powerline conducted emission measurements <IC>RSS-Gen 7.2.2	<FCC>Section 15.207 <IC>RSS-Gen 7.2.2	-	N/A	N/A*1)	N/A*1)
2	Carrier Frequency Separation	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>-	<FCC>Section15.247(a) (1) <IC>RSS-210 A8.1 (2)	Conducted	N/A	See data.	Complied
3	20dB Bandwidth	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>-	<FCC>Section15.247(a) (1) <IC>RSS-210 A8.1 (1)	Conducted	N/A		Complied
4	Number of Hopping Frequency	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>-	<FCC>Section15.247(a) (1)(iii) <IC>RSS-210 A8.1 (4)	Conducted	N/A		Complied
5	Dwell time	<FCC>ANSI C63.4:2003 13.Measurement of intentional radiators <IC>-	<FCC>Section15.247(a)(1) (iii) <IC>RSS-210 A8.1 (4)	Conducted	N/A		Complied
6	Maximum Peak Output Power	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>RSS-Gen 4.6	<FCC>Section15.247(b) (1) <IC>RSS-210 A8.4 (2)	Conducted	N/A		Complied
7	Band Edge Compliance	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>-	<FCC>Section15.247(d) <IC>RSS-210 A8.5	Conducted	N/A		Complied
8	Spurious Emission	<FCC>ANSI C63.4:2003 13. Measurement of intentional radiators <IC>RSS-Gen 4.7	<FCC>Section15.247(d) <IC>RSS-210 A8.5	Conducted/ Radiated	N/A	9.8dB 2400.00MHz Hori, PK	Complied

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

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

*1) The test is not applicable, because the EUT is not connected to the public utility (AC) power line. (For vehicle use)

*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 Uncertainty

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is $\pm 4.5\text{dB}(3\text{m})/\pm 4.7\text{dB}(10\text{m})$.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is $\pm 5.2\text{dB}(3\text{m})/\pm 3.8\text{dB}(10\text{m})$.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is $\pm 6.6\text{dB}$.

The data listed in this test report has enough margin, more than the site margin.

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Other test except Conducted Emission and Spurious Emission (Radiated)

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

3.4 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	<IC> RSS-Gen 4.4.1	-	Conducted	N/A	N/A	N/A

3.5 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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	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	846015	IC4247A-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.4 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 and No.2 semi-anechoic and No.3 shielded room.

3.6 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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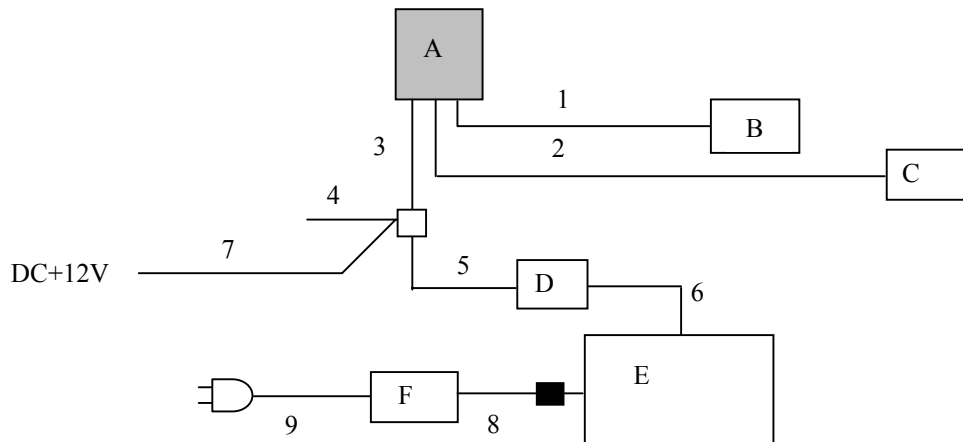
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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

The mode used for test : Transmitting mode (Packet size DH5)
 Low Channel : 2402MHz
 Mid Channel : 2441MHz
 High channel : 2480MHz
 Inquiry

4.2 Configuration and peripherals



■ : Standard Ferrite Core

* Cabling was 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	FCC ID
A	Hands-Free Kit featuring Bluetooth® technology	CY-BT100U	5JAGA010014	Panasonic	ACJ932CY-BT100U
B	Hook Switch	-	-	Panasonic	-
C	Microphone	-	-	Panasonic	-
D	RS-232C/USB Converter	USB-RSAQ3	V1E0026147R6	IO DATA	-
E	Note PC	WD311	32152121409599	SOTEC	-
F	AC Adapter	0335C1965	A30521181407	SOTEC	-

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List of cables used

No.	Name	Length (m)	Shield
1	Hook Switch Cable	2.8m	N
2	Microphone Cable	5.0m	N
3	Control Cable	2.8m	Y
4	AUX-IN Cable	0.2m	N
5	RS-232C Cable	3.2m	N
6	USB Cable	1.0m	Y
7	DC Cable	0.7m	N
8	DC Cable	1.8m	N
9	AC Cable	1.5m	N

SECTION 5: Spurious Emission

[Conducted]

Test Procedure

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

Test data : APPENDIX 3

Test result : Pass

[Radiated]

Test Procedure

EUT was placed on a platform of nominal size, 1.0m by 2.0m, 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).

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 3

Test result : Pass

SECTION 6: Bandwidth

Test Procedure

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

Test data : APPENDIX 3

Test result : Pass

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SECTION 7: Maximum Peak Output Power

Test Procedure

The Maximum Peak Output Power was measured with a spectrum analyzer connected to the antenna port.

Test data	: APPENDIX 3
Test result	: Pass

SECTION 8: Carrier Frequency Separation

Test Procedure

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

Test data	: APPENDIX 3
Test result	: Pass

SECTION9: 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 3
Test result	: Pass

SECTION 10: Dwell time

Test Procedure

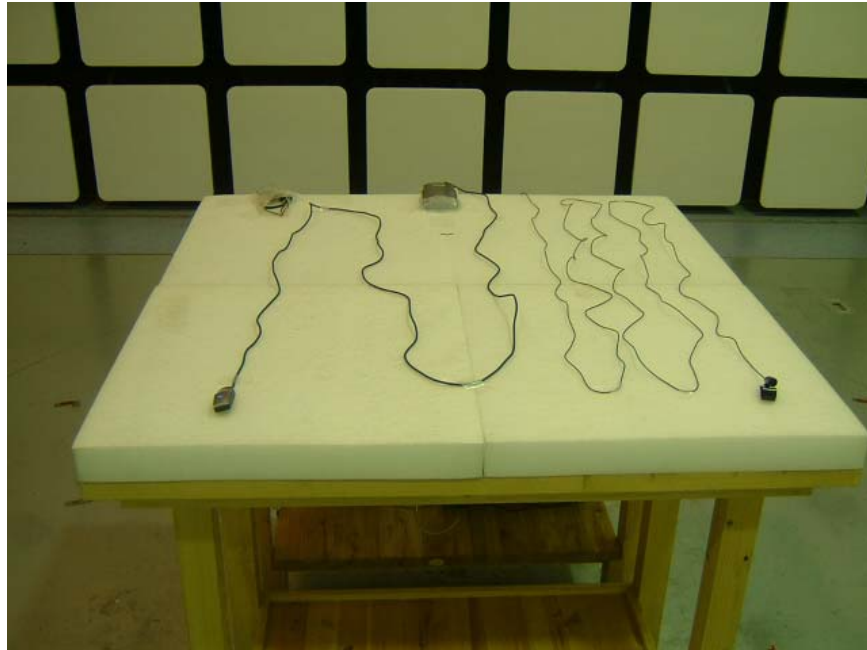
The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Test data	: APPENDIX 3
Test result	: Pass

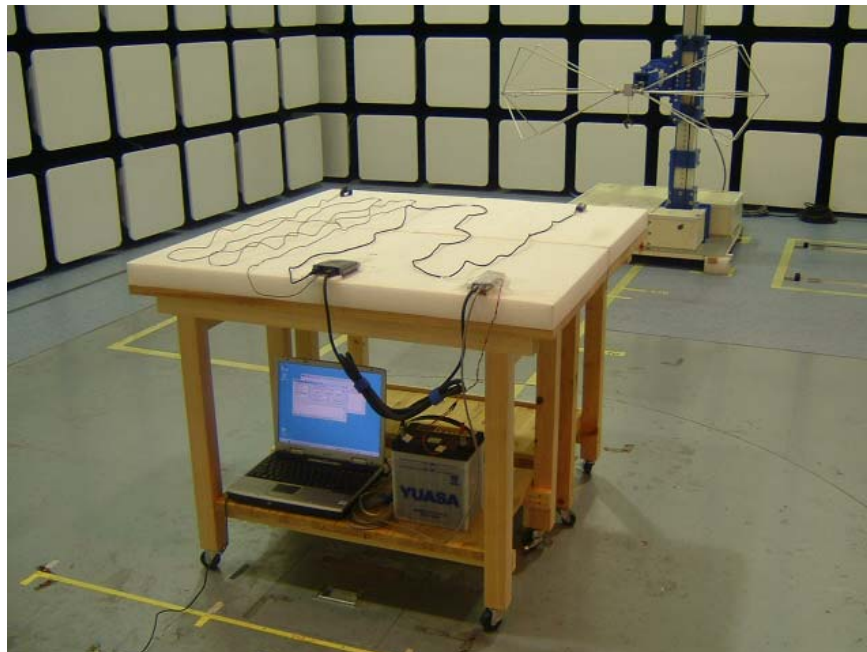
APPENDIX 1: Photographs of test setup

Spurious Emission (Radiated)

Front



Rear



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

X-axis



Y-axis



Z-axis



APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval (month)
MRENT-21	Spectrum Analyzer	Advantest	R3273	AT	2005/08/19 * 12
MCC-06	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	AT	2005/02/03 * 12
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2005/04/11 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2005/05/19 * 12
MCC-04	Microwave Cable 1G-50GHz	Storm	421-011 (90- 1394-079)	RE	2005/01/05 * 12
MPA-05	Pre Amplifier	TSJ	TSJ 1-26.5GHz PreAmp	RE	2005/07/08 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2005/02/03 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2005/09/27 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE	2005/02/02 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2005/02/24 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2005/09/07 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12

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

Test Item:

RE: Radiated Emission

AT: Antenna Terminal Measurement

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APPENDIX 3: Data of EMI test

