



RADIO TEST REPORT

Test Report No. : 28EE0073-HO

Applicant : Sharp Corporation
Type of Equipment : WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable
Model No. : 922SH
FCC ID : APYHRO00063
Test standard : FCC Part 15 Subpart C 2007
Section 15.207, Section 15.247
Test Result : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested 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: December 12 to 14, 2007

Tested by:

Norihisa Hashimoto
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://uljapan.co.jp/emc/nvlap.htm>

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MF060b (18.06.07)

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SECTION 1: Client information

Company Name : Sharp Corporation
Address : 2-13-1 Iida Hachihonmatsu HigashiHiroshima-City, Hiroshima-pref.
739-0192 Japan
Telephone Number : +81-82-420-1592
Facsimile Number : +81-82-420-1852
Contact Person : Houyuu Sugimoto

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

2.1 Identification of E.U.T.

Type of Equipment : WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone /
Bluetooth enable
Model No. : 922SH
Serial No. : 004401/11/092473/1 (for Conducted Emission and Radiated Emission)
004401/11/092624/9 (for Antenna Terminal Conducted test)
Rating : AC120V
Country of Manufacture : Japan
Receipt Date of Sample : December 12, 2007
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT : No modification by the test lab.

2.2 Product Description

Model No. 922SH (referred to as the EUT in this report) is the WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable. The EUT has the function that Bluetooth wireless technology interface for establishing contact and transmitting data with certain devices.

Clock frequencies in the system : CPU:26MHz, RTC:32.768KHz

[Bluetooth Specification (Bluetooth Ver.2.0 without EDR function)]

Equipment Type : Transceiver
Frequency of Operation : 2402-2480MHz
Bandwidth & Channel Spacing : 1MHz & 1MHz / CH
Modulation : FHSS
Power Supply (inner) : DC 2.9V
Antenna Type : Internal Antenna
Antenna Gain : 0dBi

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C: 2007
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz

FCC 15.31 (e)

The EUT provides the stable voltage(DC2.9V) constantly to RF Module regardless of 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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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	[QP] 17.5dB, 1.79988MHz, L [AV] 23.7dB, 0.53840MHz, N	Complied			
		IC: RSS-Gen 7.2.2	IC: RSS-Gen 7.2.2							
2	Carrier Frequency Separation	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(a)(1)	Conducted	N/A	See data.	Complied			
		IC: -	IC: RSS-210 A8.1 (b)							
3	20dB Bandwidth	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(a)(1)	Conducted	N/A		See data.	Complied		
		IC: -	IC: RSS-210 A8.1 (a)							
4	Number of Hopping Frequency	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(a)(1)(iii)	Conducted	N/A			See data.	Complied	
		IC: -	IC: RSS-210 A8.1 (d)							
5	Dwell time	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(a)(1)(iii)	Conducted	N/A				See data.	Complied
		IC: -	IC: RSS-210 A8.1 (d)							
6	Maximum Peak Output Power	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(b)(1)	Conducted	N/A	See data.				Complied
		IC: RSS-Gen 4.8	IC: RSS-210 A8.4 (2)							
7	Band Edge Compliance	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(d)	Conducted	N/A		See data.			Complied
		IC: -	IC: RSS-210 A8.5							
8	Spurious Emission	FCC: FCC Public Notice DA 00-705	FCC: Section 15.247(d)	Conducted/ Radiated	N/A			See data.		Complied
		IC: RSS-Gen 4.9 RSS-Gen 4.10	IC: RSS-210 A8.5 RSS-Gen 7.2.1 and 7.2.3							

Note: UL Japan, Inc.'s EMI Work Procedures No.QPM05 and QPM15.

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

*ANSI C63.4: 2003 is also referred, in case any questions arise about test procedure.

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3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	IC: RSS-Gen 4.6.1	IC: RSS-Gen 4.6.1	Conducted	N/A	N/A	N/A

3.4 Uncertainty

EMI

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Test room	Conducted emission	Radiated emission (10m*)				Radiated emission (3m*)			Radiated emission (3m*)	
	150kHz-30MHz	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	9kHz-30MHz	30MHz-300MHz	300MHz-1GHz	1GHz-18GHz	18GHz-40GHz	
No.1 semi-anechoic chamber	±3.7dB	±3.1dB	±4.7dB	±4.4dB	±3.2dB	±3.7dB	±4.4dB	±5.9dB	±6.1dB	
No.2 semi-anechoic chamber	±3.7dB	-	-	-	±3.2dB	±4.3dB	±3.9dB	±5.9dB	±6.1dB	
No.3 semi-anechoic chamber	±3.7dB	-	-	-	±3.2dB	±4.2dB	±4.4dB	±5.9dB	±6.1dB	
No.4 semi-anechoic chamber	±3.7dB	-	-	-	±3.2dB	±4.2dB	±4.4dB	±5.9dB	±6.1dB	

*10m/3m = Measurement distance

Conducted emission test

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

Radiated emission test(3m and/or 10m)

[Tx] The data listed in this report meets the limits unless the uncertainty is taken into consideration.

[Rx] 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 for this test is ±3.0dB.

