

RADIO TEST REPORT

Test Report No. : 26HE0199-HO-A

Applicant : Sharp Corporation

Type of Equipment : 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable

Model No. : 770SH

FCC ID : APYHRO00049

Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247: 2006

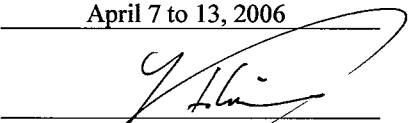
Test Result : Complied

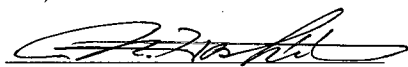
1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with the above regulation. We hereby certify that the data contain a true representation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

Date of test:

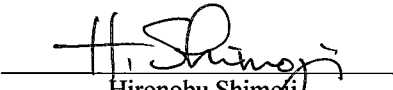
April 7 to 13, 2006

Tested by:


Yasuyuki Fukui
EMC Services


Norihisa Hashimoto
EMC Services

Approved by :


Hironobu Shimogai
Group Leader of EMC Services

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(01.06.05)

CONTENTS	PAGE
SECTION 1: Client information	3
SECTION 2: Equipment under test (E.U.T.)	3
SECTION 3: Test specification, procedures & results	5
SECTION 4: Operation of E.U.T. during testing	9
SECTION 5: Conducted Emission	10
SECTION 6: Spurious Emission	11
SECTION 7: Bandwidth	12
SECTION 8: Maximum Peak Output Power	12
SECTION 9: Carrier Frequency Separation	12
SECTION 10: Number of Hopping Frequency	12
SECTION 11: Dwell time	12
APPENDIX 1: Photographs of test setup	13
Conducted Emission	13
Spurious Emission (Radiated)	14
Worst Case Position (X-axis:Horizontal / Z-axis:Vertical)	15
APPENDIX 2: Test instruments	16
APPENDIX 3: Data of EMI test	17
Conducted Emission	17
Carrier Frequency Separation	21
20dB Bandwidth	23
Number of Hopping Frequency	25
Dwell time	27
Maximum Peak Output Power	30
Radiated Spurious Emission	32
Conducted Spurious Emission	38
99% Occupied Bandwidth	42
APPENDIX 4: Label	43

SECTION 1: Client information

Company Name : Sharp Corporation
Brand Name : SHARP
Address : 2-13-1 Iida Hachihonmatsu Higashihiroshima-City, Hiroshima-pref. 739-0192
Japan
Telephone Number : +81-82-420-1817
Facsimile Number : +81-82-420-1654
Contact Person : Masatsugu Daijuh

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

2.1 Identification of E.U.T.

Type of Equipment : 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015598/9, 004401/11/015605/2
Power Supply : DC(nominal)4.0V
AC120V(AC charger)
Country of Manufacture : Japan
Receipt Date of Sample : April 10, 2006
Condition of E.U.T. : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)

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(01.06.05)

2.2 Product Description

Model No: 770SH is the 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable.

Clock frequency(ies) in the system	:	13MHz
Equipment Type	:	Transceiver
Frequency band	:	Lower limit: 2402MHz Upper limit: 2480MHz
Bandwidth & Channel spacing	:	1MHz & 1MHz
Modulation	:	GFSK, FHSS
Mode of Operation	:	Duplex
ITU code	:	F1D/F1E/F1W
Power Supply	:	DC 3.7-4.0V (EUT input) DC 2.8V (BT RF Module input)
Antenna Type	:	Internal Antenna
Antenna Connector Type	:	Spring connector
Antenna Gain	:	1.5dBi(max)
Method of Frequency Generation	:	Synthesizer

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(01.06.05)

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 stable voltage (DC4.0V) is provided to the EUT and it is converted to DC2.8V and then constantly supplied to RF module part. 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.

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin*0)	Results
1	Conducted Emission *1)	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	6.3dB, AV, 0.32886MHz, N	Complied
2	Carrier Frequency Separation	FCC: ANSI C63.4:2003 13. Measurement of intentional radiators IC: -	FCC: Section 15.247(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: Section 15.247(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: Section 15.247(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: Section 15.247(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: Section 15.247(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: Section 15.247(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 RSS-Gen 4.8	FCC: Section 15.247(d) IC: RSS-210 A8.5 RSS-Gen 7.2.1 and 7.2.3	Conducted/ Radiated	N/A	8.1dB, AV, 2483.5MHz, Ver.	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) There is no difference in output levels of 3 Channels (Low/Mid/High) at both QP/AV data, and all the levels complied with the limit. Therefore, only the representative channel (High: 2480MHz) was tested.

*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.

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(01.06.05)

3.3 Addition to standards

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

3.4 Uncertainty

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is ± 2.6 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 test report has enough margin, more than the site margin.

Other test except Conducted Emission and Spurious Emission (Radiated)

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

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(01.06.05)

3.5 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0

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

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	846015	IC4247A-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 shielded room	-	-	6.0 x 6.0 x 3.9m	N/A	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	N/A	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	N/A	-
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 and No.2 semi-anechoic and No.7 shielded room.

3.6 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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

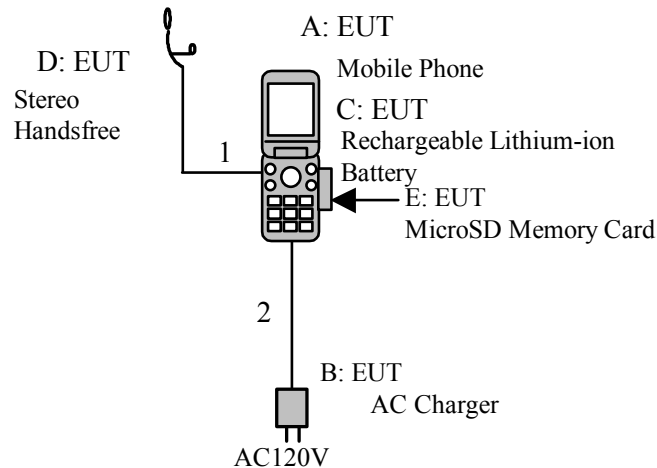
MF060b(01.06.05)

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

4.1 Operating Modes

The mode is used : Transmitting mode (PRBS9/ Packet size DH5)
Low Channel :2402MHz
Mid Channel :2441MHz
High Channel :2480MHz
Inquiry

4.2 Configuration and peripherals



*Cabling and test 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	3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable	770SH	004401/11/015598/9 *1) 004401/11-015605/2 *2)	Sharp Corporation	EUT
B	AC Charger	XN-1QC43	-	HOSIDEN	EUT
C	Rechargeable Lithium-ion Battery	XN-1BT77	-	SANYO	EUT
D	Stereo Handsfree	RPHOA013AF	-	FOSTER	EUT
E	MicroSD Memory Card	UIMC-A022AF	-	SanDisk	EUT

*1) Used for Antenna terminal tests

*2) Used for Conducted and radiated emission tests

List of cables used

No.	Name	Length (m)	Shield
1	Cable for Stereo Handsfree	1.8	Y
2	Cable for AC Charger	1.8	N

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(01.06.05)

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1m by 1.5m, 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.

1) 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.

2) For the tests on EUT itself (as a stand alone equipment)

Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN/(AMN) to the input power source. 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 3
Test result	: Pass

Date: April 13, 2006

Test engineer: Yasuyuki Fukui

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(01.06.05)

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 3

Test result : Pass

[Radiated]

Test Procedure

EUT was placed on a platform of nominal size, 0.5m 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).

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.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

20dBc was applied to the frequency over the limit of FCC 15.209 and outside the restricted band of 15.205. (FCC)

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver / Spectrum Analyzer	Spectrum Analyzer
Detector	QP: BW 120kHz(T/R)	PK: RBW:1MHz/VBW: 1MHz
IF Bandwidth	20dBc : RBW: 100kHz VBW: 300kHz (S/A)	AV: RBW:1MHz/VBW:10Hz 20dBc : RBW:100kHz/VBW:300kHz

Test data : APPENDIX 3

Test result : Pass

- 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

Date: April 7 and 10, 2006

Test engineer: Yasuyuki Fukui

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(01.06.05)

SECTION 7: Bandwidth

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

SECTION 8: 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 9: 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

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 3
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 3
Test result : Pass

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(01.06.05)

APPENDIX 1: Photographs of test setup

Conducted Emission

This page has been submitted for a separate exhibit.

Spurious Emission (Radiated)

This page has been submitted for a separate exhibit.

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

This page has been submitted for a separate exhibit.

APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2006/04/10 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800		2004/11/25 * 24
MRENT-26	Spectrum Analyzer	Advantest	R3273	RE	2006/02/15 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2005/09/07 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2006/01/09 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2005/08/30 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2006/02/02 * 12
MHF-05	High Pass Filter	Tokimec	TF323DCA	RE	2006/01/24 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2006/02/02 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2006/01/09 * 12
MPA-05	Pre Amplifier	TSJ	TSJ 1-26.5GHz PreAmp	RE	2005/07/08 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE/CE	2005/11/14 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ES140	RE/CE	2005/11/10 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	RE	2006/02/20 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2005/05/24 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2005/12/16 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	CE	2005/12/18 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2005/11/09 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	AT	2006/02/11 * 12
MCC-05	Microwave Cable 1G-40GHz	Storm	421-011 (90-1394-079)	AT	2006/01/04 * 12
MAT-24	Attenuator(10dB)(above1GHz)	Agilent	8493C	AT	2005/06/03 * 12

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

Test Item:

CE AC Main Conducted Emission, RE: Radiated Spurious Emission
AT: Antenna Terminal Conducted Spurious Emission, Maximum Peak Output Power
Carrier Frequency Separation, 20dB Bandwidth, Number of Hopping Frequency, Dwell time

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(01.06.05)

APPENDIX 3: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/13 22:02:18

Company : Sharp Corporation
Kind of EUT : 3G (UMTS) / GSM900/1800/1900 GPRS Phone/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2

Report No. : 26HE0199-HO
Power : DC 4.0V (AC Charger:AC120V/60Hz)
Temp./Humi. : 20deg.C / 48%
Operator : Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2402MHz

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

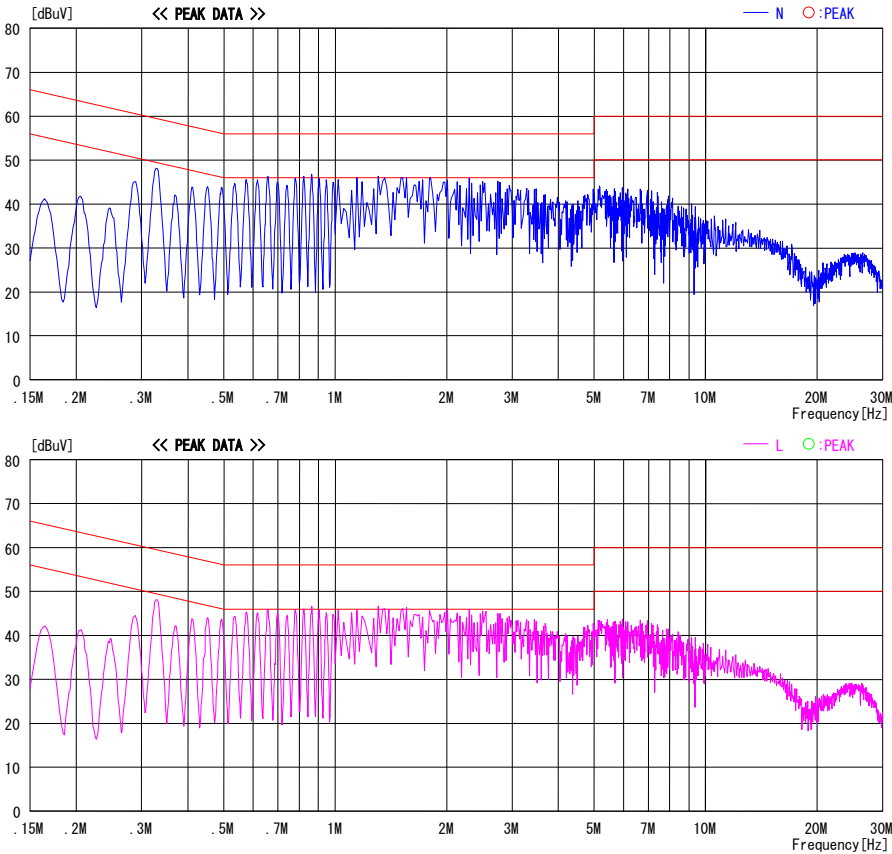


CHART: WITH FACTOR. Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/13 22:15:28