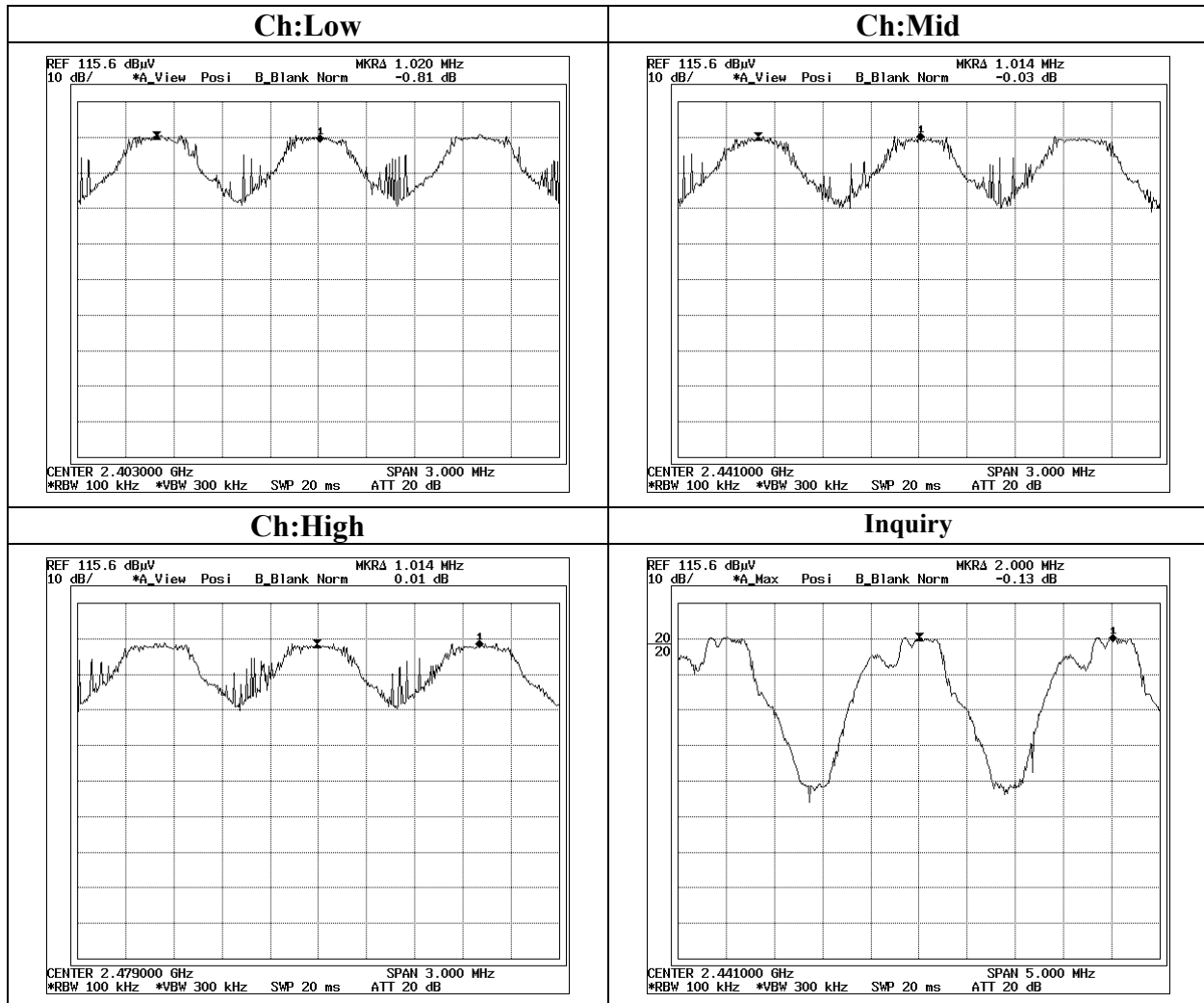
Carrier Frequency Separation

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

COMPANY	: Matsushita Electric Industrial	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)
EQUIPMENT	: Hands-Free Kit featuring BT tech.	TEST DISTANCE	: -
MODEL	: CY-BT100U	DATE	: 13/10/2005
S/ N	: 5JAGA010014	TEMPERATURE	: 22deg.C
POWER	: DC12V	HUMIDITY	: 59%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Yutaka Yoshida

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.020	>20dB Bandwidth and 25[kHz]
Mid	2441.0	1.014	>20dB Bandwidth and 25[kHz]
High	2480.0	1.014	>20dB Bandwidth and 25[kHz]
Inquiry	2441.0	2.000	>20dB Bandwidth and 25[kHz]

Carrier Frequency Separation

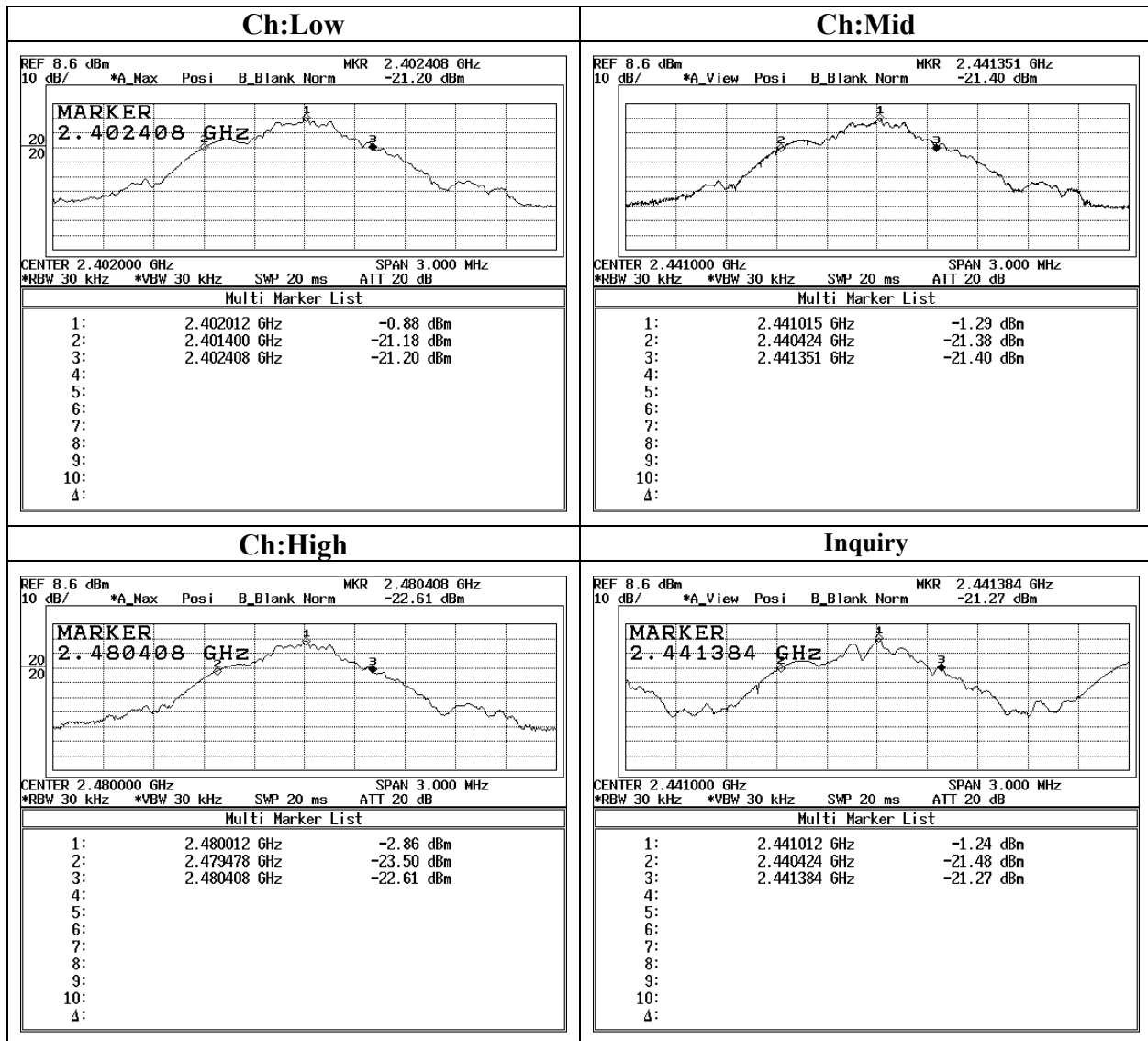


20dB Bandwidth

COMPANY : Matsushita Electric Industrial REGULATION : FCC Part 15 Subpart C 15.247(a)(1)
EQUIPMENT : Hands-Free Kit featuring BT tech. TEST DISTANCE : -
MODEL : CY-BT100U DATE : 13/10/2005
S/ N : 5JAGA010014 TEMPERATURE : 22deg.C
POWER : DC12V HUMIDITY : 59%
MODE : Tx (Hopping off) /Inquiry ENGINEER : Yutaka Yoshida

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	1.008	-
Mid	2441.0	0.927	-
High	2480.0	0.930	-
Inquiry	2441.0	0.960	-

20dB Bandwidth



Number of Hopping Frequency

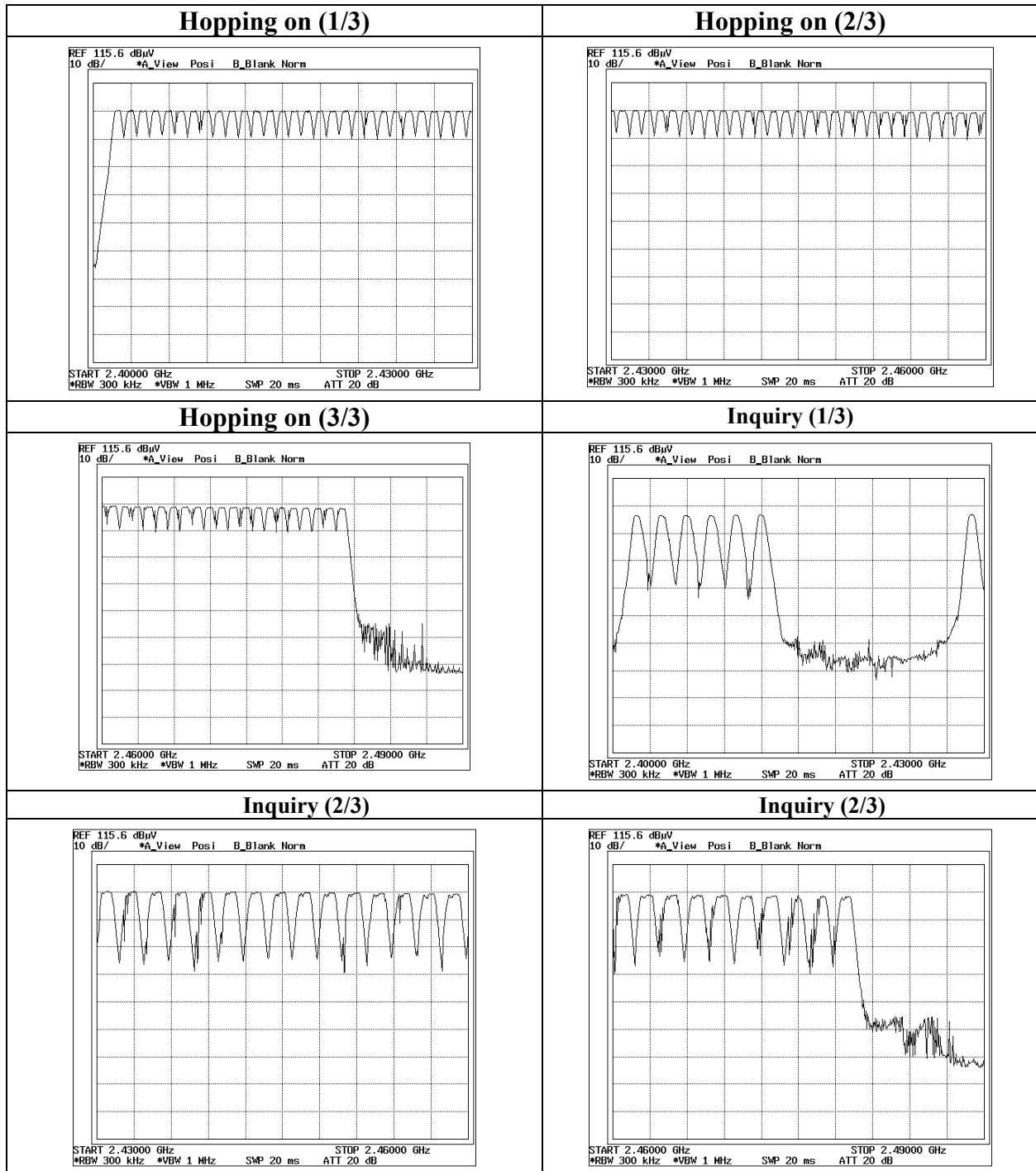
UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