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3.5 Test Location

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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	IC4247	19.2 x 11.2 x 7.7m	7.0 x 6.0m	No.1 Power source room
No.2 semi-anechoic chamber	655103	IC4247-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	148738	IC4247-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.3 Preparation room
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	134570	IC4247-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.4 Preparation room
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	6.0 x 6.0m	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	4.75 x 5.4 m	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	4.75 x 4.15 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	-
No.9 measurement room	-	-	8.0 x 4.5 x 2.8m	N/A	-
No.10 measurement room	-	-	2.6 x 2.8 x 2.5m	2.4 x 2.4m	-
No.11 measurement room	-	-	3.1 x 3.4 x 3.0m	2.4 x 3.4m	-

* 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.3 and No.4 shielded rooms.

3.6 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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

4.1 Operating Mode(s)

The mode(s)

Test	Mode	Tested frequency
Conducted Emission	Transmitting (Tx), Payload: PRBS9	2402MHz 2441MHz 2480MHz
	Receiving (Rx)	2441MHz
Carrier Frequency Separation	Transmitting (Tx)(Hopping On)/Inquiry, Payload: PRBS9	2402MHz 2441MHz 2480MHz
20dB Bandwidth Maximum Peak Output Power	Transmitting (Tx)(Hopping Off)/Inquiry, Payload: PRBS9	2402MHz 2441MHz 2480MHz
Number of Hopping Frequency	Transmitting (Tx)(Hopping On)/Inquiry, Payload: PRBS9	-
Dwell time	Transmitting (Tx)(Hopping On)/Inquiry, Payload: PRBS9 -DH1 -DH3 -DH5	-
Spurious Emission (Conducted/Radiated)	Transmitting (Tx), DH5, Payload: PRBS9	2402MHz 2441MHz 2480MHz
	Receiving (Rx), DH5	2441MHz
Band Edge Compliance (Conducted)	Transmitting (Tx), DH5, Payload: PRBS9 -Hopping ON	2402MHz 2480MHz
	-Hopping OFF	
(Radiated)	Transmitting (Tx), DH5	2402MHz 2480MHz
99% Occupied Bandwidth	Transmitting (Tx), DH5, Payload: PRBS9	2402MHz
	-Hopping ON	2441MHz
	-Hopping OFF	2480MHz

As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload (except Dwell time test).

Remarks: Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT. However, the limit level 125mWof AFH mode was used for the test.

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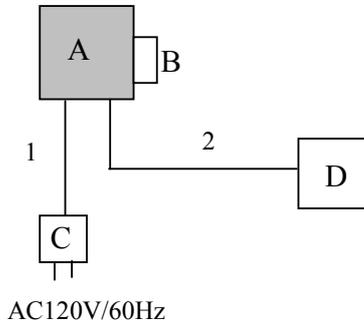
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4.2 Configuration and peripherals



- * Cabling and setup were taken into consideration and test data was taken under worse case conditions.
- * Antenna Terminal Conducted test was performed with the EUT fully charged.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	922SH	004401/11/092473/1 *2) 004401/11/092624/9 *3)	Sharp Corporation	EUT
B	Lithium-Ion Battery	SHBBG1	-	Sharp Corporation	
C	AC CHARGER*1)	ZTDAA1	QDA	Sharp Corporation	-
D	Stereo Handsfree	RPHoHA019AF SB	-	Sharp Corporation	-

- *1) Used for Conducted Emission and Radiated Emission tests
- *2) Used for Radiated Emission and Antenna Terminal Conducted tests
- *3) Used for Conducted Emission test

List of cables used

No.	Name	Length (m)	Shield	
			Cable	Connector
1	Cable for AC CHARGER *1)	1.5	Unshielded	Unshielded
2	Cable for Stereo Handsfree	1.7	Unshielded	Unshielded

- *1) Used for Conducted Emission and Radiated Emission tests

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 : 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. The following spectrum analyzer setting was used:

- RBW: 100kHz
- VBW: 300kHz
- Sweep: Auto
- Detector: Peak
- Trace: Max Hold

Test data : APPENDIX 2
Test result : Pass

[Radiated]

Test Procedure

EUT was placed on a urethane platform of nominal size, 1.0m by 0.5m, 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 / Table 2 of RSS-210 2.7 (IC) and outside the restricted band of FCC15.205 / Table 1 of RSS-210 2.7 (IC).

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

- 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.
The following spectrum analyzer setting was used:

- Span: 3MHz
- RBW: 30kHz
- VBW: 30kHz
- Sweep: Auto
- Detector: Peak
- Trace: Max Hold

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.
The following spectrum analyzer setting was used:

- Span: 3MHz
- RBW: 100kHz
- VBW: 300kHz
- Sweep: Auto
- Detector: Peak
- Trace: Max Hold

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.
The following spectrum analyzer setting was used:

- Span: 30MHz
- RBW: 300kHz
- VBW: 1MHz
- Sweep: Auto
- Detector: Peak
- Trace: Max Hold

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.
The following spectrum analyzer setting was used:

- Span: Zero Span
- RBW: 1MHz
- VBW: 1MHz
- Sweep: as necessary to capture the entire dwell time per hopping channel
- Detector: function peak
- Trace: Max Hold

Test data : APPENDIX 2
Test result : Pass

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 (Horizontal: Open Z-axis/ Vertical:Close Z-axis)

This page has been submitted for a separate exhibit.