Company	: Sharp Corporation	Report No.	: 26HE0199-HO
Kind of EUT	: 3G (UMTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable	Power	: DC 4.0V (AC Charger:AC120V/60Hz)
Model No.	: 770SH	Temp./Humi.	: 20deg. C / 48%
Serial No.	: 004401/11/015605/2	Operator	: Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2441MHz

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

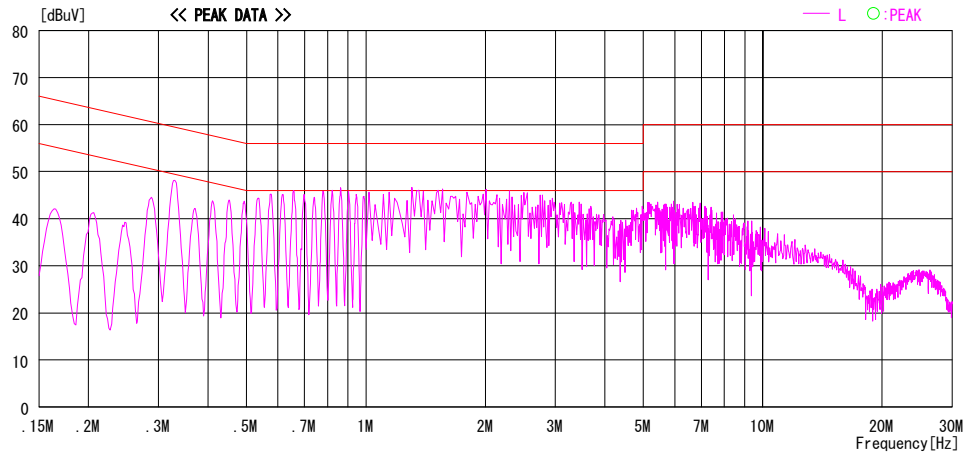
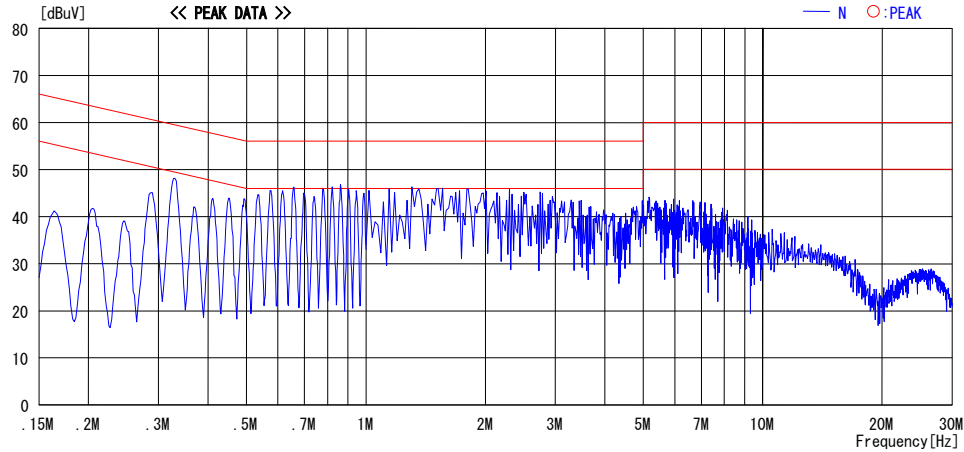


CHART:WITH FACTOR, Peak hold data, Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/13 22:06:47

Company : Sharp Corporation
Kind of EUT : 3G (UMTS) / GSM900/1800/1900 GPRS home/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2

Report No. : 26HE0199-HO
Power : DC 4.0V (AC Charger: AC120V/60Hz)
Temp./Humi. : 20deg. C / 48%
Operator : Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2480MHz

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

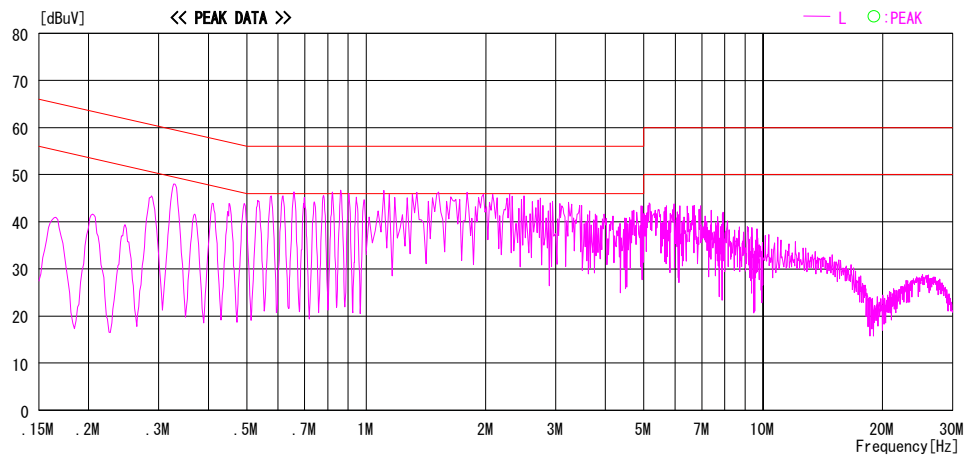
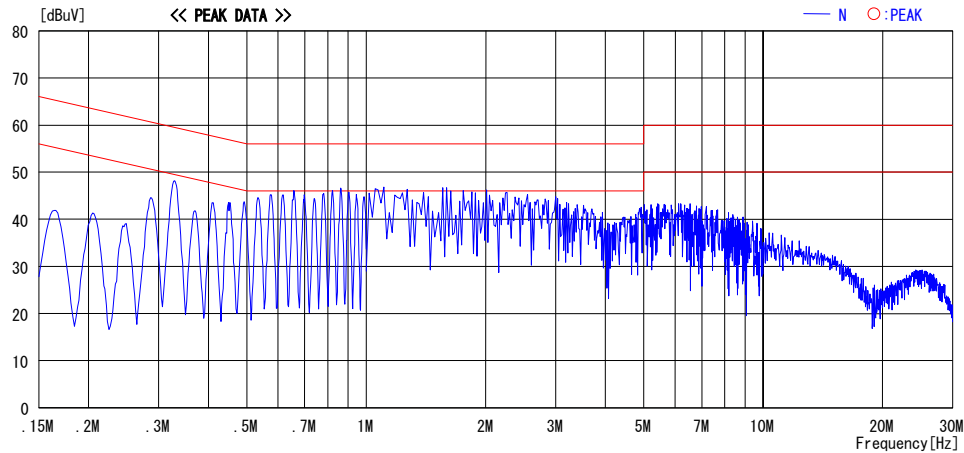


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

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

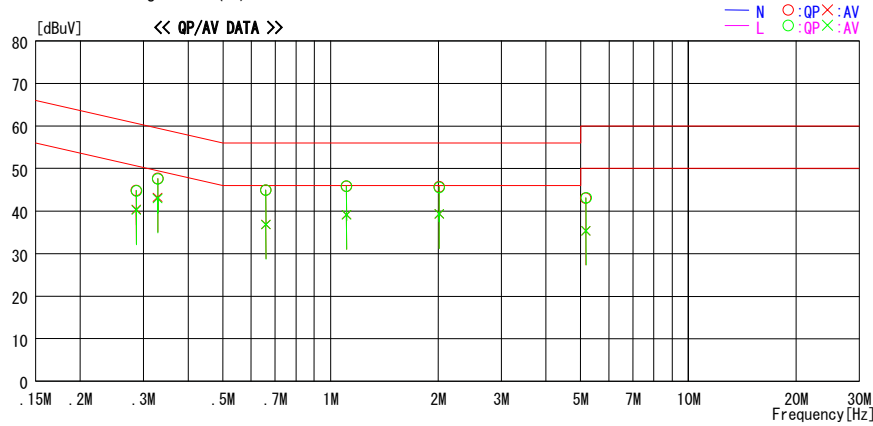
MF060b(01.06.05)

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/13 22:06:47

Company : Sharp Corporation
Kind of EUT : 3G (UMTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2
Report No. : 26HE0199-HO
Power : DC 4.0V (AC Charger:AC120V/60Hz)
Temp./Humi. : 20deg.C / 48%
Operator : Yasuyuki Fukui
Mode / Remarks : Bluetooth Tx 2480MHz

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.28627	44.7	40.3	0.1	44.8	40.4	60.6	50.6	15.8	10.2	N
0.32886	47.5	43.0	0.2	47.7	43.2	59.5	49.5	11.8	6.3	N
0.65932	44.6	36.6	0.3	44.9	36.9	56.0	46.0	11.1	9.1	N
1.10779	45.6	38.9	0.3	45.9	39.2	56.0	46.0	10.2	6.8	N
2.01112	45.2	38.9	0.5	45.7	39.4	56.0	46.0	10.3	6.7	N
5.17204	42.1	34.4	1.0	43.1	35.4	60.0	50.0	16.9	14.6	N
0.28688	44.7	40.1	0.1	44.8	40.2	60.6	50.6	15.8	10.4	L
0.32886	47.4	42.8	0.2	47.6	43.0	59.5	49.5	11.9	6.5	L
0.65932	44.6	36.5	0.3	44.9	36.8	56.0	46.0	11.1	9.2	L
1.10822	45.6	38.8	0.3	45.9	39.1	56.0	46.0	10.1	6.9	L
2.01102	45.1	38.8	0.5	45.6	39.3	56.0	46.0	10.4	6.7	L
5.17211	42.2	34.4	1.0	43.2	35.4	60.0	50.0	16.8	14.6	L

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.