COMPANY	: Matsushita Electric Industrial	REGULATION	: FCC Part 15 Subpart C 15.247(a)(1)(iii)
EQUIPMENT	: Hands-Free Kit featuring BT tech.	TEST DISTANCE	: -
MODEL	: CY-BT100U	DATE	: 13/10/2005
S/ N	: 5JAGA010014	TEMPERATURE	: 22deg.C
POWER	: DC12V	HUMIDITY	: 59%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Yutaka Yoshida

Mode	Number of channel	Limit
	[time]	[time]
Tx(Hoppng on)	79	≥ 15

Mode	Number of channel	Limit
	[time]	[time]
Inquiry	32	≥ 15

Number of Hopping Frequency



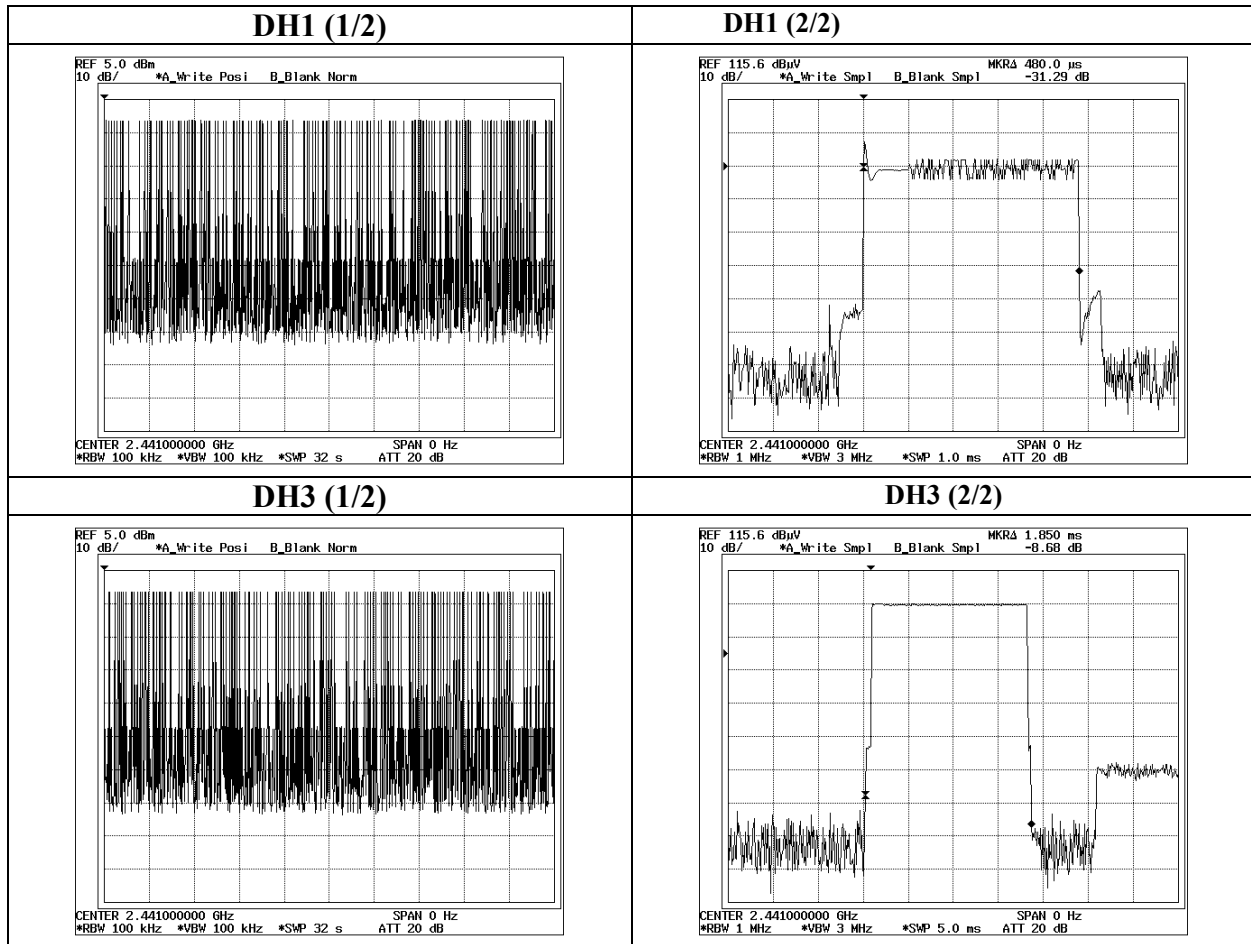
Dwell time

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Head Office EMC Lab. No.4 Measurement Room

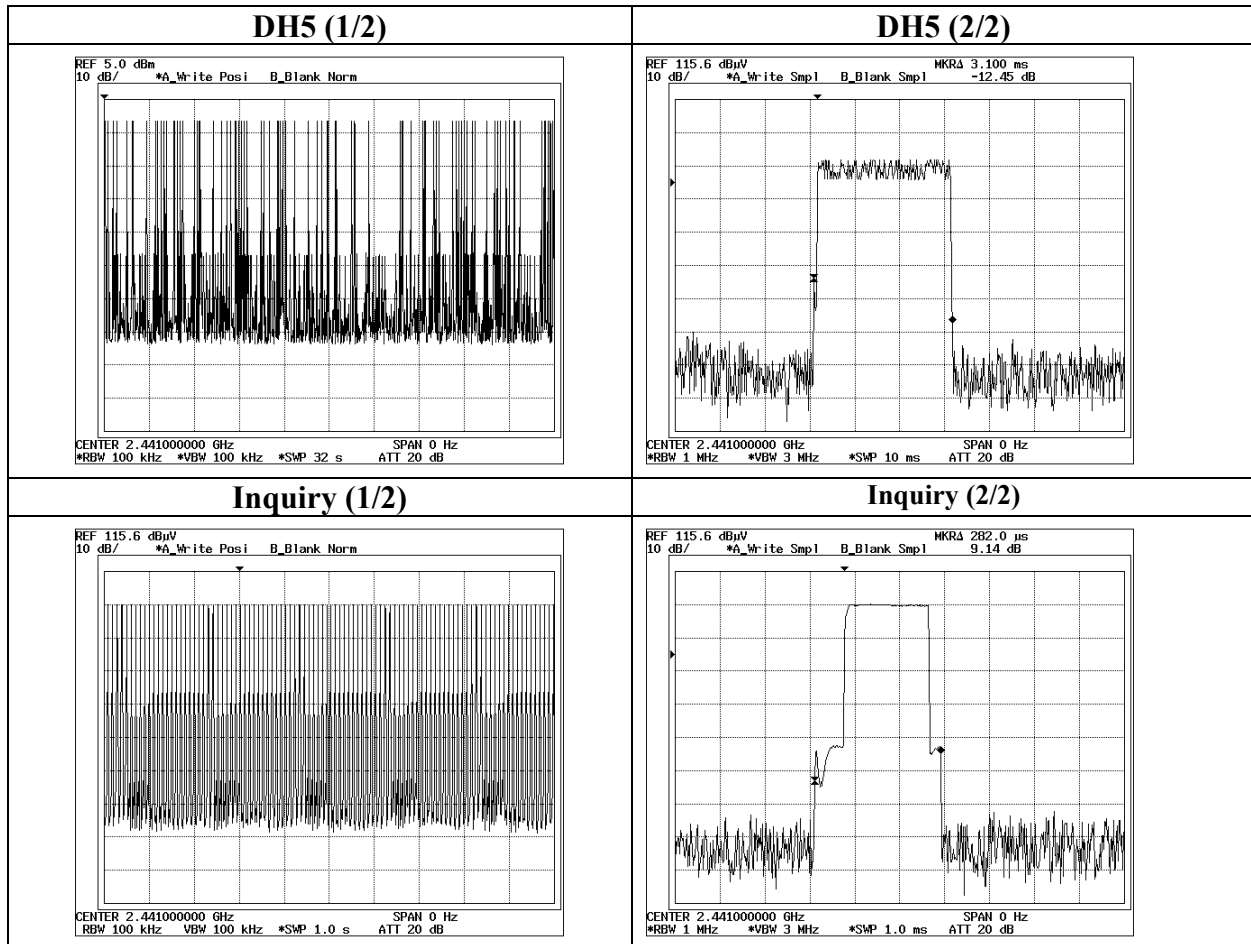
COMPANY : Matsushita Electric Industrial REGULATION : FCC Part 15 Subpart C 15.247(a)(1)(iii)
EQUIPMENT : Hands-Free Kit featuring BT tech. TEST DISTANCE : -
MODEL : CY-BT100U DATE : 13/10/2005
S/N : 5JAGA010014 TEMPERATURE : 22deg.C
POWER : DC12V HUMIDITY : 59%
MODE : Tx (Hopping on) /Inquiry ENGINEER : Yutaka Yoshida

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	115	0.480	56	400
DH3	121	1.850	224	400
DH5	73	3.100	227	400
Inquiry	100 times / 1sec. x 12.8 = 1280 times	0.282	361	400

Dwell time



Dwell time



Maximum Peak Output Power

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

COMPANY	: Matsushita Electric Industrial	REGULATION	: FCC Part 15 Subpart C 15.247(b)(1)
EQUIPMENT	: Hands-Free Kit featuring BT tech.	TEST DISTANCE	: -
MODEL	: CY-BT100U	DATE	: 13/10/2005
S/ N	: 5JAGA010014	TEMPERATURE	: 22deg.C
POWER	: DC12V	HUMIDITY	: 59%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Yutaka Yoshida