APPENDIX 2: Data of EMI test

**Conducted Emission
Tx, Ch. Low**

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2007/12/13

Company	: Sharp Corporation	Report No.	: 28EE0073-HO
Kind of EUT	: WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	Power	: AC 120V / 60Hz
Model No.	: 922SH	Temp./Humi.	: 22deg. C / 42%
Serial No.	: 004401/11/092473/1	Operator	: Norihisa Hashimoto
Mode / Remarks	: Transmitting 2402MHz		

LIMIT : FCC15.207 OP
FCC15.207 AV

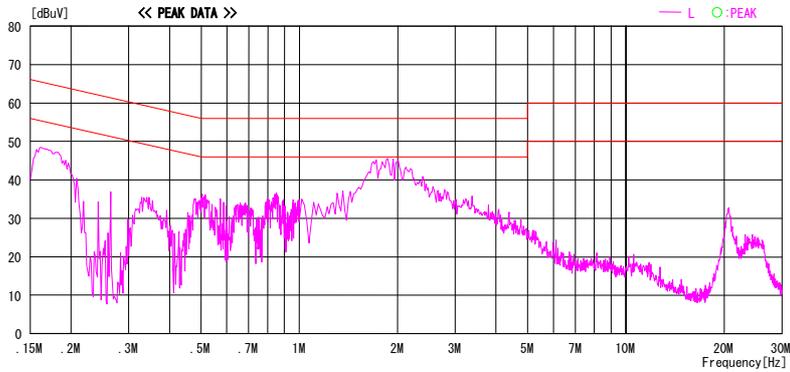
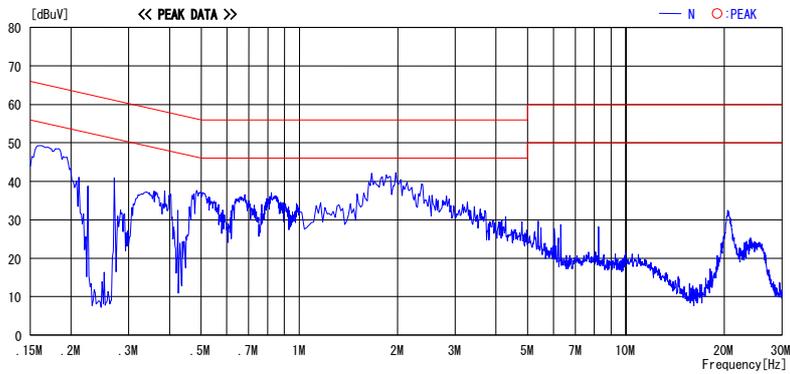


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuA]=READING[dBuV]+C.F[dB] (Probe factor+CABLE LOSS)
Except for the above table: adequate margin data below the limits.

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Conducted Emission

Tx, Ch. Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/12/13

Company	: Sharp Corporation	Report No.	: 28EE0073-HO
Kind of EUT	: WCDMA & Tr1-band (900/1800/1900) GSM Dual mode	Power	: AC 120V / 60Hz
Model No.	: Mobile Phone / Bluetooth enable	Temp./Humi.	: 22deg.C / 42%
Serial No.	: 922SH	Operator	: Norihisa Hashimoto
Mode / Remarks	: 004401/11/092473/1		
	: Transmitting 2441MHz		

LIMIT : FCC15.207 QP
 FCC15.207 AV

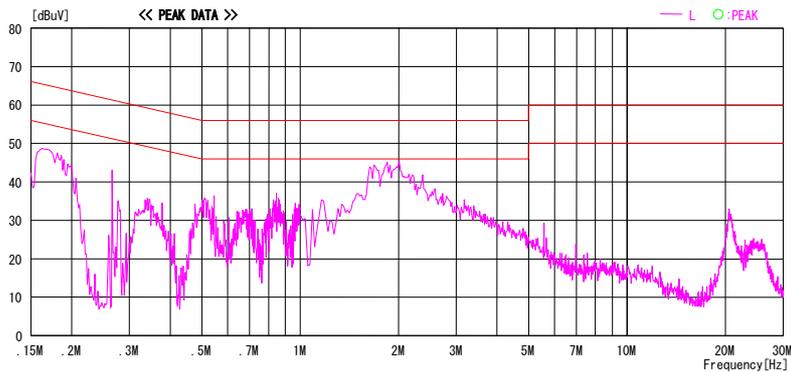
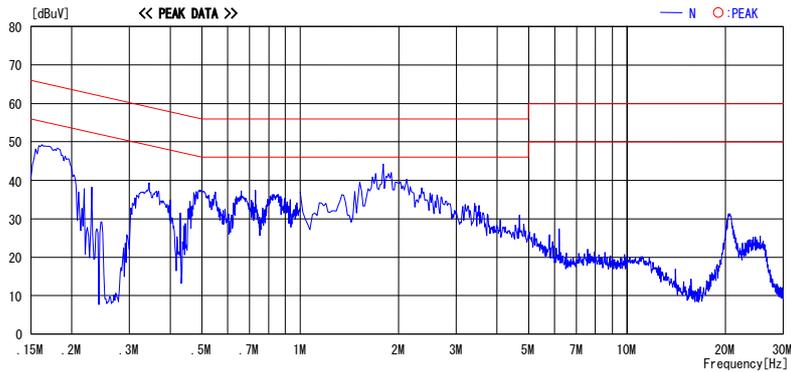


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuA]=READING[dBuV]+C.F[dB] (Probe factor+CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