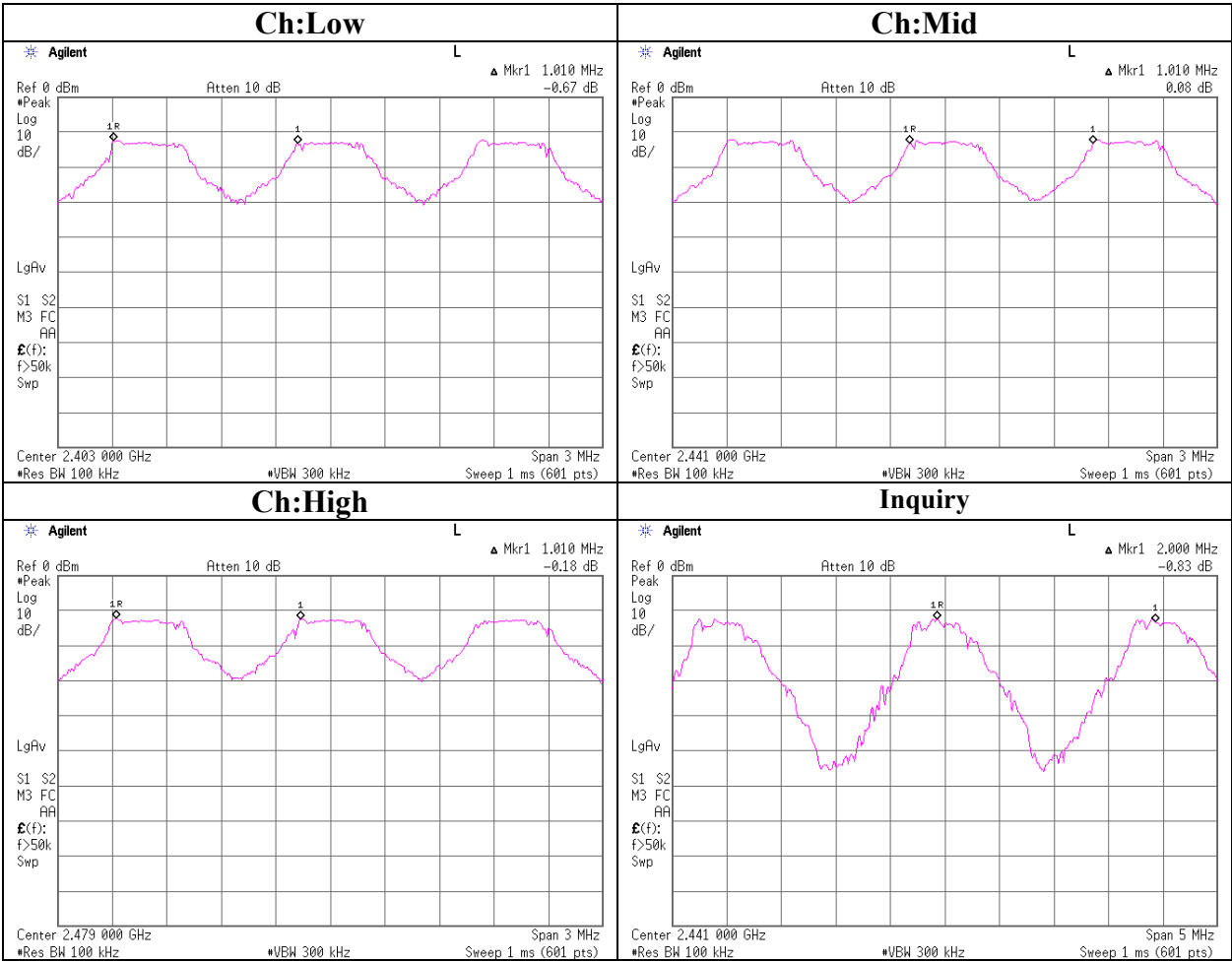
Carrier Frequency Separation

UL Apex Co., Ltd.
Head Office EMC Lab. No.6 Measurement Room

COMPANY	: Sharp Corporation	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)
EQUIPMENT	: 3G(UMTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable	TEST DISTANCE	: -
MODEL	: 770SH	DATE	: 04/10/2006
S/ N	: 004401/11/015598/9	TEMPERATURE	: 20deg C
POWER	: DC4.0V	HUMIDITY	: 48%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Norihisa Hashimoto

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.010	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
Mid	2441.0	1.010	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
High	2480.0	1.010	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
Inquiry	2441.0	2.000	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)

Carrier Frequency Separation



20dB Bandwidth

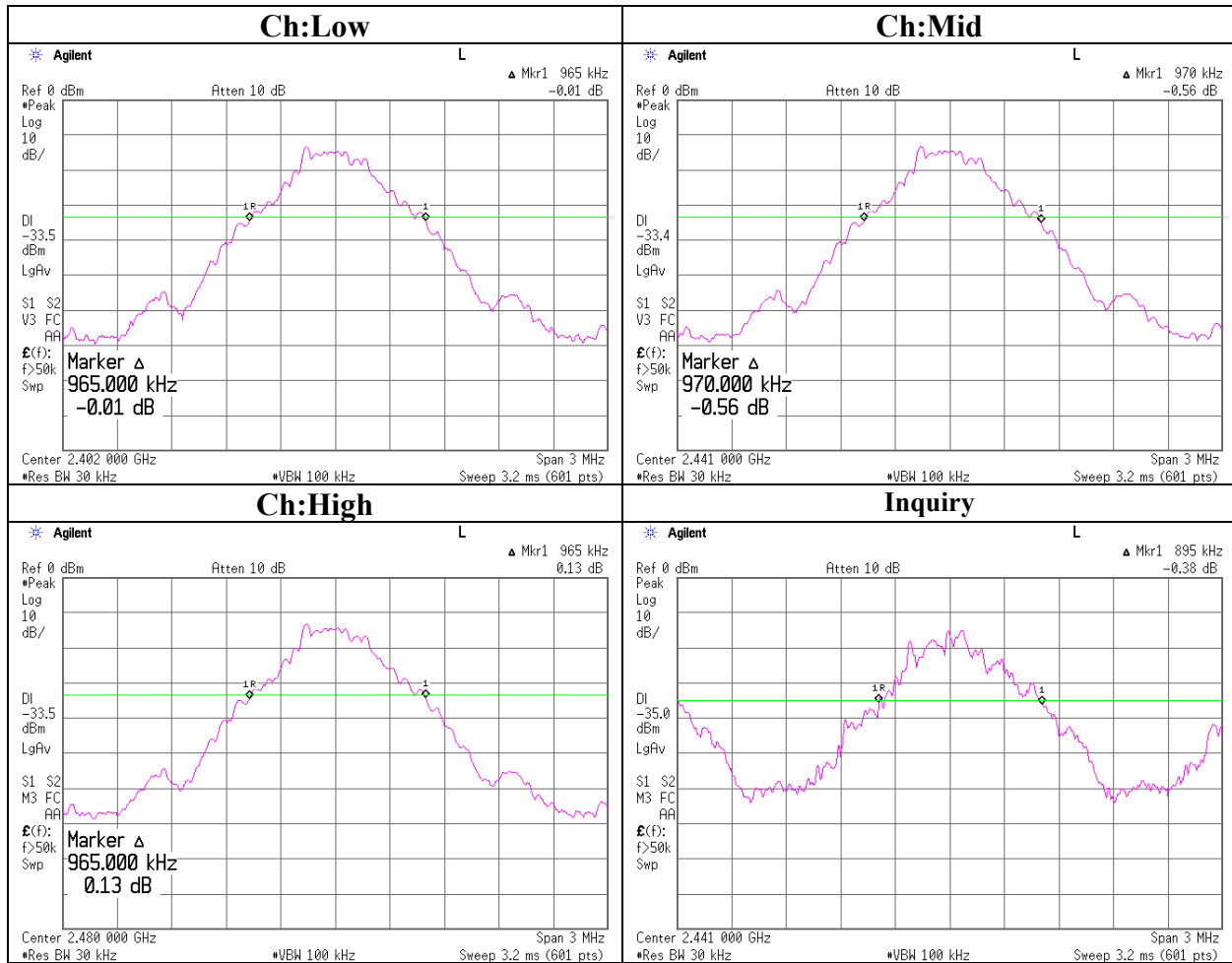
UL Apex Co., Ltd.
Head Office EMC Lab. No.6 Measurement Room

COMPANY : Sharp Corporation
EQUIPMENT : 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable
MODEL : 770SH
S/N : 004401/11/015598/9
POWER : DC4.0V
MODE : Tx (Hopping off) /Inquiry

REGULATION : FCC Part15 Subpart C 15.247(a)(1)
TEST DISTANCE : -
DATE : 04/10/2006
TEMPERATURE : 20deg.C
HUMIDITY : 48%
ENGINEER : Norihisa Hashimoto

Ch	Freq.	20dB Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	2402.0	0.965	-
Mid	2441.0	0.970	-
High	2480.0	0.965	-
Inquiry	2441.0	0.895	-

20dB Bandwidth



Number of Hopping Frequency

UL Apex Co., Ltd.
Head Office EMC Lab. No.6 Measurement Room

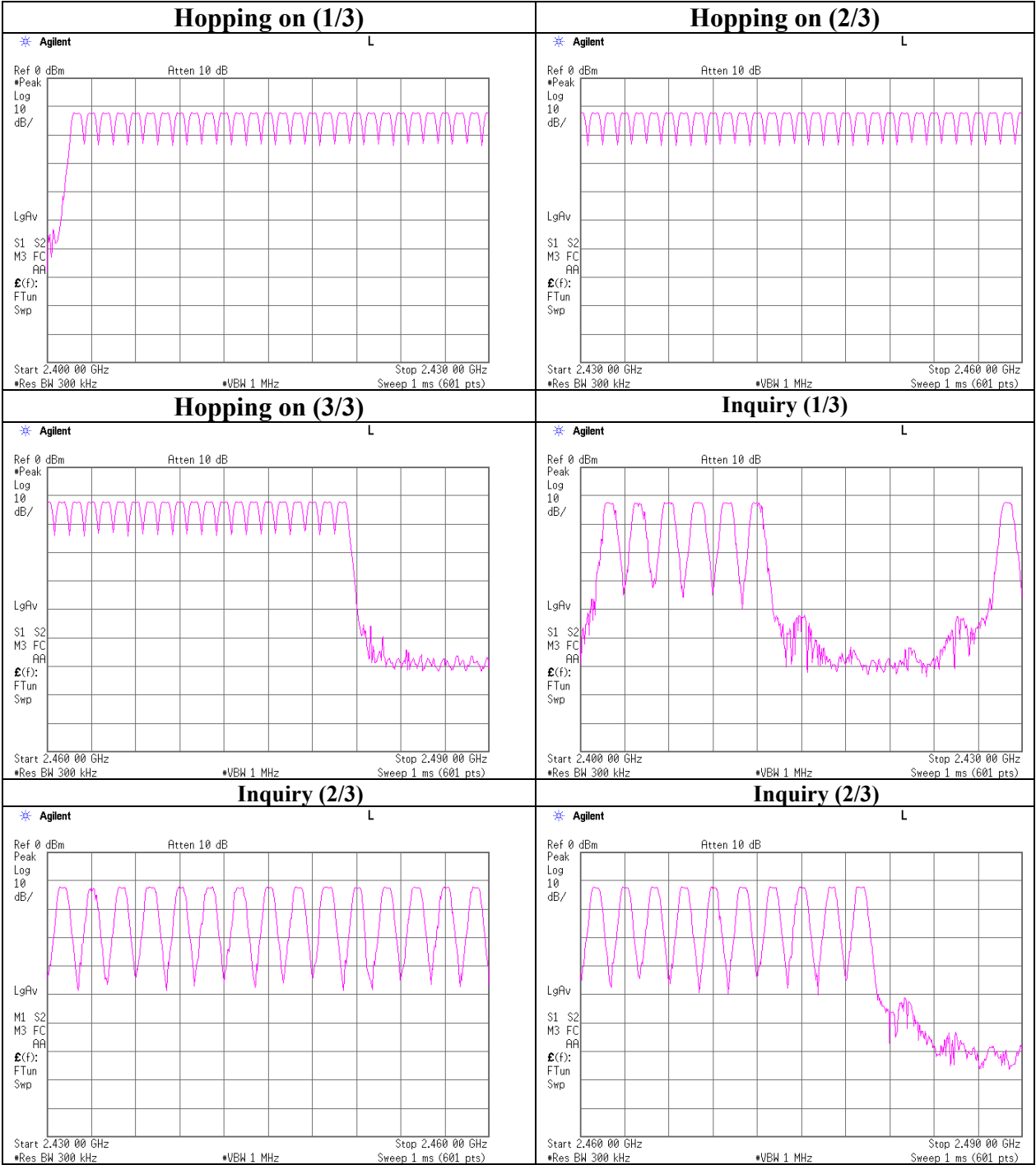
COMPANY : Sharp Corporation
EQUIPMENT : 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable
MODEL : 770SH
S/ N : 004401/11/015598/9
POWER : DC4.0V
MODE : Tx (Hopping on) /Inquiry