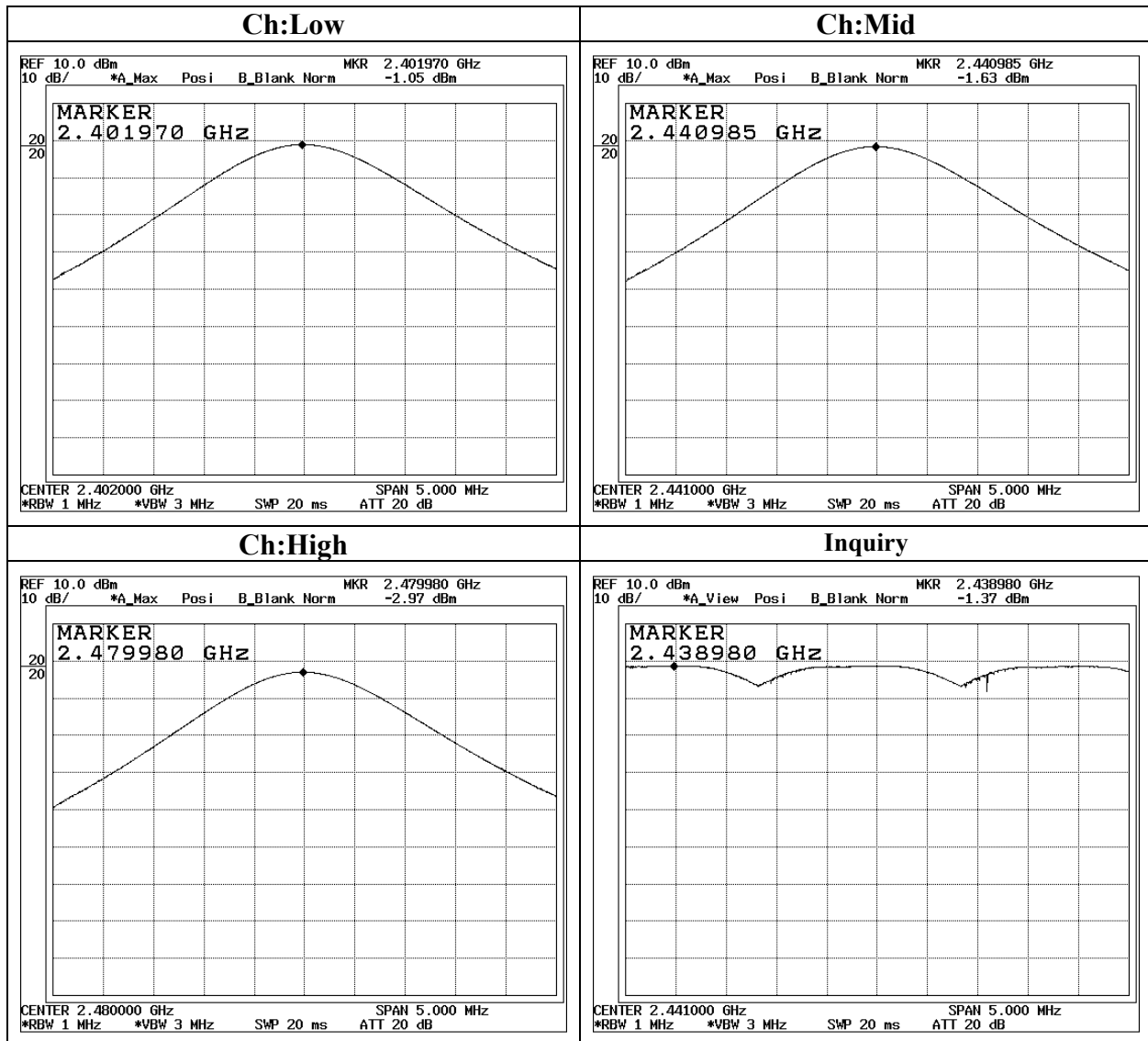
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2401.97	-1.05	0.55	0.00	-0.50	30.00	30.50
Mid	2440.99	-1.63	0.48	0.00	-1.15	30.00	31.15
High	2479.98	-2.97	0.45	0.00	-2.52	30.00	32.52
Inquiry	2438.98	-1.37	0.48	0.00	-0.89	30.00	30.89

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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

Maximum Peak Output Power



Radiated Spurious Emission

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

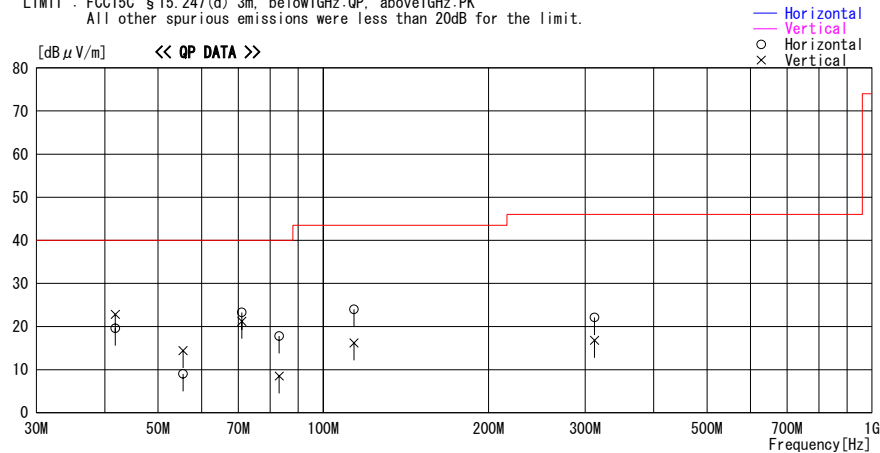
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/19 20:03:32

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2402MHz Max Axis

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Loss&Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
41.800	29.3	QP	12.9	-22.6	19.6	251	280	Hori.	40.0	20.4
41.800	32.5	QP	12.9	-22.6	22.8	0	100	Vert.	40.0	17.2
55.525	22.6	QP	9.0	-22.6	9.0	350	100	Hori.	40.0	31.0
55.525	28.0	QP	9.0	-22.6	14.4	209	100	Vert.	40.0	25.6
71.050	39.1	QP	6.6	-22.4	23.3	63	194	Hori.	40.0	16.7
71.050	37.0	QP	6.6	-22.4	21.2	114	100	Vert.	40.0	18.8
83.120	33.2	QP	6.8	-22.2	17.8	328	242	Hori.	40.0	22.2
83.120	23.9	QP	6.8	-22.2	8.5	301	100	Vert.	40.0	31.5
113.700	34.1	QP	11.7	-21.8	24.0	282	157	Hori.	43.5	19.5
113.700	26.3	QP	11.7	-21.8	16.2	346	100	Vert.	43.5	27.3
312.000	26.9	QP	14.6	-19.4	22.1	57	100	Hori.	46.0	23.9
312.000	21.6	QP	14.6	-19.4	16.8	59	100	Vert.	46.0	29.2

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

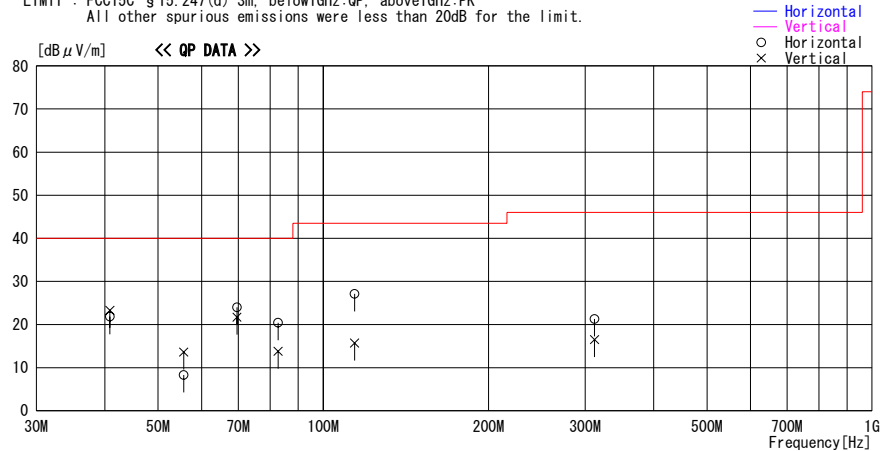
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/19 21:42:11

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2441MHz Max Axis

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Loss&Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
40.848	31.1	QP	13.3	-22.6	21.8	253	318	Hori.	40.0	18.2
40.848	32.6	QP	13.3	-22.6	23.3	0	100	Vert.	40.0	16.7
55.650	21.9	QP	9.0	-22.6	8.3	310	100	Hori.	40.0	31.7
55.665	27.2	QP	9.0	-22.6	13.6	207	100	Vert.	40.0	26.4
69.600	39.8	QP	6.7	-22.5	24.0	59	170	Hori.	40.0	16.0
69.600	37.5	QP	6.7	-22.5	21.7	133	100	Vert.	40.0	18.3
82.740	35.9	QP	6.7	-22.2	20.4	326	232	Hori.	40.0	19.6
82.740	29.3	QP	6.7	-22.2	13.8	308	100	Vert.	40.0	26.2
113.980	37.2	QP	11.8	-21.9	27.1	279	146	Hori.	43.5	16.4
113.980	25.8	QP	11.8	-21.9	15.7	343	100	Vert.	43.5	27.8
312.000	26.1	QP	14.6	-19.4	21.3	54	100	Hori.	46.0	24.7
312.000	21.3	QP	14.6	-19.4	16.5	85	100	Vert.	46.0	29.5

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

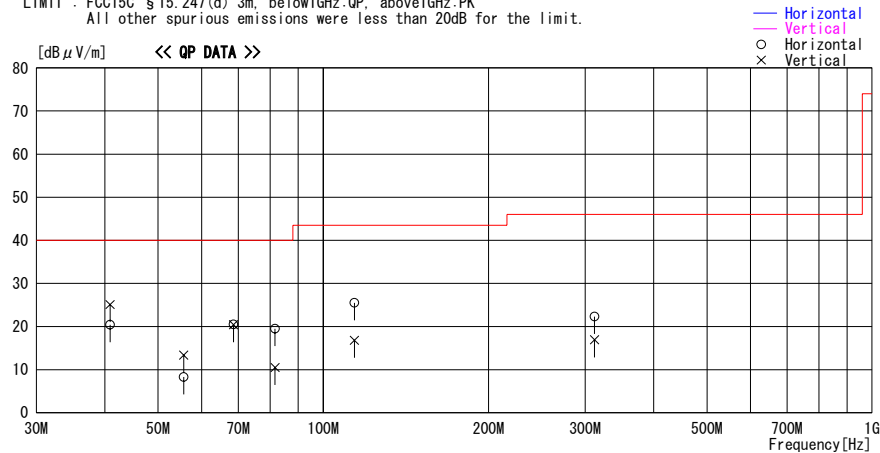
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/19 22:37:52