Conducted Emission

Tx, Ch. High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/12/13

Company	: Sharp Corporation	Report No.	: 28EE0073-HO
Kind of EUT	: WCDMA & TrF-band (900/1800/1900) GSM Dual mode	Power	: AC 120V / 60Hz
Model No.	: Mobile Phone / Bluetooth enable	Temp./Humi.	: 22deg.C / 42%
Serial No.	: 922SH	Operator	: Norihisa Hashimoto
Serial No.	: 004401/11/092473/1		
Mode / Remarks	: Transmitting 2480MHz		

LIMIT : FCC15.207 QP
 FCC15.207 AV

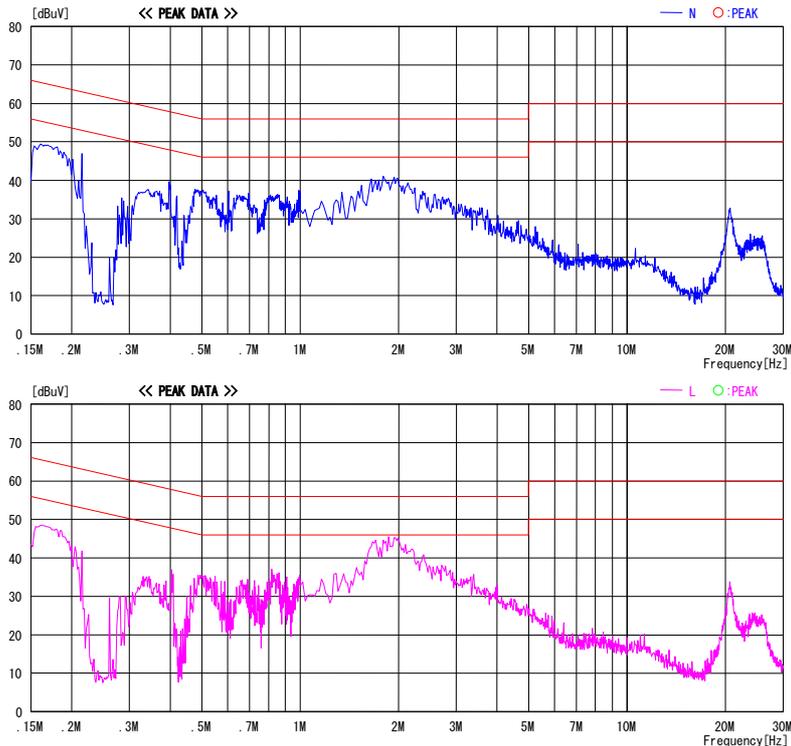


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuA] = READING [dBuV] + C.F. [dB] (Probe factor + CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

Conducted Emission

Rx, Ch. Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/12/13

Company	: Sharp Corporation	Report No.	: 28EE0073-HO
Kind of EUT	: WCDMA & Tr1-band (900/1800/1900) GSM Dual mode	Power	: AC 120V / 60Hz
Model No.	: 922SH	Temp./Humi.	: 22deg.C / 42%
Serial No.	: 004401/11/092473/1	Operator	: Norihisa Hashimoto
Mode / Remarks	: Receiving 2441MHz		

LIMIT : FCC15.207 QP
FCC15.207 AV

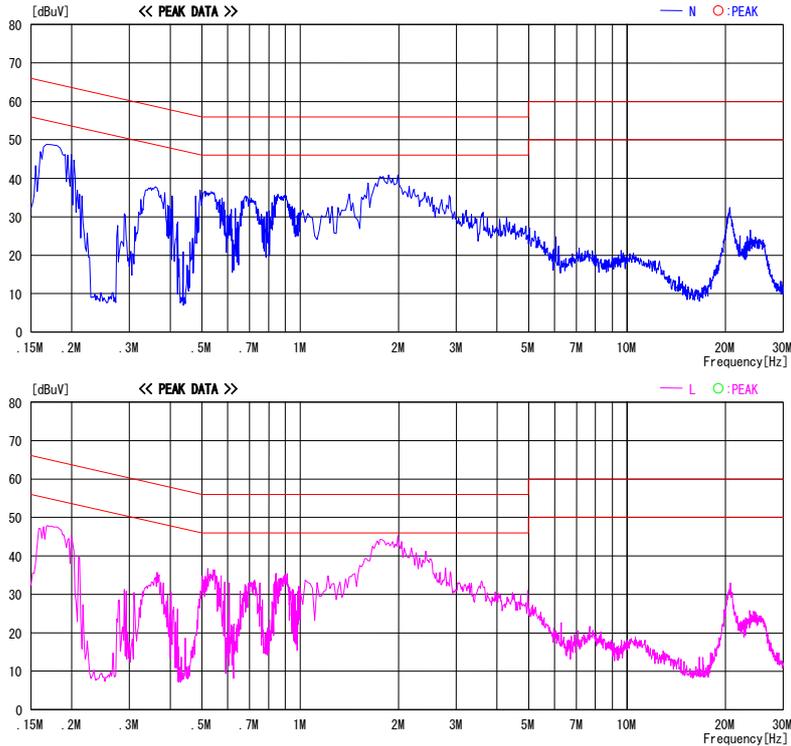


CHART: WITH FACTOR. Peak hold data. CALCULATION: RESULT [dBuA] = READING [dBuV] + C. F. [dB] (Probe factor + CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