REGULATION : FCC Part15 Subpart C 15.247(a)(1)(iii)
TEST DISTANCE : -
DATE : 04/10/2006
TEMPERATURE : 20deg.C
HUMIDITY : 48%
ENGINEER : Norihisa Hashimoto

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

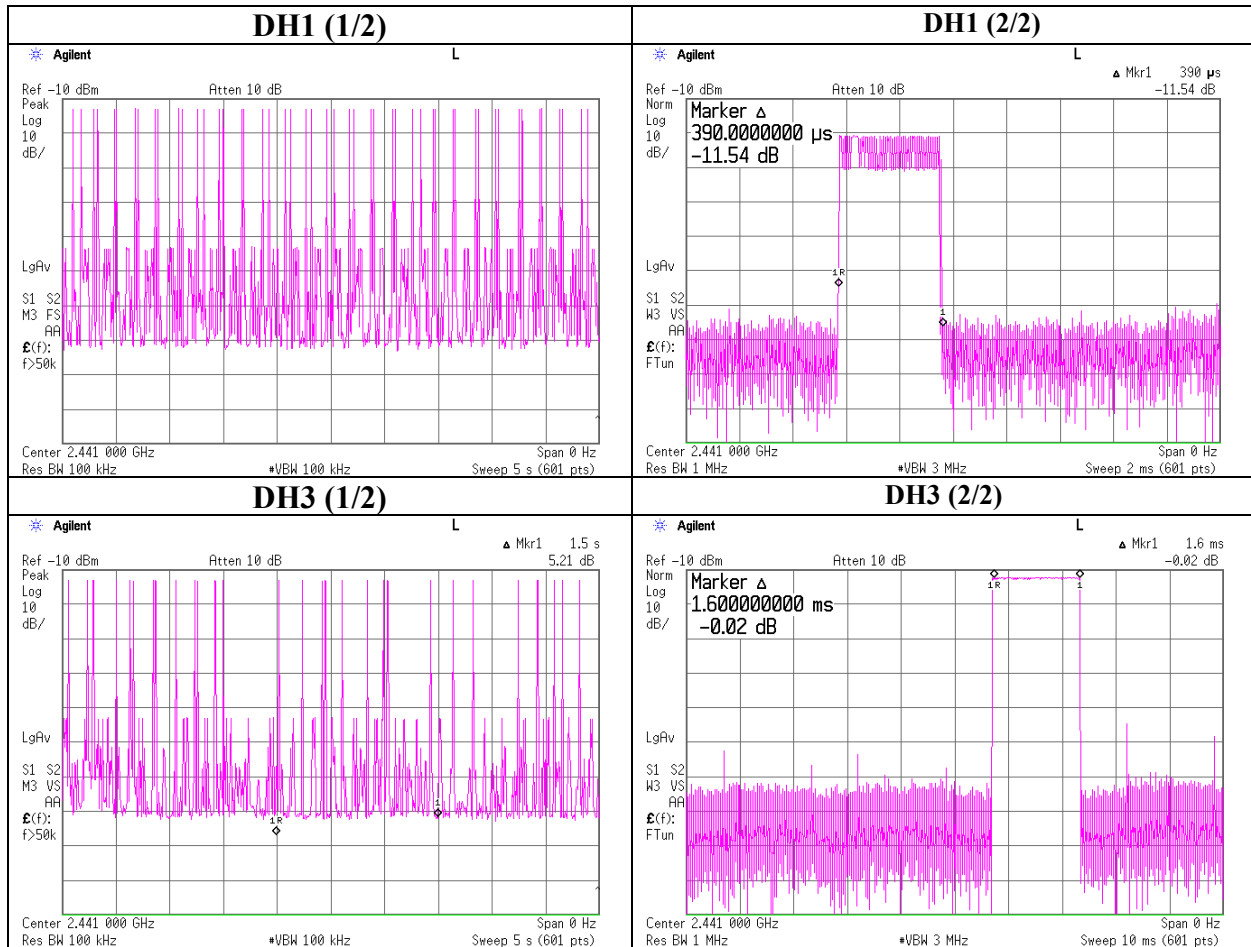
UL Apex Co., Ltd.
Head Office EMC Lab. No.6 Measurement Room

COMPANY	: Sharp Corporation	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)(iii)
EQUIPMENT	: 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable	TEST DISTANCE	: -
MODEL	: 770SH	DATE	: 04/10/2006
S/N	: 004401/11/015598/9	TEMPERATURE	: 20deg.C
POWER	: DC4.0V	HUMIDITY	: 48%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Norihisa Hashimoto

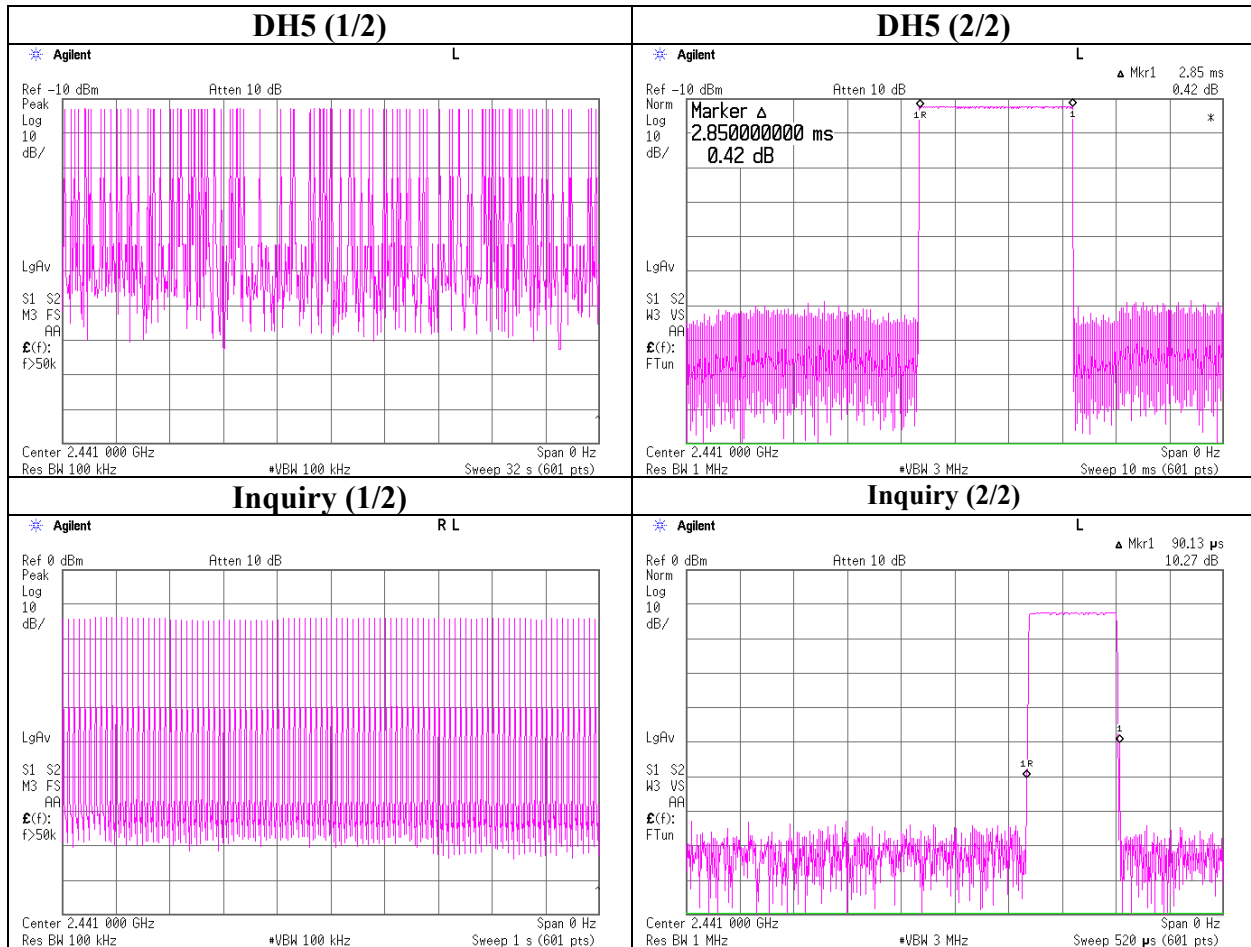
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50.2 times /5sec. x 31.6 = 317times *1)	0.390	124	400
DH3	31.5 times / 5sec. x 31.6 = 199times *1)	1.600	319	400
DH5	122times	2.850	347	400
Inquiry	100times / 1sec. x 12.8 = 1280 times	0.090	115	400

*1) Average data of 5 tests

Dwell time



Dwell time



Maximum Peak Output Power

UL Apex Co., Ltd.
Head Office EMC Lab. No.6 Measurement Room

COMPANY : Sharp Corporation
EQUIPMENT : 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable
MODEL : 770SH
S/ N : 004401/11/015598/9
POWER : DC4.0V
MODE : Tx(Hopping Off)/Inquiry

REGULATION : FCC Part15 Subpart C 15.247(b)(1)
TEST DISTANCE : -
DATE : 04/10/2006
TEMPERATURE : 20deg.C
HUMIDITY : 48%
ENGINEER : Norihisa Hashimoto