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2480MHz Max Axis

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Loss& Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
40.875	29.7	QP	13.3	-22.6	20.4	66	290	Hori.	40.0	19.6
40.875	34.4	QP	13.3	-22.6	25.1	359	100	Vert.	40.0	14.9
55.650	21.9	QP	9.0	-22.6	8.3	0	100	Hori.	40.0	31.7
55.650	27.0	QP	9.0	-22.6	13.4	217	100	Vert.	40.0	26.6
68.625	36.2	QP	6.8	-22.5	20.5	68	198	Hori.	40.0	19.5
68.625	36.1	QP	6.8	-22.5	20.4	127	100	Vert.	40.0	19.6
81.680	35.2	QP	6.5	-22.2	19.5	322	247	Hori.	40.0	20.5
81.680	26.2	QP	6.5	-22.2	10.5	305	100	Vert.	40.0	29.5
113.975	35.6	QP	11.8	-21.9	25.5	284	135	Hori.	43.5	18.0
113.975	26.9	QP	11.8	-21.9	16.8	0	100	Vert.	43.5	26.7
312.000	27.1	QP	14.6	-19.4	22.3	59	100	Hori.	46.0	23.7
312.000	21.7	QP	14.6	-19.4	16.9	75	100	Vert.	46.0	29.1

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

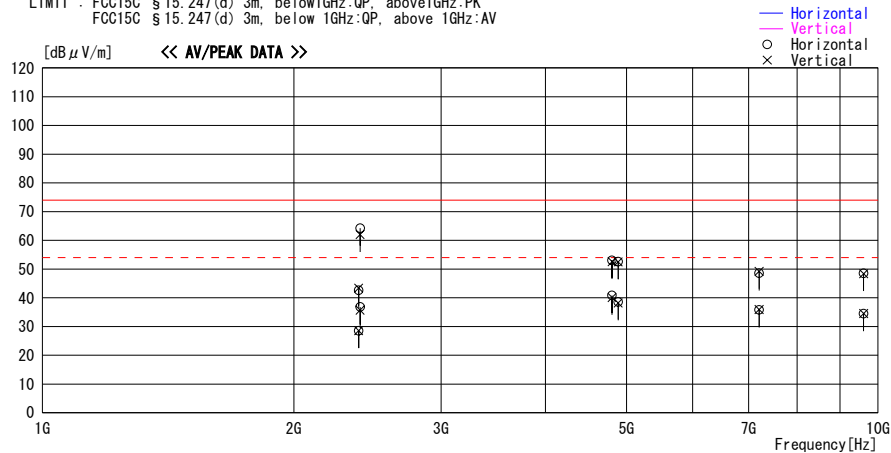
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/17 23:58:00

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : SJAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 24deg.C / 53%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2402MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
2390.000	49.6	PK	30.5	-37.5	42.6	0	100	Hori.	74.0	31.4	
2390.000	50.4	PK	30.5	-37.5	43.4	0	100	Vert.	74.0	30.6	
2390.000	35.6	AV	30.5	-37.5	28.6	0	100	Hori.	54.0	25.5	
2390.000	35.6	AV	30.5	-37.5	28.6	0	100	Vert.	54.0	25.4	
2400.000	71.3	PK	30.5	-37.5	64.3	156	181	Hori.	74.0	9.8	
2400.000	69.0	PK	30.5	-37.5	62.0	270	111	Vert.	74.0	12.0	
2400.000	43.8	AV	30.5	-37.5	36.8	156	181	Hori.	54.0	17.2	
2400.000	42.7	AV	30.5	-37.5	35.7	270	111	Vert.	54.0	18.3	
4804.000	54.1	PK	35.2	-36.3	53.0	166	100	Hori.	74.0	21.0	With HPF
4804.000	53.7	PK	35.2	-36.3	52.6	268	104	Vert.	74.0	21.4	With HPF
4804.000	41.9	AV	35.2	-36.3	40.8	166	100	Hori.	54.0	13.2	With HPF
4804.000	41.2	AV	35.2	-36.3	40.1	268	104	Vert.	54.0	13.9	With HPF
4886.000	53.3	PK	35.6	-36.3	52.6	166	100	Hori.	74.0	21.4	With HPF
4886.000	53.2	PK	35.6	-36.3	52.5	264	104	Vert.	74.0	21.5	With HPF
4886.000	39.3	AV	35.6	-36.3	38.6	166	100	Hori.	54.0	15.4	With HPF
4886.000	38.9	AV	35.6	-36.3	38.2	264	104	Vert.	54.0	15.8	With HPF
7206.000	45.7	PK	37.7	-34.8	48.6	160	100	Hori.	74.0	25.4	With HPF
7206.000	46.3	PK	37.7	-34.8	49.2	271	100	Vert.	74.0	24.8	With HPF
7206.000	32.9	AV	37.7	-34.8	35.8	160	100	Hori.	54.0	18.2	With HPF
7206.000	33.0	AV	37.7	-34.8	35.9	271	100	Vert.	54.0	18.1	With HPF
9608.000	43.6	PK	37.0	-32.1	48.5	157	100	Hori.	74.0	25.5	With HPF
9608.000	43.5	PK	37.0	-32.1	48.4	271	100	Vert.	74.0	25.6	With HPF

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

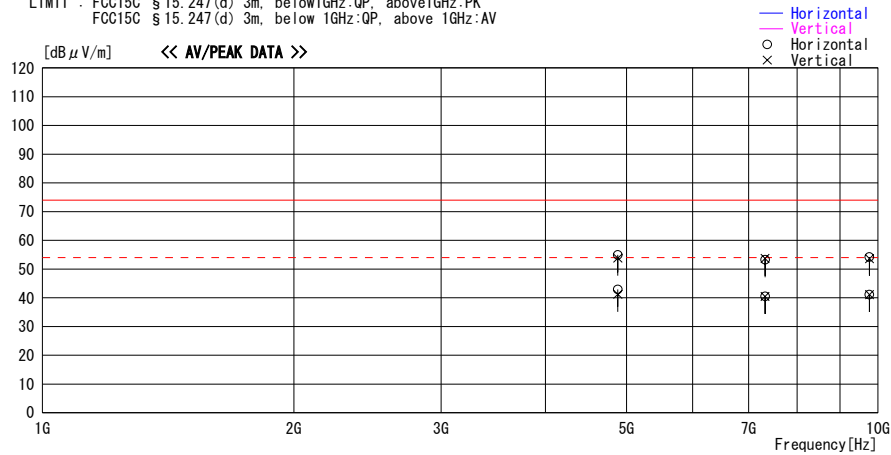
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/17 22:51:45

Applicant : Matsushita Electric Industrial Report No. : 26AE0255-HO
Kind of EUT : Hands-Free Kit featuring BT tech. Power : DC12.0V
Model No. : CY-BT100U Temp./Humi. : 24deg.C / 53%
Serial No. : 5JAGA010014 Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2441MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dB μ V]		Factor	Gain	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]	
4882.000	55.6	PK	35.6	-36.3	54.9	212	100	Hori.	74.0	19.1	With HPF
4882.000	54.5	PK	35.6	-36.3	53.8	272	103	Vert.	74.0	20.2	With HPF
4882.000	43.6	AV	35.6	-36.3	42.9	212	100	Hori.	54.0	11.1	With HPF
4882.000	41.9	AV	35.6	-36.3	41.2	272	103	Vert.	54.0	12.8	With HPF
7323.000	50.1	PK	37.9	-34.8	53.2	160	100	Hori.	74.0	20.8	With HPF
7323.000	50.6	PK	37.9	-34.8	53.7	270	100	Vert.	74.0	20.3	With HPF
7323.000	37.4	AV	37.9	-34.8	40.5	160	100	Hori.	54.0	13.5	With HPF
7323.000	37.4	AV	37.9	-34.8	40.5	270	100	Vert.	54.0	13.5	With HPF
9764.000	49.3	PK	36.8	-31.9	54.2	160	100	Hori.	74.0	19.8	With HPF
9764.000	48.7	PK	36.8	-31.9	53.6	270	100	Vert.	74.0	20.4	With HPF
9764.000	36.2	AV	36.8	-31.9	41.1	160	100	Hori.	54.0	12.9	With HPF
9764.000	36.2	AV	36.8	-31.9	41.1	270	100	Vert.	54.0	12.9	With HPF

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

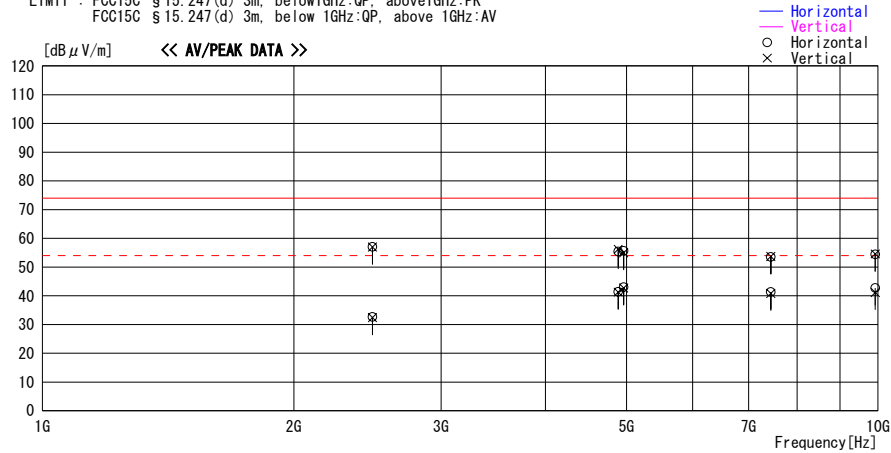
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/18 00:04:59

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 24deg.C / 53%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2480MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dB μ V]		Factor	Gain	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]	
2483.500	64.1	PK	30.5	-37.6	57.0	152	100	Hori.	74.0	17.0	
2483.500	64.1	PK	30.5	-37.6	57.0	272	143	Vert.	74.0	17.1	
2483.500	39.8	AV	30.5	-37.6	32.7	152	100	Hori.	54.0	21.3	
2483.500	39.5	AV	30.5	-37.6	32.4	272	143	Vert.	54.0	21.6	
4885.830	56.1	PK	35.6	-36.3	55.4	216	110	Hori.	74.0	18.6	With HPF
4885.830	56.9	PK	35.6	-36.3	56.2	173	100	Vert.	74.0	17.8	With HPF
4885.830	42.1	AV	35.6	-36.3	41.4	216	110	Hori.	54.0	12.6	With HPF
4885.830	42.0	AV	35.6	-36.3	41.3	173	100	Vert.	54.0	12.7	With HPF
4960.000	55.8	PK	36.1	-36.3	55.6	216	110	Hori.	74.0	18.4	With HPF
4960.000	55.2	PK	36.1	-36.3	55.0	173	100	Vert.	74.0	19.0	With HPF
4960.000	43.2	AV	36.1	-36.3	43.0	216	110	Hori.	54.0	11.0	With HPF
4960.000	42.9	AV	36.1	-36.3	42.7	173	100	Vert.	54.0	11.3	With HPF
7440.000	50.0	PK	38.1	-34.6	53.5	156	100	Hori.	74.0	20.5	With HPF
7440.000	50.2	PK	38.1	-34.6	53.7	173	100	Vert.	74.0	20.3	With HPF
7440.000	37.8	AV	38.1	-34.6	41.3	156	100	Hori.	54.0	12.7	With HPF
7440.000	37.3	AV	38.1	-34.6	40.8	173	100	Vert.	54.0	13.2	With HPF
9920.000	49.5	PK	36.7	-31.8	54.4	156	100	Hori.	74.0	19.6	With HPF
9920.000	49.7	PK	36.7	-31.8	54.6	173	100	Vert.	74.0	19.4	With HPF
9920.000	37.8	AV	36.7	-31.8	42.7	156	100	Hori.	54.0	11.3	With HPF
9920.000	36.3	AV	36.7	-31.8	41.2	0	100	Vert.	54.0	12.8	With HPF