Conducted Emission

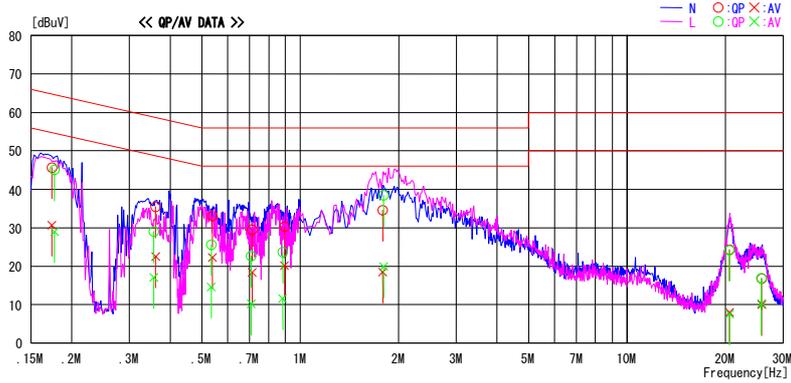
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DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/12/13

Company : Sharp Corporation
 Kind of EUT : WCDMA & Tri-band (900/1800/1900) GSM Dual mode
 Model No. : Mobile Phone / Bluetooth enable
 Serial No. : 922SH
 Mode / Remarks : 004401/11/092473/1
 Report No. : 28EE0073-HO
 Power : AC 120V / 60Hz
 Temp./Humi. : 22deg.C / 42%
 Operator : Norihisa Hashimoto

LIMIT : FCC15.207 QP
 FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.17382	45.4	30.4	0.3	45.7	30.7	64.8	54.8	19.1	24.1	N
0.17714	44.8	28.7	0.3	45.1	29.0	64.6	54.6	19.5	25.6	L
0.36109	35.2	22.2	0.3	35.5	22.5	58.7	48.7	23.2	26.2	N
0.35619	28.7	16.8	0.3	29.0	17.1	58.8	48.8	29.8	31.7	L
0.53419	25.3	14.3	0.3	25.6	14.6	56.0	46.0	30.4	31.4	L
0.53840	32.8	22.0	0.3	33.1	22.3	56.0	46.0	22.9	23.7	N
0.71253	29.2	18.1	0.3	29.5	18.4	56.0	46.0	26.5	27.6	N
0.70754	22.3	9.9	0.3	22.6	10.2	56.0	46.0	33.4	35.8	L
0.89514	29.9	19.8	0.4	30.3	20.2	56.0	46.0	25.7	25.8	N
0.88314	23.3	11.2	0.4	23.7	11.6	56.0	46.0	32.3	34.4	L
1.78788	34.2	18.1	0.4	34.6	18.5	56.0	46.0	21.4	27.5	N
1.79988	38.1	19.5	0.4	38.5	19.9	56.0	46.0	17.5	26.1	L
20.58400	22.5	5.9	1.7	24.2	7.6	60.0	50.0	35.8	42.4	L
25.77600	14.9	8.3	2.0	16.9	10.3	60.0	50.0	43.1	39.7	L
20.57141	22.6	6.3	1.7	24.3	8.0	60.0	50.0	35.7	42.0	N
25.81600	14.8	8.0	2.0	16.8	10.0	60.0	50.0	43.2	40.0	N

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuA] = READING [dBuV] + C.F [dB] (Probe factor + CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

*The test result is round off to one or two decimal places, so some differences might be observed.