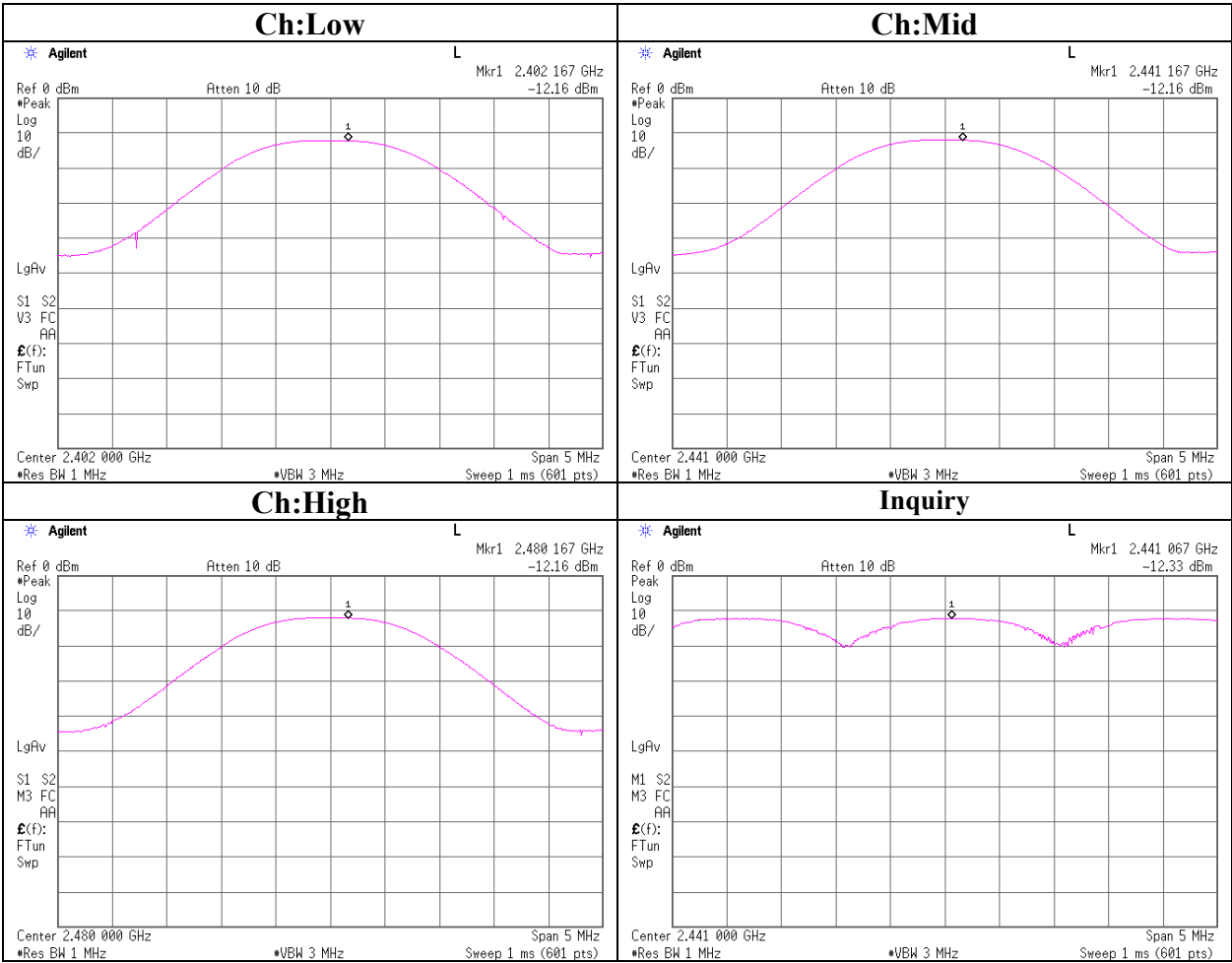
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-12.16	1.59	10.14	-0.43	0.91	30.00	1000	30.43
Mid	2441.0	-12.16	1.60	10.14	-0.42	0.91	30.00	1000	30.42
High	2480.0	-12.16	1.61	10.14	-0.41	0.91	30.00	1000	30.41
Inquiry	2441.0	-12.33	1.60	10.14	-0.59	0.87	20.97	125	21.56

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer)+ 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.

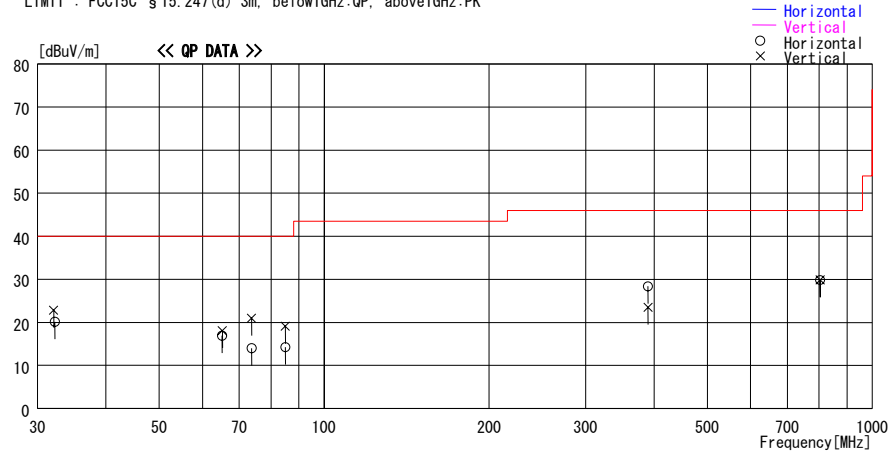
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2006/04/10 21:36:00

Applicant : Sharp Corporation
Kind of EUT : 3G(WTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2
Report No. : 26HE0199-HO
Power : 120V / 60Hz
Temp./Humi. : 20deg. C / 48%
Operator : Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2402MHz DH5 EUT max (H:X-axis V:Z-axis)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
32.110	26.1	QP	17.7	-21.0	22.8	39	100	Vert.	40.0	17.2
32.246	23.4	QP	17.7	-21.0	20.1	4	300	Hori.	40.0	19.9
65.100	28.9	QP	7.8	-19.8	16.9	6	300	Hori.	40.0	23.1
73.697	26.6	QP	7.0	-19.6	14.0	10	300	Hori.	40.0	26.0
73.697	33.6	QP	7.0	-19.6	21.0	180	220	Vert.	40.0	19.0
65.210	30.2	QP	7.7	-19.8	18.1	173	100	Vert.	40.0	21.9
84.945	30.9	QP	7.7	-19.5	19.1	0	100	Vert.	40.0	20.9
84.945	26.0	QP	7.7	-19.5	14.2	220	300	Hori.	40.0	25.8
389.779	27.4	QP	17.4	-16.4	28.4	5	100	Hori.	46.0	17.6
389.974	22.5	QP	17.4	-16.4	23.5	100	100	Vert.	46.0	22.5
803.220	23.0	QP	21.6	-14.7	29.9	347	100	Vert.	46.0	16.1
803.220	22.9	QP	21.6	-14.7	29.8	79	100	Hori.	46.0	16.2

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN

Radiated Spurious Emission

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

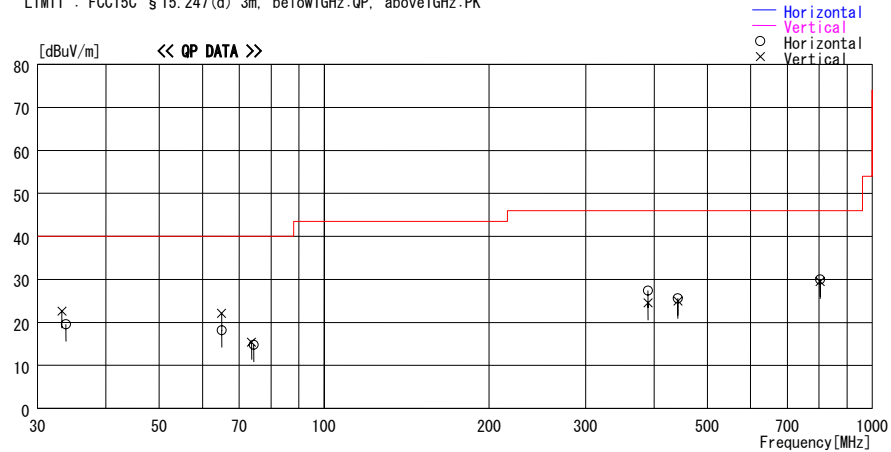
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2006/04/10 21:01:26

Applicant : Sharp Corporation
Kind of EUT : 3G (UMTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2
Report No. : 26HE0199-HO
Power : 120W / 60Hz
Temp./Humi. : 20deg. C / 48%
Operator : Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2441MHz DH5 EUT max (H:X-axis V:Z-axis)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
33.246	26.2	QP	17.2	-20.8	22.6	0	100	Vert.	40.0	17.4
33.788	23.5	QP	16.9	-20.8	19.6	300	300	Hori.	40.0	20.4
65.010	34.1	QP	7.8	-19.8	22.1	220	100	Vert.	40.0	17.9
65.022	30.2	QP	7.8	-19.8	18.2	0	300	Hori.	40.0	21.8
73.729	28.0	QP	7.0	-19.6	15.4	68	100	Vert.	40.0	24.6
74.369	27.4	QP	7.0	-19.6	14.8	100	300	Hori.	40.0	25.2
389.984	26.4	QP	17.4	-16.4	27.4	275	116	Hori.	46.0	18.6
389.960	23.5	QP	17.4	-16.4	24.5	58	100	Vert.	46.0	21.5
442.002	24.4	QP	17.7	-16.4	25.7	280	100	Hori.	46.0	20.4
442.002	23.6	QP	17.7	-16.4	24.9	10	100	Vert.	46.0	21.1
802.854	23.1	QP	21.6	-14.7	30.0	190	100	Hori.	46.0	16.0
803.612	22.6	QP	21.6	-14.7	29.5	190	100	Vert.	46.0	16.5

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN

Radiated Spurious Emission

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

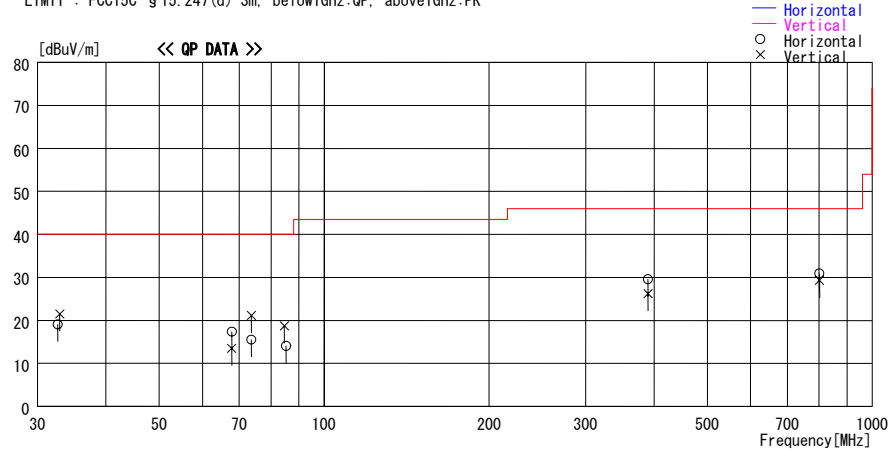
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2006/04/10 22:09:48

Applicant : Sharp Corporation
Kind of EUT : 3G(UMTS)/GSM900/1800/1900 GPRS Phone/Bluetooth Enable
Model No. : 770SH
Serial No. : 004401/11/015605/2
Report No. : 26HE0199-HO
Power : 120V / 60Hz
Temp./Humi. : 20deg. C / 48%
Operator : Yasuyuki Fukui

Mode / Remarks : Bluetooth Tx 2480MHz DH5 EUT max (H:X-axis V:Z-axis)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
32.623	22.4	QP	17.5	-20.8	19.1	264	300	Hori.	40.0	20.9
32.946	25.0	QP	17.3	-20.8	21.5	233	100	Vert.	40.0	18.5
67.845	29.9	QP	7.3	-19.8	17.4	100	220	Hori.	40.0	22.6
67.845	26.0	QP	7.3	-19.8	13.5	100	100	Vert.	40.0	26.5
73.694	28.1	QP	7.0	-19.6	15.5	100	220	Hori.	40.0	24.5
73.694	33.7	QP	7.0	-19.6	21.1	0	180	Vert.	40.0	18.9
84.649	30.5	QP	7.7	-19.5	18.7	227	100	Vert.	40.0	21.3
85.190	25.8	QP	7.8	-19.5	14.1	330	300	Hori.	40.0	25.9
389.970	28.6	QP	17.4	-16.4	29.6	350	120	Hori.	46.0	16.4
389.970	25.2	QP	17.4	-16.4	26.2	60	100	Vert.	46.0	19.8
801.230	24.1	QP	21.6	-14.7	31.0	300	220	Hori.	46.0	15.0
801.399	22.4	QP	21.6	-14.7	29.3	220	100	Vert.	46.0	16.7

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN

Radiated Spurious Emission (Tx Ch.:L)

Company : Sharp Corporation
Equipment : 3G(UMTS)/GSM900/1800/1900 GRPS phone/ Bluetooth Enable
Model : 770SH
Sample No. : 004401/11/015605/2
Power : DC 4.0V (AC Charger: AC 120V / 60Hz)
Mode : Bluetooth Tx 2402MHz, DH5, PRBS9
Remarks : Hor X, Ver Z-axis