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

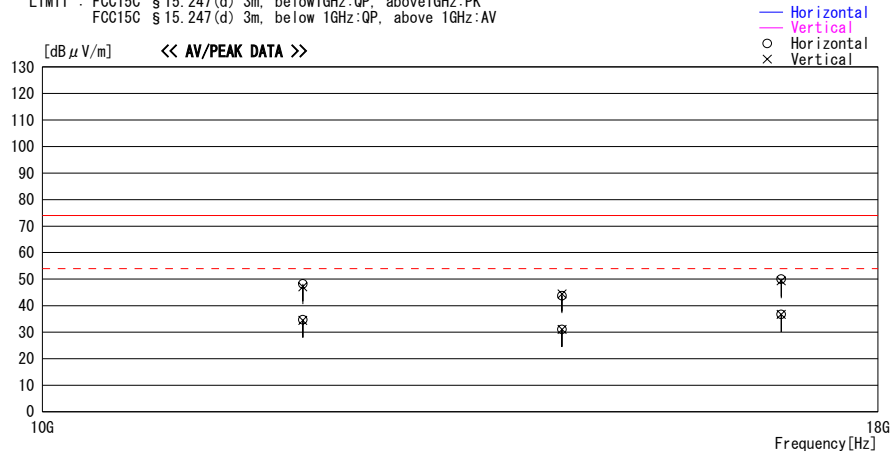
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/20 00:25:39

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2402MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12010.000	45.2	PK	41.6	-38.6	48.2	0	100	Hori.	74.0	25.8
12010.000	44.1	PK	41.6	-38.6	47.1	0	100	Vert.	74.0	26.9
12010.000	31.6	AV	41.6	-38.6	34.6	0	100	Hori.	54.0	19.4
12010.000	31.4	AV	41.6	-38.6	34.4	0	100	Vert.	54.0	19.6
14412.000	43.2	PK	41.7	-41.2	43.7	0	100	Hori.	74.0	30.3
14412.000	43.9	PK	41.7	-41.2	44.4	0	100	Vert.	74.0	29.6
14412.000	30.5	AV	41.7	-41.2	31.0	0	100	Hori.	54.0	23.0
14412.000	30.6	AV	41.7	-41.2	31.1	0	100	Vert.	54.0	22.9
16814.000	44.7	PK	45.1	-39.8	50.0	0	100	Hori.	74.0	24.0
16814.000	44.1	PK	45.1	-39.8	49.4	0	100	Vert.	74.0	24.6
16814.000	31.4	AV	45.1	-39.8	36.7	0	100	Hori.	54.0	17.3
16814.000	31.4	AV	45.1	-39.8	36.7	0	100	Vert.	54.0	17.3

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

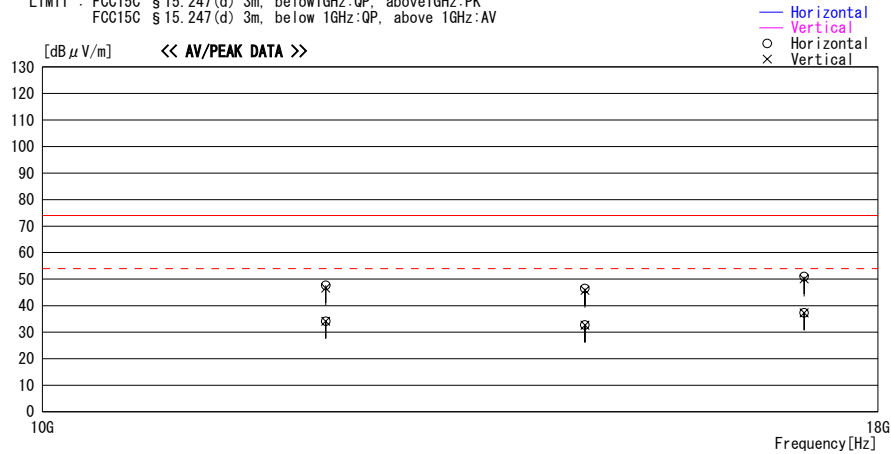
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/20 00:29:48

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2441MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12205.000	45.1	PK	41.6	-39.1	47.6	0	100	Hori.	74.0	26.4
12205.000	44.2	PK	41.6	-39.1	46.7	0	100	Vert.	74.0	27.3
12205.000	31.6	AV	41.6	-39.1	34.1	0	100	Hori.	54.0	19.9
12205.000	31.6	AV	41.6	-39.1	34.1	0	100	Vert.	54.0	19.9
14646.000	45.1	PK	42.2	-40.8	46.5	0	100	Hori.	74.0	27.5
14646.000	44.4	PK	42.2	-40.8	45.8	0	100	Vert.	74.0	28.2
14646.000	31.3	AV	42.2	-40.8	32.7	0	100	Hori.	54.0	21.4
14646.000	31.2	AV	42.2	-40.8	32.6	0	100	Vert.	54.0	21.4
17087.000	45.5	PK	45.2	-39.7	51.0	0	100	Hori.	74.0	23.0
17087.000	44.6	PK	45.2	-39.7	50.1	0	100	Vert.	74.0	23.9
17087.000	31.8	AV	45.2	-39.7	37.3	0	100	Hori.	54.0	16.8
17087.000	31.8	AV	45.2	-39.7	37.3	0	100	Vert.	54.0	16.8

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

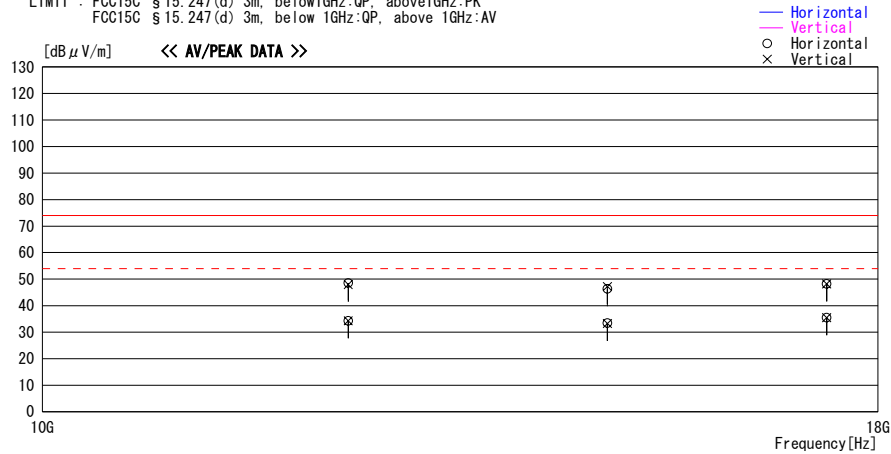
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/20 00:33:17

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014
Report No. : 26AE0255-HO
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2480MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12400.000	46.5	PK	41.7	-39.7	48.5	0	100	Hori.	74.0	25.5
12400.000	46.0	PK	41.7	-39.7	48.0	0	100	Vert.	74.0	26.0
12400.000	32.3	AV	41.7	-39.7	34.3	0	100	Hori.	54.0	19.7
12400.000	32.3	AV	41.7	-39.7	34.3	0	100	Vert.	54.0	19.7
14880.000	43.9	PK	42.7	-40.3	46.3	0	100	Hori.	74.0	27.7
14880.000	44.8	PK	42.7	-40.3	47.2	0	100	Vert.	74.0	26.8
14880.000	31.0	AV	42.7	-40.3	33.4	0	100	Hori.	54.0	20.6
14880.000	30.9	AV	42.7	-40.3	33.3	0	100	Vert.	54.0	20.7
17360.000	43.1	PK	44.7	-39.6	48.2	0	100	Hori.	74.0	25.8
17360.000	43.1	PK	44.7	-39.6	48.2	0	100	Vert.	74.0	25.8
17360.000	30.3	AV	44.7	-39.6	35.4	0	100	Hori.	54.0	18.6
17360.000	30.4	AV	44.7	-39.6	35.5	0	100	Vert.	54.0	18.5

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

* 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

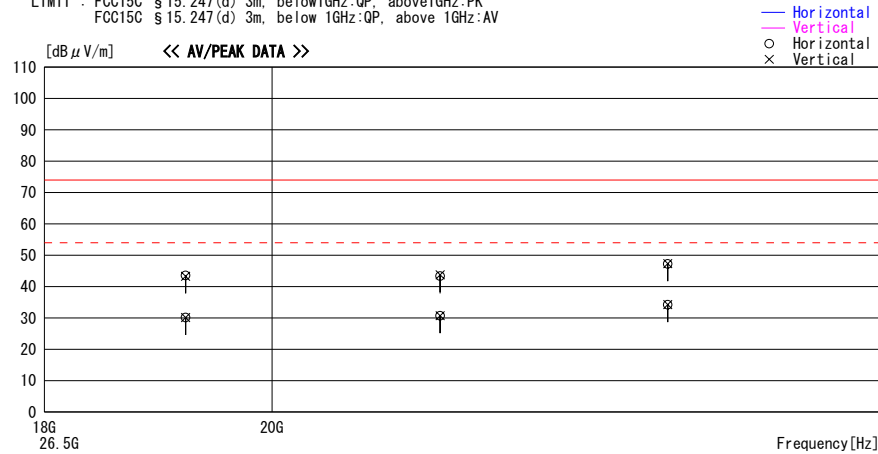
UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/20 01:50:31

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014

Report No. : 26AE0255-H0
Power : DC12.0V
Temp./Humi. : 26deg.C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2402MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Loss&Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
19216.000	40.4	PK	40.1	-36.9	43.6	0	100	Hori.	74.0	30.4
19216.000	40.1	PK	40.1	-36.9	43.3	0	100	Vert.	74.0	30.7
19216.000	27.0	AV	40.1	-36.9	30.2	0	100	Hori.	54.0	23.8
19216.000	26.9	AV	40.1	-36.9	30.1	0	100	Vert.	54.0	23.9
21618.000	40.3	PK	39.8	-36.7	43.4	0	100	Hori.	74.0	30.6
21618.000	40.7	PK	39.8	-36.7	43.8	0	100	Vert.	74.0	30.3
21618.000	27.6	AV	39.8	-36.7	30.7	0	100	Hori.	54.0	23.3
21618.000	27.6	AV	39.8	-36.7	30.7	0	100	Vert.	54.0	23.3
24020.000	41.1	PK	40.4	-34.3	47.2	0	100	Hori.	74.0	26.8
24020.000	41.2	PK	40.4	-34.3	47.3	0	100	Vert.	74.0	26.7
24020.000	28.1	AV	40.4	-34.3	34.2	0	100	Hori.	54.0	19.8
24020.000	28.1	AV	40.4	-34.3	34.2	0	100	Vert.	54.0	19.8