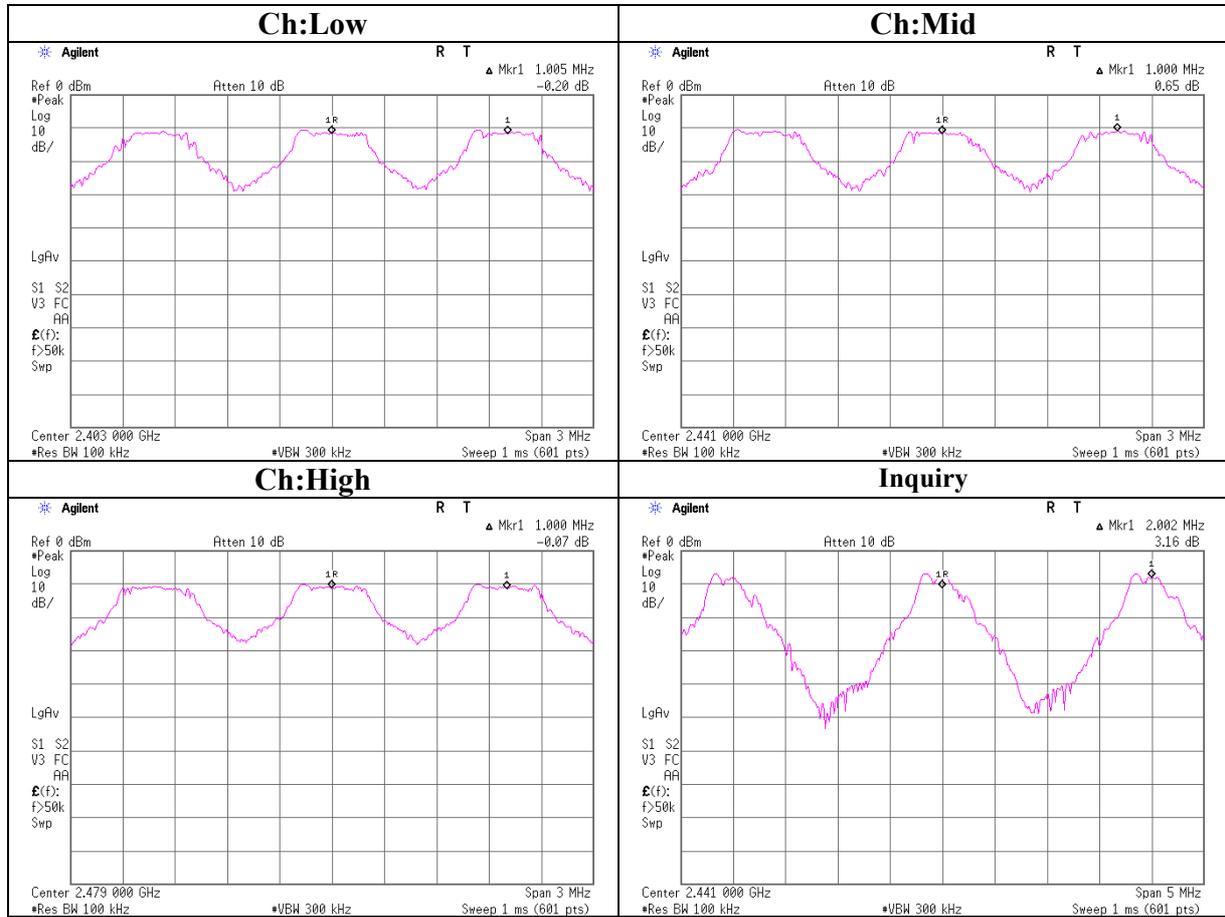
Carrier Frequency Separation

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room

Company	: Sharp Corporation	Test Report No.	: 28EE0073-HO
Equipment	: WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	Regulation	: FCC15.247(a)(1)/RSS-210A8.1(b)
Model No.	: 922SH	Test distance	: -
Serial No.	: 004401/11/092624/9	Date	: 12/14/2007
Power	: DC3.7V	Temperature	: 23deg.C
Mode	: Tx(Hopping on)/Inquiry	Humidity	: 40%
		Engineer	: Norihisa Hashimoto

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.005	>two-thirds of the 940kHz (20dB Bandwidth) or 25[kHz](whichever is greater)
Mid	2441.0	1.000	>two-thirds of the 945kHz (20dB Bandwidth) or 25[kHz](whichever is greater)
High	2480.0	1.000	>two-thirds of the 945kHz (20dB Bandwidth) or 25[kHz](whichever is greater)
Inquiry	2441.0	2.002	>two-thirds of the 825kHz (20dB Bandwidth) or 25[kHz](whichever is greater)