UL Apex Co., Ltd.
REPORT NO : 26HE0199-HO
REGULATION : Fcc Part15 Subpart C 15.247(d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 04/07/2006
TEMPERATURE : 25deg.C
HUMIDITY : 30%
ENGINEER : Yasuyuki Fukui

Head Office EMC Lab. No.2 Semi Anechoic Chamber

PK DETECT (RBW: 1MHz, VBW: 1MHz)												
No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT [dBuV/m]		Limit PK [dBuV/m]	MARGIN [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	42.0	44.2	30.6	32.4	3.3	0.0	43.5	45.7	74.0	30.5	28.3
2*	2400.0	72.2	68.3	30.6	32.4	3.3	0.0	73.7	69.8	74.0	-	-
3	4804.0	39.8	40.6	35.7	31.9	4.6	1.4	49.6	50.4	74.0	24.4	23.6
4	5790.0	40.8	40.1	36.5	31.7	5.2	1.4	52.2	51.5	74.0	21.8	22.5
5	7206.0	40.0	39.8	37.5	31.5	5.6	1.2	52.9	52.7	74.0	21.1	21.3
6	9608.0	40.3	40.5	36.6	31.7	6.5	1.0	52.7	52.9	74.0	21.3	21.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12010.0	46.7	42.3	40.3	31.3	7.9	1.8	55.9	51.5	74.0	18.1	22.5
8	14412.0	41.7	41.2	43.2	31.0	8.7	0.9	54.0	53.5	74.0	20.0	20.5
9	16814.0	46.0	45.9	46.4	41.8	6.7	0.0	47.8	47.7	74.0	26.3	26.4
10	19216.0	43.2	41.2	39.0	40.2	7.1	0.0	39.6	37.6	74.0	34.5	36.5
11	21618.0	43.1	42.5	39.3	40.2	7.6	0.0	40.3	39.7	74.0	33.8	34.4
12	24020.0	43.8	41.9	39.1	39.1	7.8	0.0	42.1	40.2	74.0	32.0	33.9

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]									
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	31.5	34.5	30.6	32.4	3.3	0.0	33.0	36.0	54.0	21.0	18.0
2*	2400.0	59.6	56.3	30.6	32.4	3.3	0.0	61.1	57.8	54.0	-	-
3	4804.0	28.5	28.4	35.7	31.9	4.6	1.4	38.3	38.2	54.0	15.7	15.8
4	5790.0	29.0	29.5	36.5	31.7	5.2	1.4	40.4	40.9	54.0	13.6	13.1
5	7206.0	28.2	28.1	37.5	31.5	5.6	1.2	41.1	41.0	54.0	12.9	13.0
6	9608.0	28.8	28.9	36.6	31.7	6.5	1.0	41.2	41.3	54.0	12.8	12.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12010.0	33.5	29.5	40.3	31.3	7.9	1.8	42.7	38.7	54.0	11.3	15.3
8	14412.0	28.8	28.8	43.2	31.0	8.7	0.9	41.1	41.1	54.0	12.9	12.9
9	16814.0	32.7	32.6	46.4	41.8	6.7	0.0	34.5	34.4	54.0	19.6	19.7
10	19216.0	29.5	28.3	39.0	40.2	7.1	0.0	25.9	24.7	54.0	28.2	29.4
11	21618.0	29.5	29.5	39.3	40.2	7.6	0.0	26.7	26.7	54.0	27.4	27.4
12	24020.0	30.6	29.5	39.1	39.1	7.8	0.0	28.9	27.8	54.0	25.2	26.3

* Reference data

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dB]		[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2402.0	97.3	89.9	30.6	32.4	3.3	0.0	98.8	91.4	-	-	-
2	2400.0	43.2	36.0	30.6	32.4	3.3	0.0	44.7	37.5	Funda-20dB	34.1	33.9

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

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

*3) In the frequency over the third harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

Radiated Spurious Emission (Tx Ch.:M)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Sharp Corporation
Equipment : 3G(UMTS)/GSM900/1800/1900 GRPS phone/ Bluetooth Enable
Model : 770SH
Sample No. : 004401/11/015605/2
Power : DC 4.0V (AC Charger: AC 120V / 60Hz)
Mode : Bluetooth Tx 2441MHz, DH5, PRBS9
Remarks : Hor X, Ver Z-axis

REPORT NO : 26HE0199-HO
REGULATION : Fcc Part15 Subpart C 15.247(d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 04/07/2006
TEMPERATURE : 24deg.C
HUMIDITY : 30%
ENGINEER : Yasuyuki Fukui

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	4882.0	42.4	42.2	36.2	31.8	4.7	1.4	52.8	52.6	74.0	21.2	21.4
2	5835.0	46.7	44.9	36.6	31.7	5.2	1.4	58.2	56.4	74.0	15.8	17.6
3	7323.0	41.6	41.7	37.9	31.7	5.7	1.1	54.6	54.7	74.0	19.4	19.3
4	9764.0	42.9	42.5	36.6	31.8	6.6	1.1	55.3	54.9	74.0	18.7	19.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12205.0	42.7	42.3	40.4	31.0	7.9	1.7	52.2	51.8	74.0	21.8	22.2
6	14646.0	42.1	42.1	43.1	31.1	8.8	0.8	54.2	54.2	74.0	19.8	19.8
7	17087.0	46.8	47.0	46.1	41.8	6.8	0.0	48.4	48.6	74.0	25.6	25.4
8	19528.0	42.1	41.6	39.1	40.1	7.1	0.0	38.6	38.1	74.0	35.4	35.9
9	21969.0	42.4	41.9	39.6	40.1	7.7	0.0	40.0	39.5	74.0	34.0	34.5
10	24410.0	44.5	44.7	39.1	39.7	7.9	0.0	42.3	42.5	74.0	31.8	31.6

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	4882.0	29.6	29.6	36.2	31.8	4.7	1.4	40.0	40.0	54.0	14.0	14.0
2	5835.0	29.3	29.2	36.6	31.7	5.2	1.4	40.8	40.7	54.0	13.2	13.3
3	7323.0	29.4	29.3	37.9	31.7	5.7	1.1	42.4	42.3	54.0	11.6	11.7
4	9764.0	30.3	30.0	36.6	31.8	6.6	1.1	42.7	42.4	54.0	11.3	11.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12205.0	28.8	28.8	40.4	31.0	7.9	1.7	38.3	38.3	54.0	15.7	15.7
6	14646.0	28.8	28.0	43.1	31.1	8.8	0.8	40.9	40.1	54.0	13.1	13.9
7	17087.0	34.0	34.5	46.1	41.8	6.8	0.0	35.6	36.1	54.0	18.4	17.9
8	19528.0	28.6	29.0	39.1	40.1	7.1	0.0	25.1	25.5	54.0	28.9	28.5
9	21969.0	29.1	29.2	39.6	40.1	7.7	0.0	26.7	26.8	54.0	27.3	27.2
10	24410.0	31.4	32.0	39.1	39.7	7.9	0.0	29.2	29.8	54.0	24.9	24.3

*1) Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) =

9.54 dB

*2) In the frequency over the three harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*4) 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(01.06.05)

Radiated Spurious Emission (Tx Ch.:H)

UL Apex Co., Ltd.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Sharp Corporation
Equipment : 3G(UMTS)/GSM900/1800/1900 GRPS phone/ Bluetooth Enable
Model : 770SH
Sample No. : 004401/11/015605/2
Power : DC 4.0V (AC Charger: AC 120V / 60Hz)
Mode : Bluetooth Tx 2480MHz, DH5, PRBS9
Remarks : Hor X, Ver Z-axis

REPORT NO : 26HE0199-HO
REGULATION : Fcc Part15 Subpart C 15.247(d) / RSS-210
TEST DISTANCE : 3m / 1m
DATE : 04/07/2006
TEMPERATURE : 24deg.C
HUMIDITY : 30%
ENGINEER : Yasuyuki Fukui

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	2483.5	58.7	59.3	30.4	32.4	3.5	0.0	60.2	60.8	74.0	13.8	13.2
2	4960.0	41.9	41.8	36.6	31.8	4.8	1.4	52.9	52.8	74.0	21.2	21.3
3	5782.0	45.5	45.4	36.6	31.7	5.1	1.4	56.9	56.8	74.0	17.1	17.2
4	7440.0	42.0	42.0	38.2	31.9	5.7	1.1	55.1	55.1	74.0	18.9	18.9
5	9920.0	42.9	42.9	36.5	32.0	6.7	1.2	55.4	55.4	74.0	18.7	18.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12400.0	42.0	42.3	40.5	30.7	8.0	1.6	51.8	52.1	74.0	22.2	21.9
7	14880.0	42.0	42.7	42.8	31.0	8.8	0.9	54.0	54.7	74.0	20.0	19.3
8	17360.0	44.1	43.9	46.2	42.0	6.8	0.0	45.5	45.3	74.0	28.5	28.7
9	19840.0	44.3	41.8	39.1	40.0	7.0	0.0	40.8	38.3	74.0	33.2	35.7
10	22320.0	42.5	42.7	39.5	39.9	7.7	0.0	40.3	40.5	74.0	33.7	33.5
11	24800.0	44.6	44.0	39.3	40.2	8.1	0.0	42.2	41.6	74.0	31.8	32.4

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	2483.5	43.2	44.4	30.4	32.4	3.5	0.0	44.7	45.9	54.0	9.3	8.1
2	4960.0	30.6	29.9	36.6	31.8	4.8	1.4	41.6	40.9	54.0	12.5	13.2
3	5782.0	29.4	30.1	36.6	31.7	5.1	1.4	40.8	41.5	54.0	13.2	12.5
4	7440.0	31.3	29.7	38.2	31.9	5.7	1.1	44.4	42.8	54.0	9.6	11.2
5	9920.0	32.8	31.2	36.5	32.0	6.7	1.2	45.3	43.7	54.0	8.8	10.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12400.0	29.0	29.1	40.5	30.7	8.0	1.6	38.8	38.9	54.0	15.2	15.1
7	14880.0	28.8	28.8	42.8	31.0	8.8	0.9	40.8	40.8	54.0	13.2	13.2
8	17360.0	30.5	30.6	46.2	42.0	6.8	0.0	31.9	32.0	54.0	22.1	22.0
9	19840.0	28.8	28.3	39.1	40.0	7.0	0.0	25.3	24.8	54.0	28.7	29.2
10	22320.0	29.4	29.4	39.5	39.9	7.7	0.0	27.2	27.2	54.0	26.8	26.8
11	24800.0	30.6	30.6	39.3	40.2	8.1	0.0	28.2	28.2	54.0	25.8	25.8

*1) Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) =$

9.54 dB

*2) In the frequency over the three harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

UL Apex Co., Ltd.

Head Office EMC Lab.