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

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

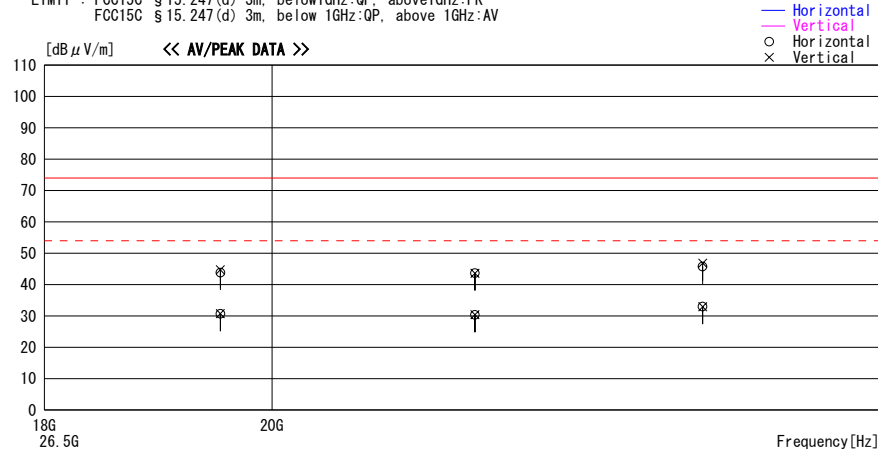
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2005/10/20 02:33:05

Applicant : Matsushita Electric Industrial Report No. : 26AE0255-H0
Kind of EUT : Hands-Free Kit featuring BT tech. Power : DC12.0V
Model No. : CY-BT100U Temp./Humi. : 26deg.C / 39%
Serial No. : 5JAGA010014 Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2441MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Loss&Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
19528.000	40.2	PK	40.3	-36.7	43.8	0	100	Hori.	74.0	30.2
19528.000	41.1	PK	40.3	-36.7	44.7	0	100	Vert.	74.0	29.3
19528.000	27.1	AV	40.3	-36.7	30.7	0	100	Hori.	54.0	23.3
19528.000	27.1	AV	40.3	-36.7	30.7	0	100	Vert.	54.0	23.3
21969.000	40.7	PK	39.8	-36.8	43.7	0	100	Hori.	74.0	30.3
21969.000	40.6	PK	39.8	-36.8	43.6	0	100	Vert.	74.0	30.4
21969.000	27.4	AV	39.8	-36.8	30.4	0	100	Hori.	54.0	23.6
21969.000	27.4	AV	39.8	-36.8	30.4	0	100	Vert.	54.0	23.6
24410.000	39.9	PK	40.4	-34.6	45.7	0	100	Hori.	74.0	28.3
24410.000	41.0	PK	40.4	-34.6	46.8	0	100	Vert.	74.0	27.2
24410.000	27.2	AV	40.4	-34.6	33.0	0	100	Hori.	54.0	21.0
24410.000	27.2	AV	40.4	-34.6	33.0	0	100	Vert.	54.0	21.1

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)
Except for the data below : adequate margin data below the limits.

Radiated Spurious Emission

* 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

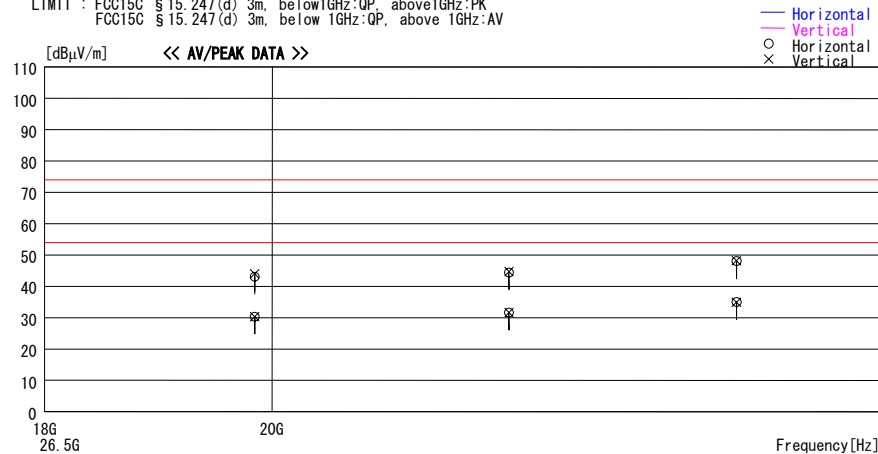
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/10/20 03:25:28

Applicant : Matsushita Electric Industrial
Kind of EUT : Hands-Free Kit featuring BT tech.
Model No. : CY-BT100U
Serial No. : 5JAGA010014

Report No. : 26AE0255-H0
Power : DC12.0V
Temp./Humi. : 26deg. C / 39%
Operator : Yutaka Yoshida

Mode / Remarks : Transmitting Bluetooth 2480MHz Max Axis

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV

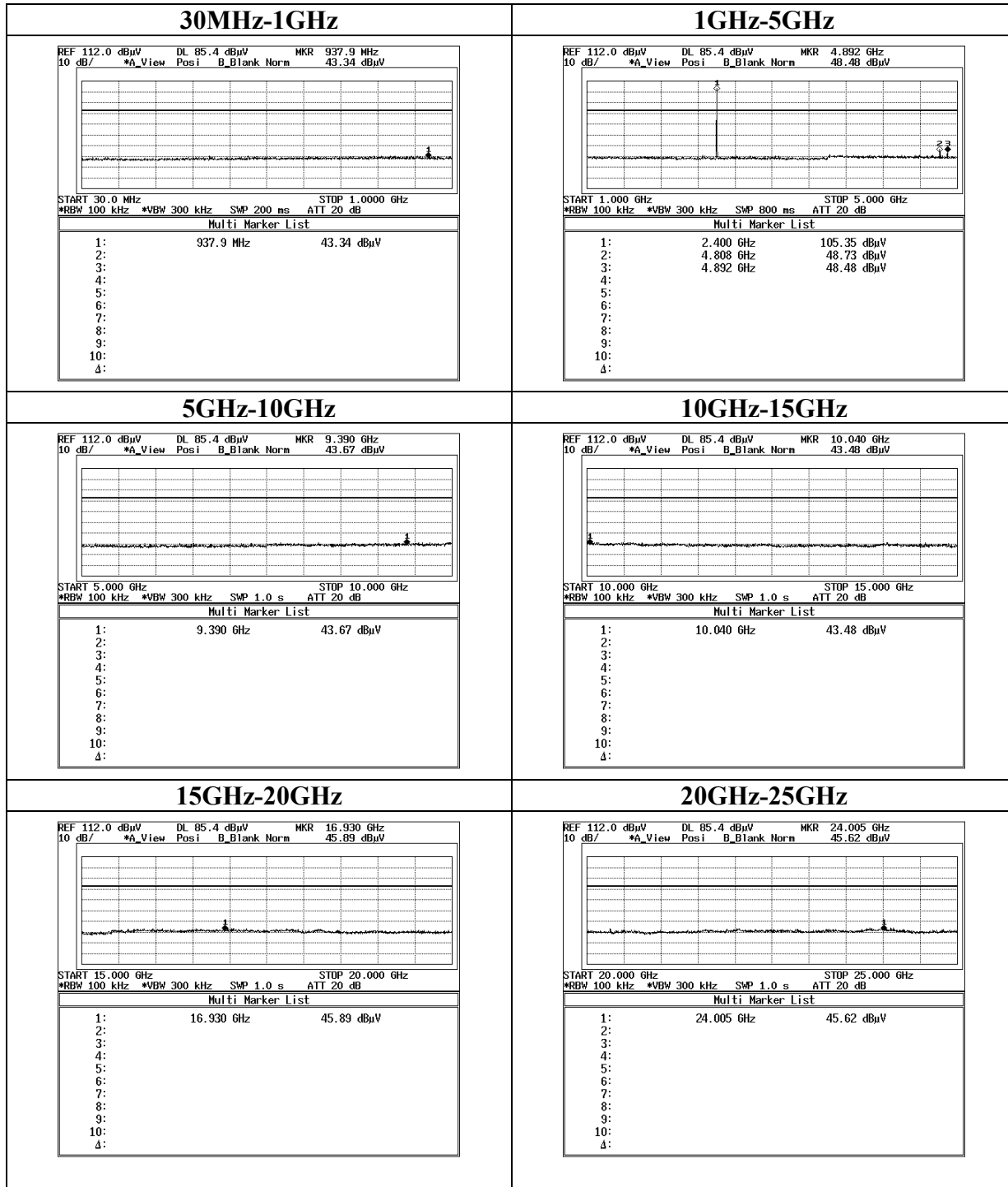


Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBμV]		[dB/m]	[dB]	[dBμV/m]	[Deg]	[cm]		[dBμV/m]	[dB]
19840.000	39.2	PK	40.4	-36.5	43.1	0	100	Hori.	74.0	30.9
19840.000	40.1	PK	40.4	-36.5	44.0	0	100	Vert.	74.0	30.0
19840.000	26.4	AV	40.4	-36.5	30.3	0	100	Hori.	54.0	23.7
19840.000	26.4	AV	40.4	-36.5	30.3	0	100	Vert.	54.0	23.7
22320.000	40.8	PK	39.8	-36.2	44.4	0	100	Hori.	74.0	29.6
22320.000	41.1	PK	39.8	-36.2	44.7	0	100	Vert.	74.0	29.3
22320.000	28.0	AV	39.8	-36.2	31.6	0	100	Hori.	54.0	22.4
22320.000	28.1	AV	39.8	-36.2	31.7	0	100	Vert.	54.0	22.4
24800.000	42.3	PK	40.7	-34.9	48.1	0	100	Hori.	74.0	25.9
24800.000	42.4	PK	40.7	-34.9	48.2	0	100	Vert.	74.0	25.8
24800.000	29.2	AV	40.7	-34.9	35.0	0	100	Hori.	54.0	19.0
24800.000	29.2	AV	40.7	-34.9	35.0	0	100	Vert.	54.0	19.1

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)
Except for the data below : adequate margin data below the limits.