Carrier Frequency Separation



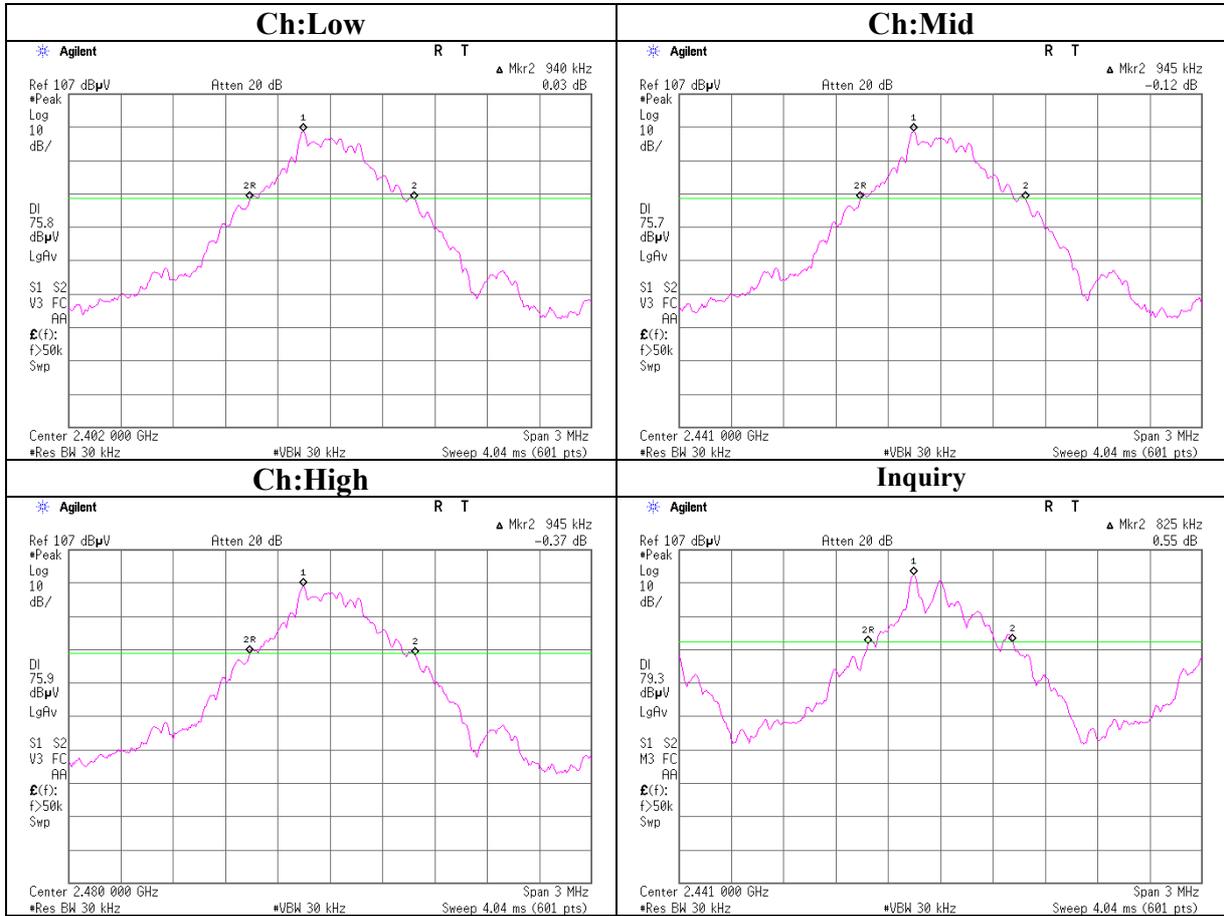
20dB Bandwidth

Company : Sharp Corporation
Equipment : WCDMA & Tri-band (900/1800/1900)
 GSM Dual mode Mobile Phone / Bluetooth enable
Model No. : 922SH
Serial No. : 004401/11/092624/9
Power : DC3.7V
Mode : Tx (Hopping off) /Inquiry

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room
Test Report No. : 28EE0073-HO
Regulation : FCC15.247(a)(1)/RSS-210A8.1(a)
Test distance : -
Date : 12/14/2007
Temperature : 23deg.C
Humidity : 40%
Engineer : Norihisa Hashimoto

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.940	-
Mid	2441.0	0.945	-
High	2480.0	0.945	-
Inquiry	2441.0	0.825	-

20dB Bandwidth



Number of Hopping Frequency

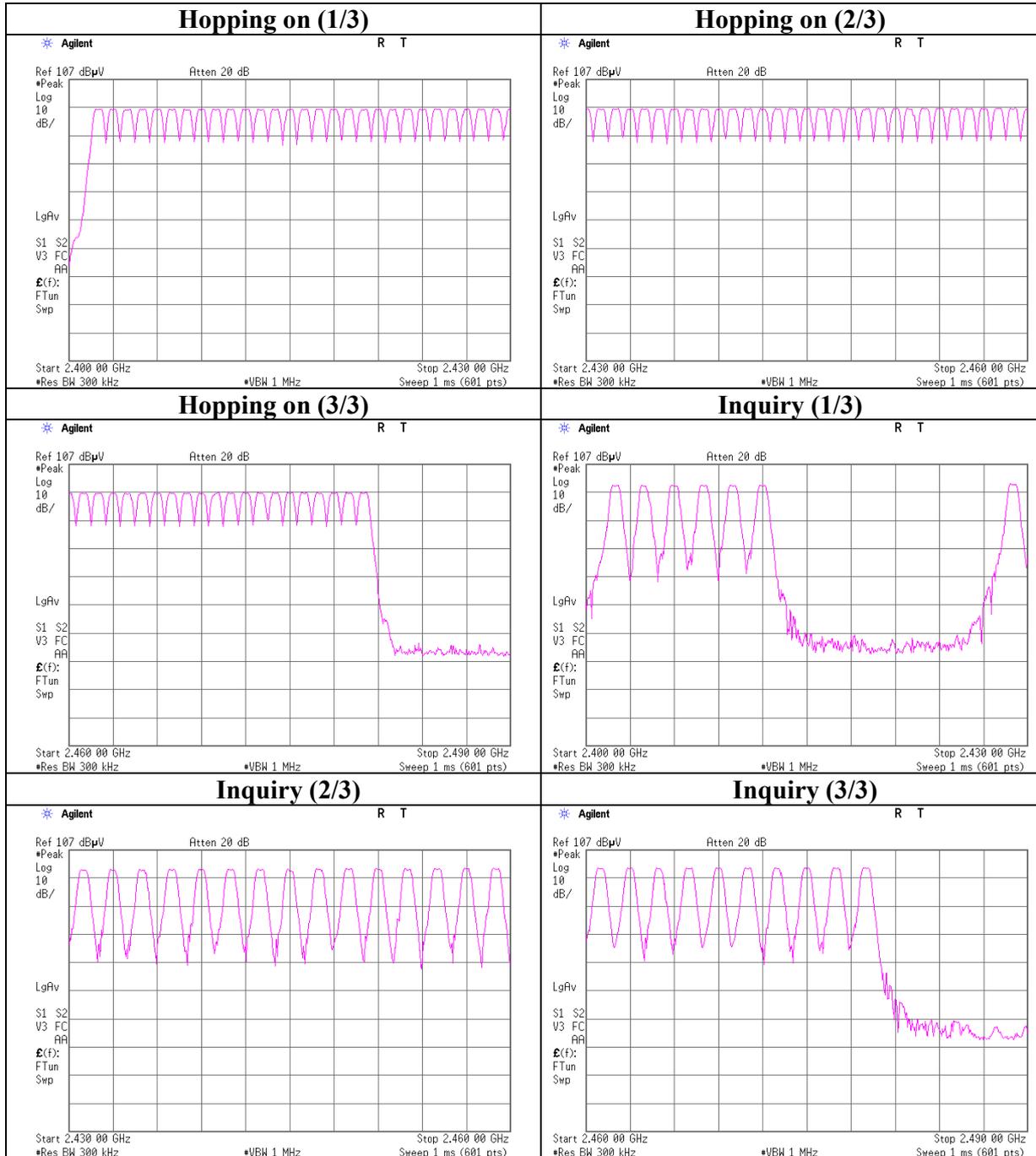
Company : Sharp Corporation
Equipment : WCDMA & Tri-band (900/1800/1900)
 GSM Dual mode Mobile Phone / Bluetooth enable
Model No. : 922SH
Serial No. : 004401/11/092624/9
Power : DC3.7V
Mode : Tx (Hopping on) /Inquiry