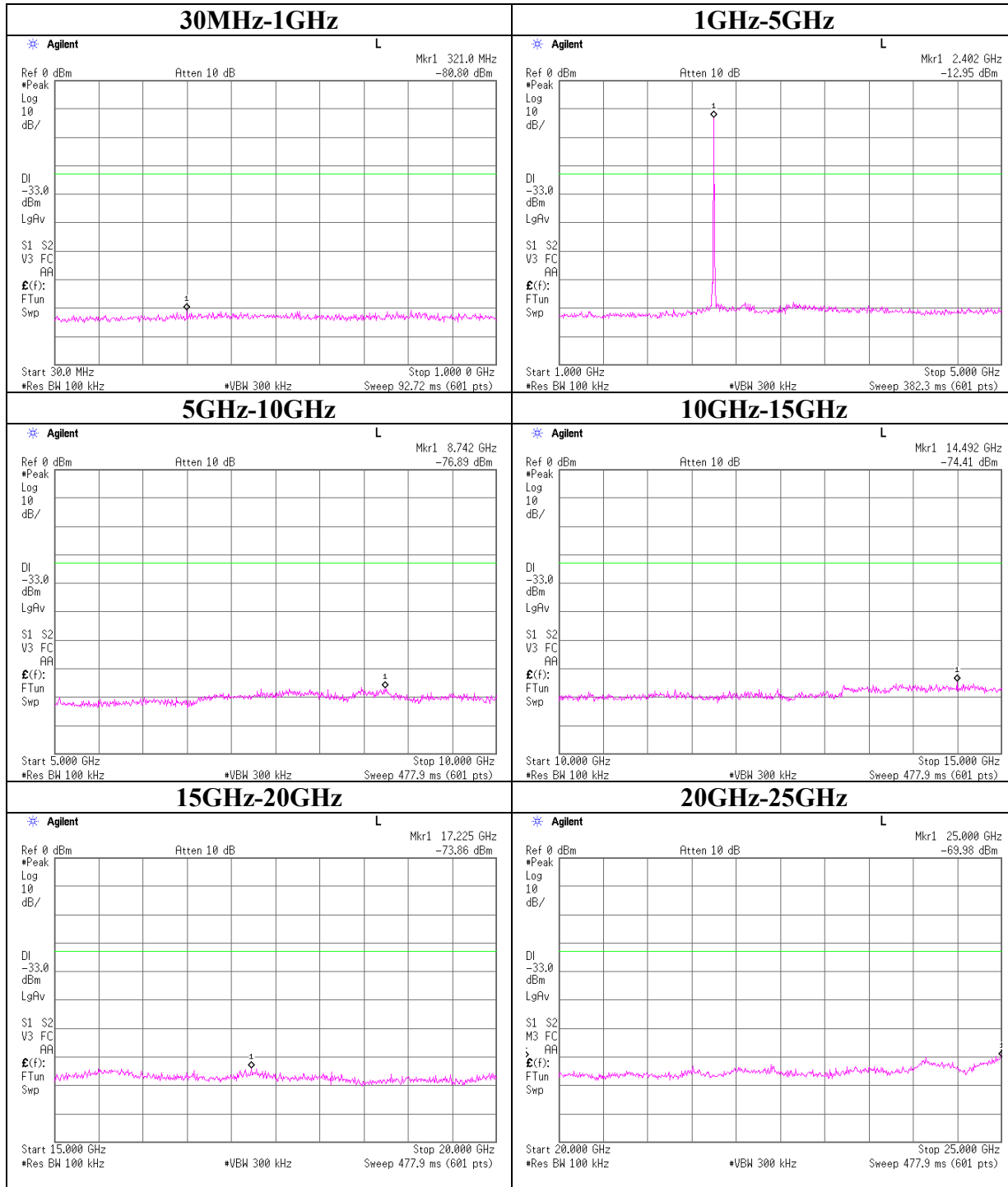
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

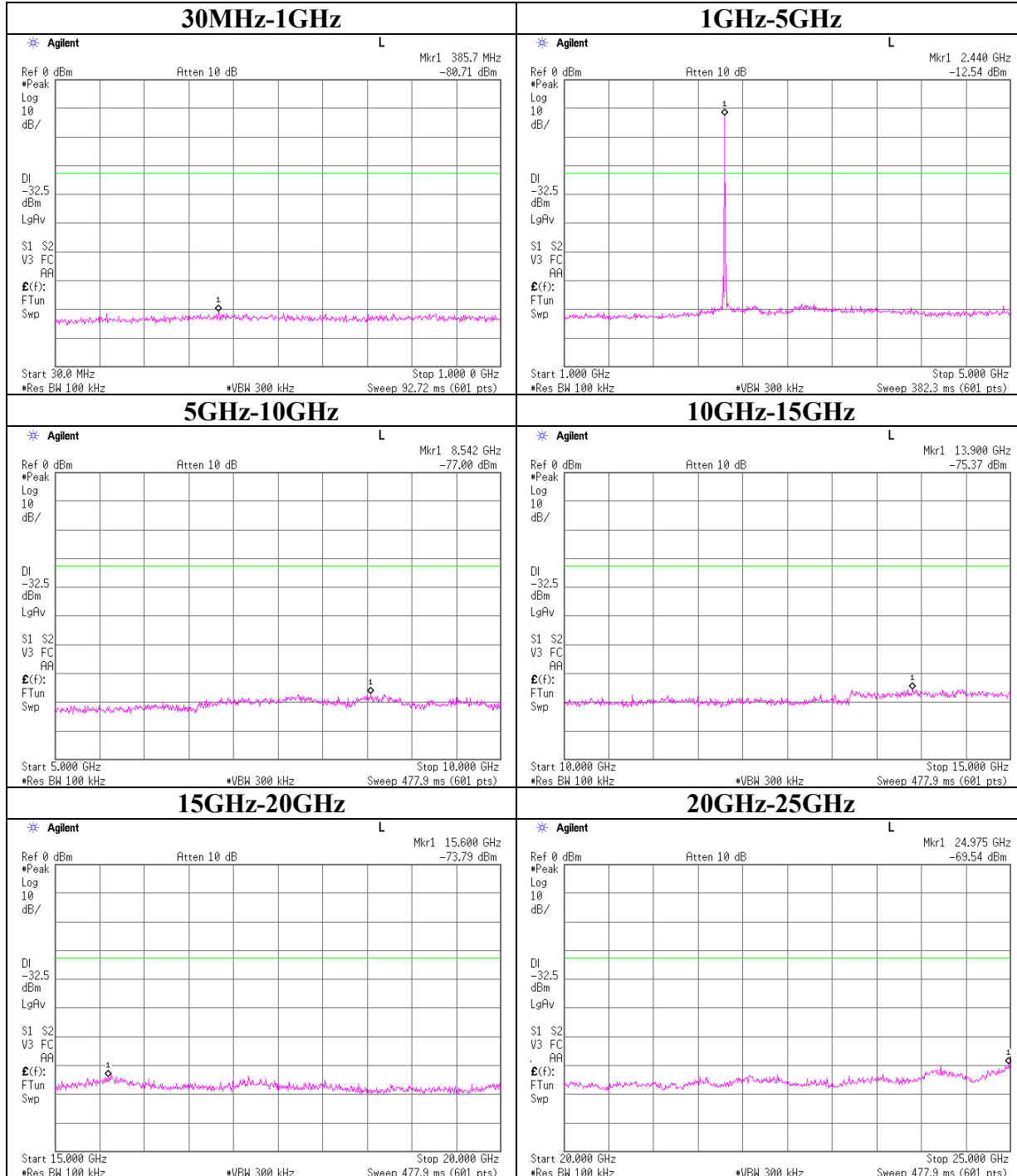
MF060b(01.06.05)