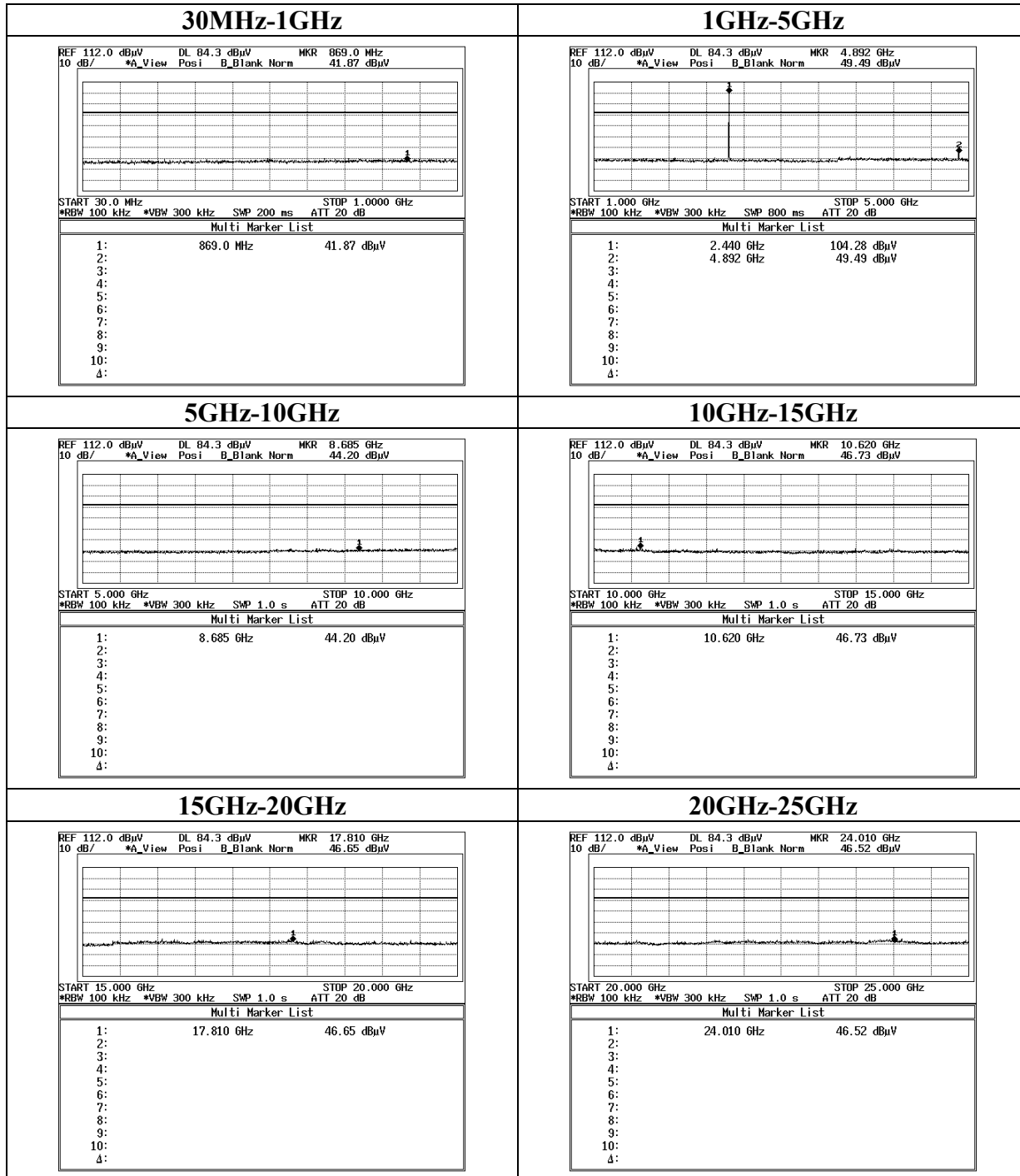
Conducted Spurious Emission

Ch:Low



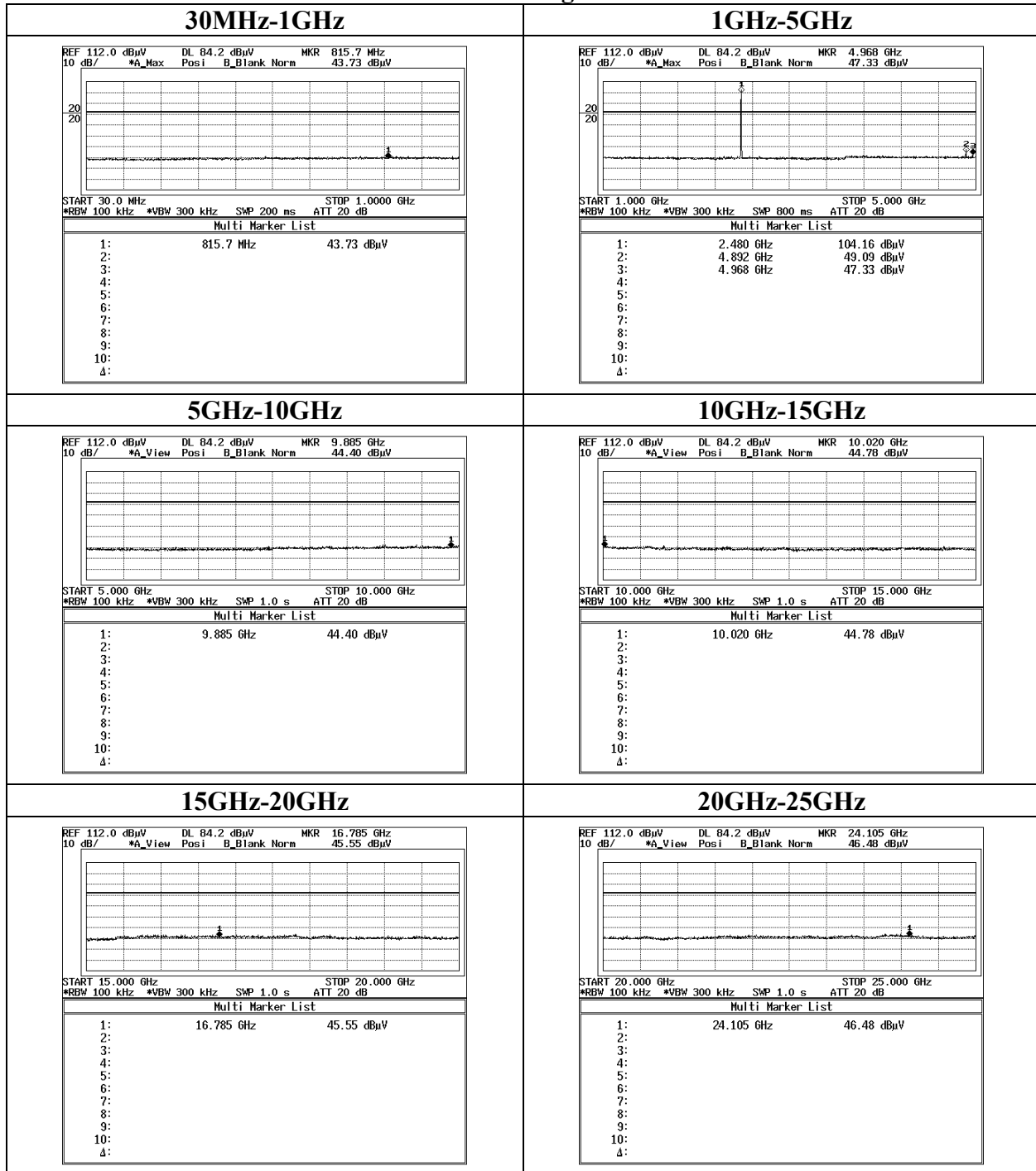
Conducted Spurious Emission

Ch:Mid

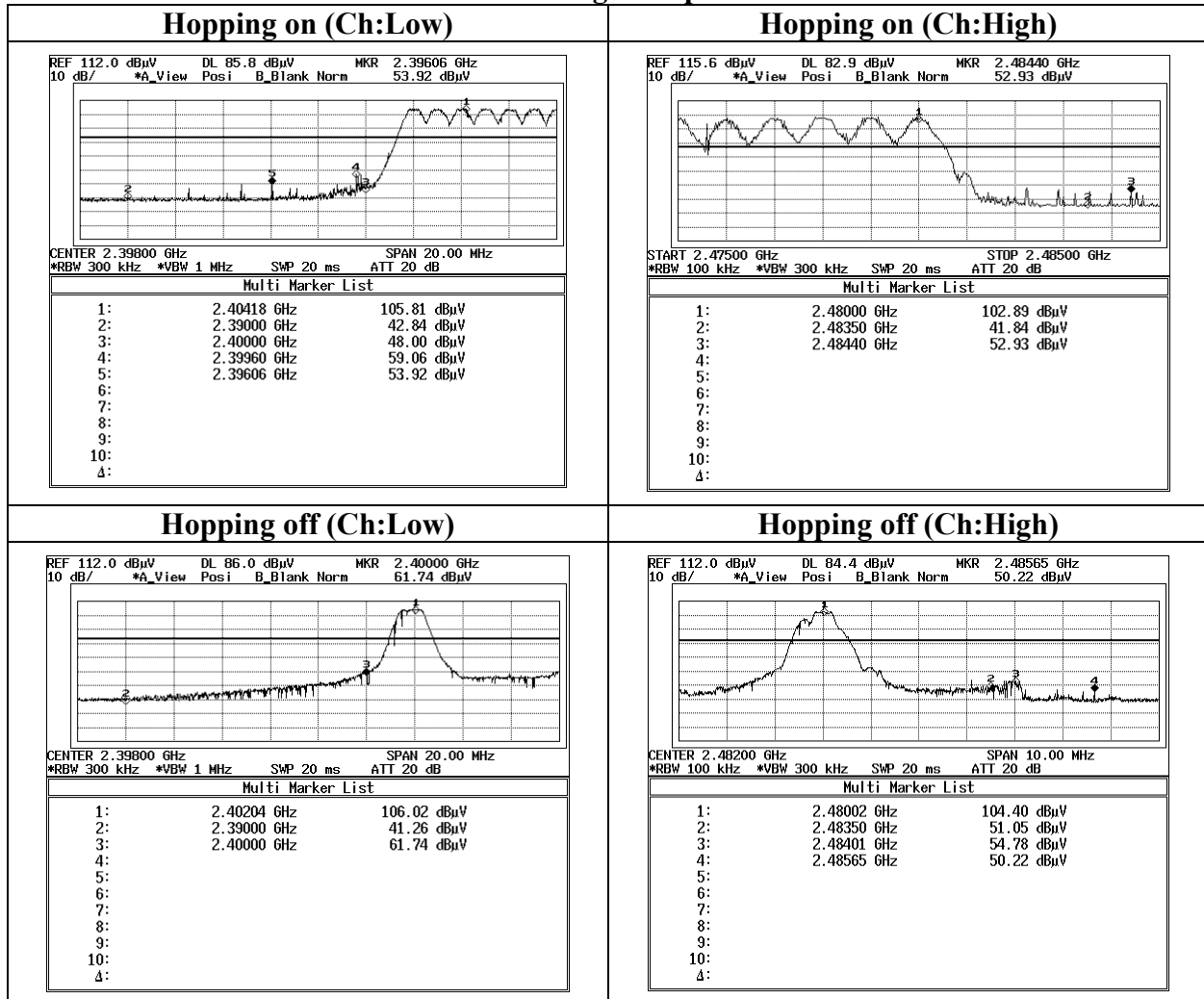


Conducted Spurious Emission

Ch:High



Conducted Spurious Emission Band Edge compliance



99% Occupied Bandwidth