Conducted Spurious Emission
Ch:Low

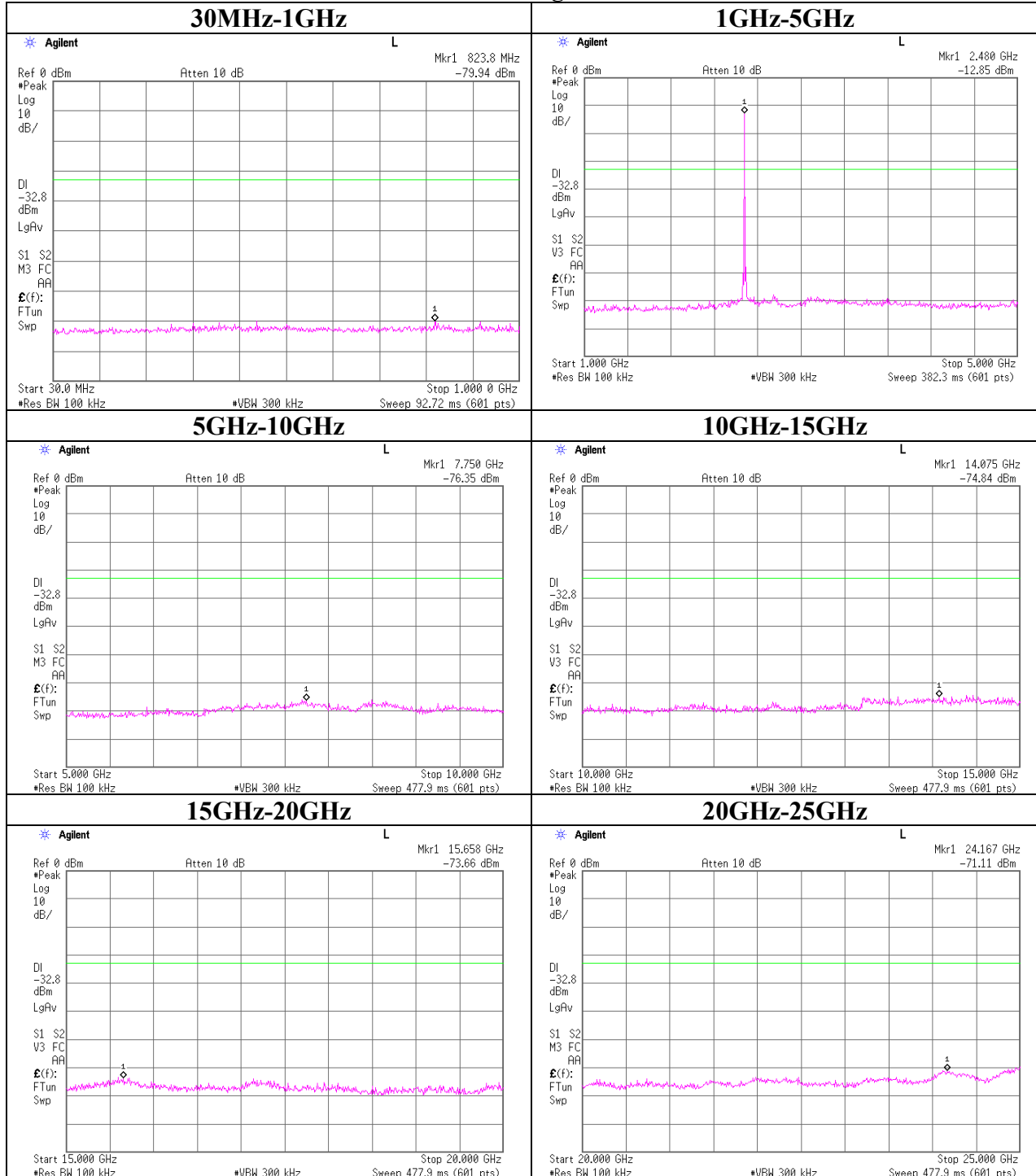


Conducted Spurious Emission

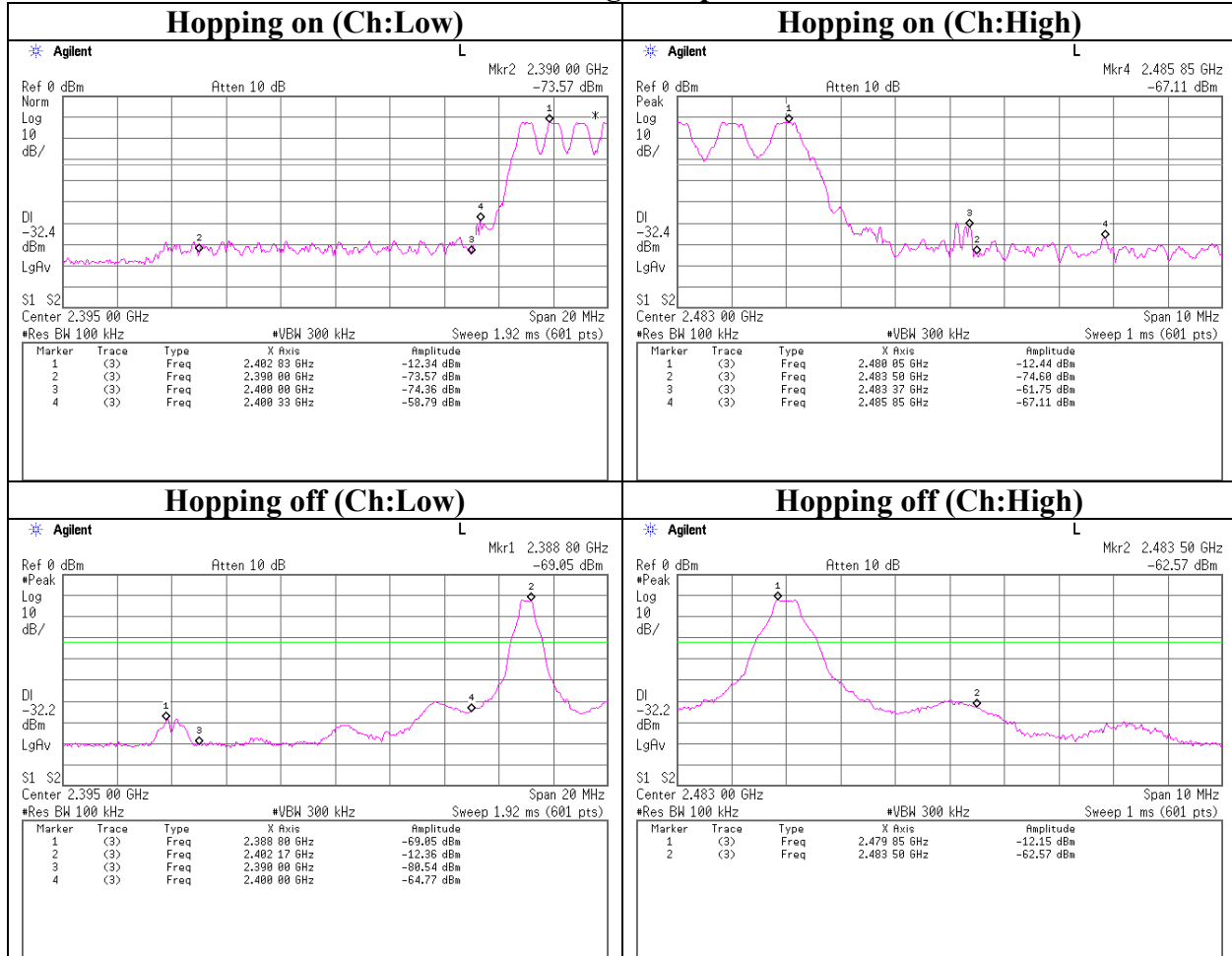
Ch:Mid



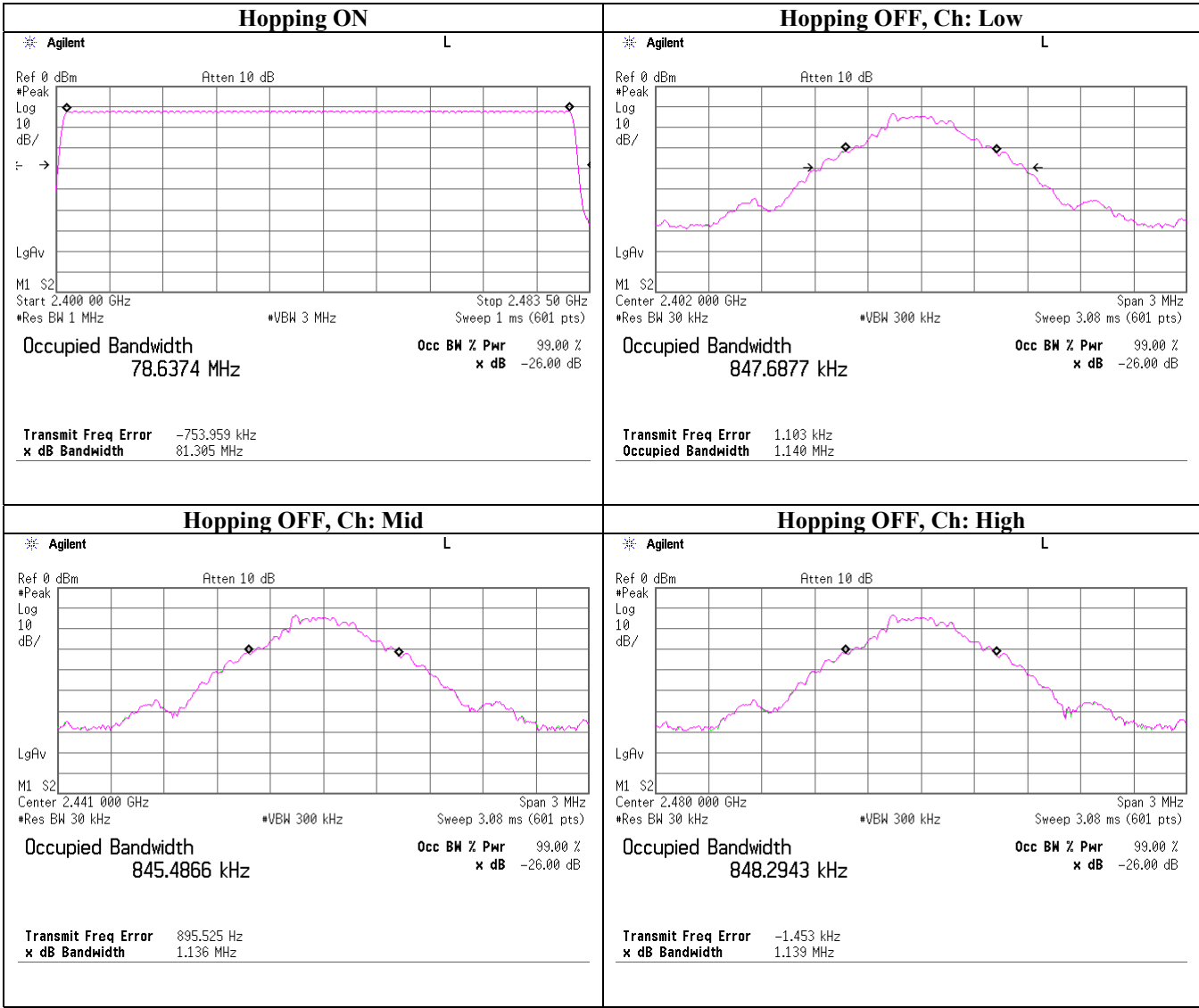
Conducted Spurious Emission
Ch:High



Conducted Spurious Emission Band Edge compliance

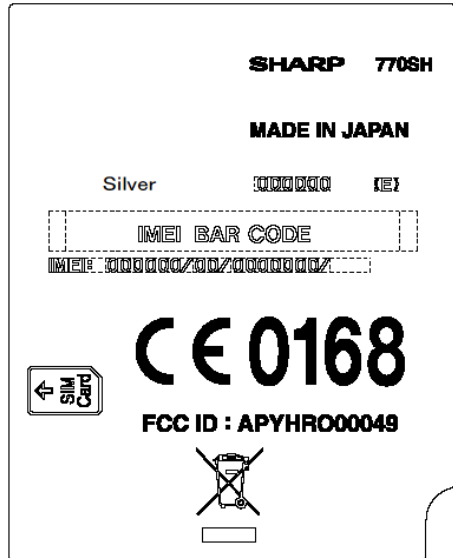


99% Occupied Bandwidth



APPENDIX 4: Label

< 3G(UMTS) / GSM 900/1800/1900 GPRS phone / Bluetooth Enable MODEL:770SH >



< RECHARGEABLE LITHIUM-ION BATTERY >

Japan Product

- ◁ RECHARGEABLE LITHIUM-ION BATTERY
MODEL : XN-1BT77
3.7V 820mAh
- ⊕
- Ⓢ **WARNING** DO NOT SHORT CIRCUIT.
MAY EXPLODE IF DISPOSED IN FIRE.
TO BE CHARGED WITH SPECIFIED
CHARGER. DO NOT DISASSEMBLE.
- ⊖
- ATTENTION** NE PAS COURT
CIRCUITER. NE PAS BRULER
MEME APRES USAGE, RISQUE
D'EXPLOSION. A RECHARGER
UNIQUEMENT AVEC UN CHARGEUR
D'ORIGINE. NE PAS DEMONTER
LA BATTERIE.
- SHARP CORPORATION
MADE IN JAPAN
FABRIQUÉ AU JAPON
- CE
- ◁

China Product

- ◁ RECHARGEABLE LITHIUM-ION BATTERY
MODEL : XN-1BT77
3.7V 820mAh
- ⊕
- Ⓢ **WARNING** DO NOT SHORT CIRCUIT.
MAY EXPLODE IF DISPOSED IN FIRE.
TO BE CHARGED WITH SPECIFIED
CHARGER. DO NOT DISASSEMBLE.
- ⊖
- ATTENTION** NE PAS COURT
CIRCUITER. NE PAS BRULER
MEME APRES USAGE, RISQUE
D'EXPLOSION. A RECHARGER
UNIQUEMENT AVEC UN CHARGEUR
D'ORIGINE. NE PAS DEMONTER
LA BATTERIE.
- SHARP CORPORATION
CELL ORIGIN JAPAN /
FINISHED IN CHINA
ORIGINE CELLULE JAPON /
FINI EN CHINE
- CE
- ◁

UL Apex Co., Ltd.

Head Office EMC Lab.

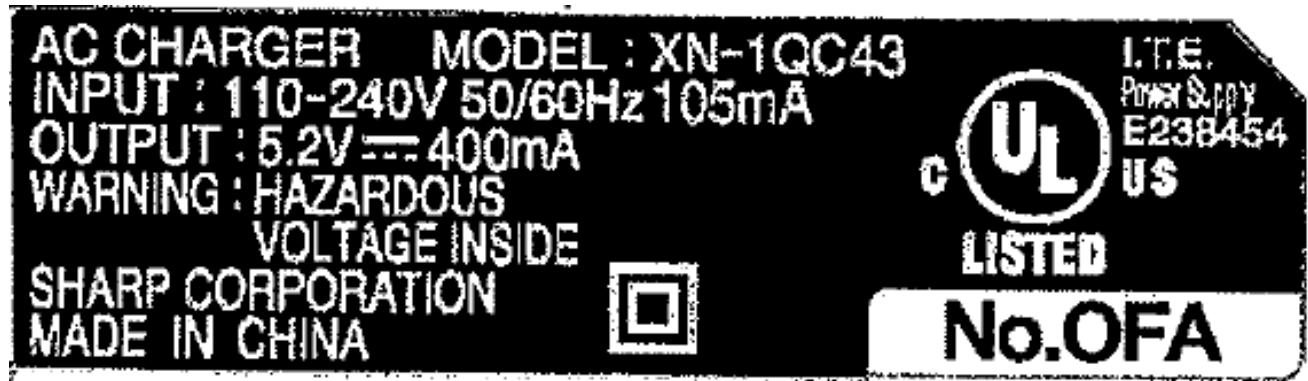
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(01.06.05)

<AC Charger/ MODEL:XN-1QC43>



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(01.06.05)