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room
Test Report No. : 28EE0073-HO
Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
Test distance : -
Date : 12/14/2007
Temperature : 23deg.C
Humidity : 40%
Engineer : Norihisa Hashimoto

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

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

Number of Hopping Frequency



Dwell time

	UL Japan, Inc.
	Head Office EMC Lab. No.7 Shielded Room
Company : Sharp Corporation	Test Report No. : 28EE0073-HO
Equipment : WCDMA & Tri-band (900/1800/1900)	Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
GSM Dual mode Mobile Phone / Bluetooth enable	Test distance : -
Model No. : 922SH	Date : 12/14/2007
Serial No. : 004401/11/092624/9	Temperature : 23deg.C
Power : DC3.7V	Humidity : 40%
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	51.4 times / 5 sec. x 31.6 sec. = 325 times	0.409	133	400
DH3	24.2 times / 5 sec. x 31.6 sec. = 153 times	1.670	256	400
DH5	14.8 times / 5 sec. x 31.6 sec. = 94 times	2.925	275	400
Inquiry	100.0 times / 1 sec. x 12.8 sec. = 1280 times	0.115	148	400

*DH1 / 1:50 2:53 3:52 4:50 5:52 = 51.4 times

*DH3 / 1:25 2:23 3:25 4:25 5:23 = 24.2 times

*DH5 / 1:12 2:14 3:18 4:15 5:15 = 14.8 times

UL Japan, Inc.

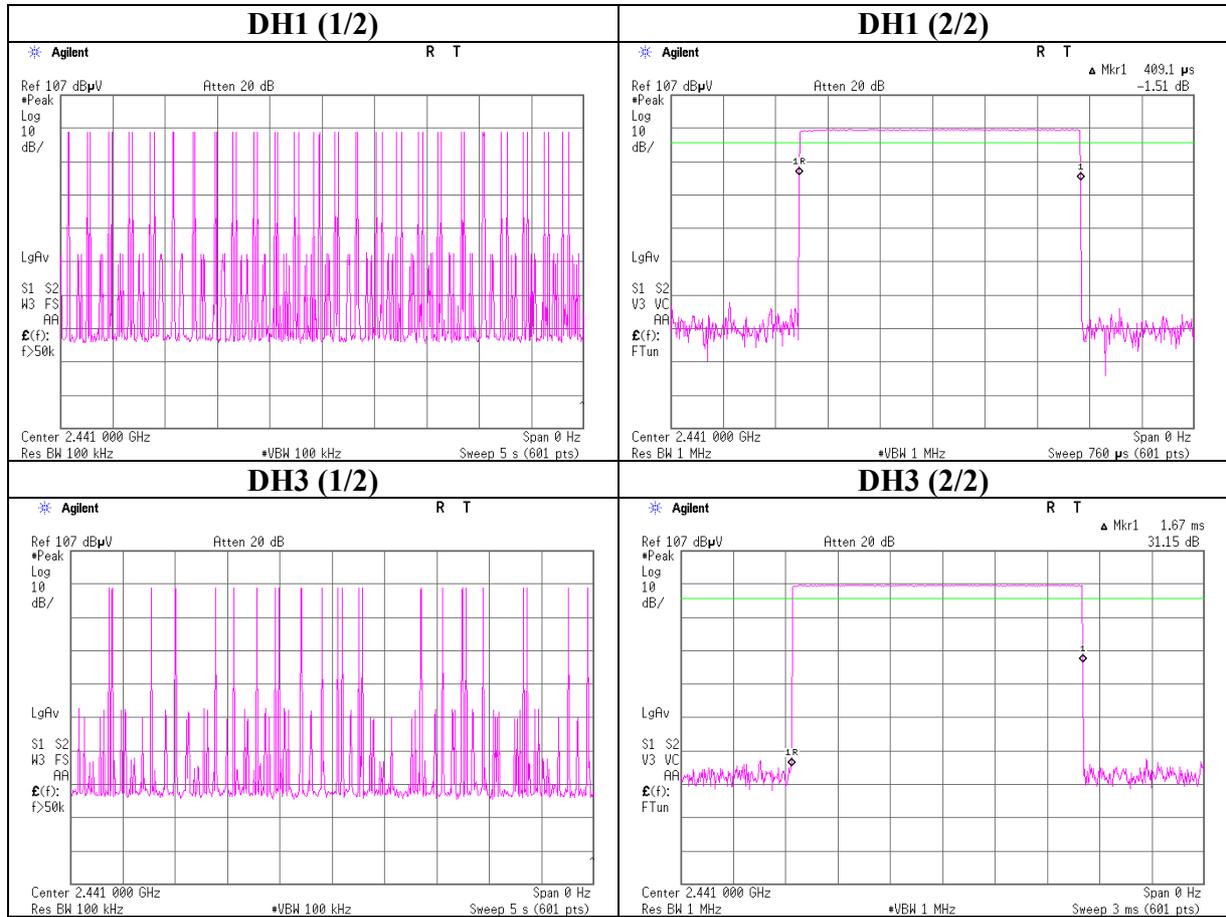
Head Office EMC Lab.

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

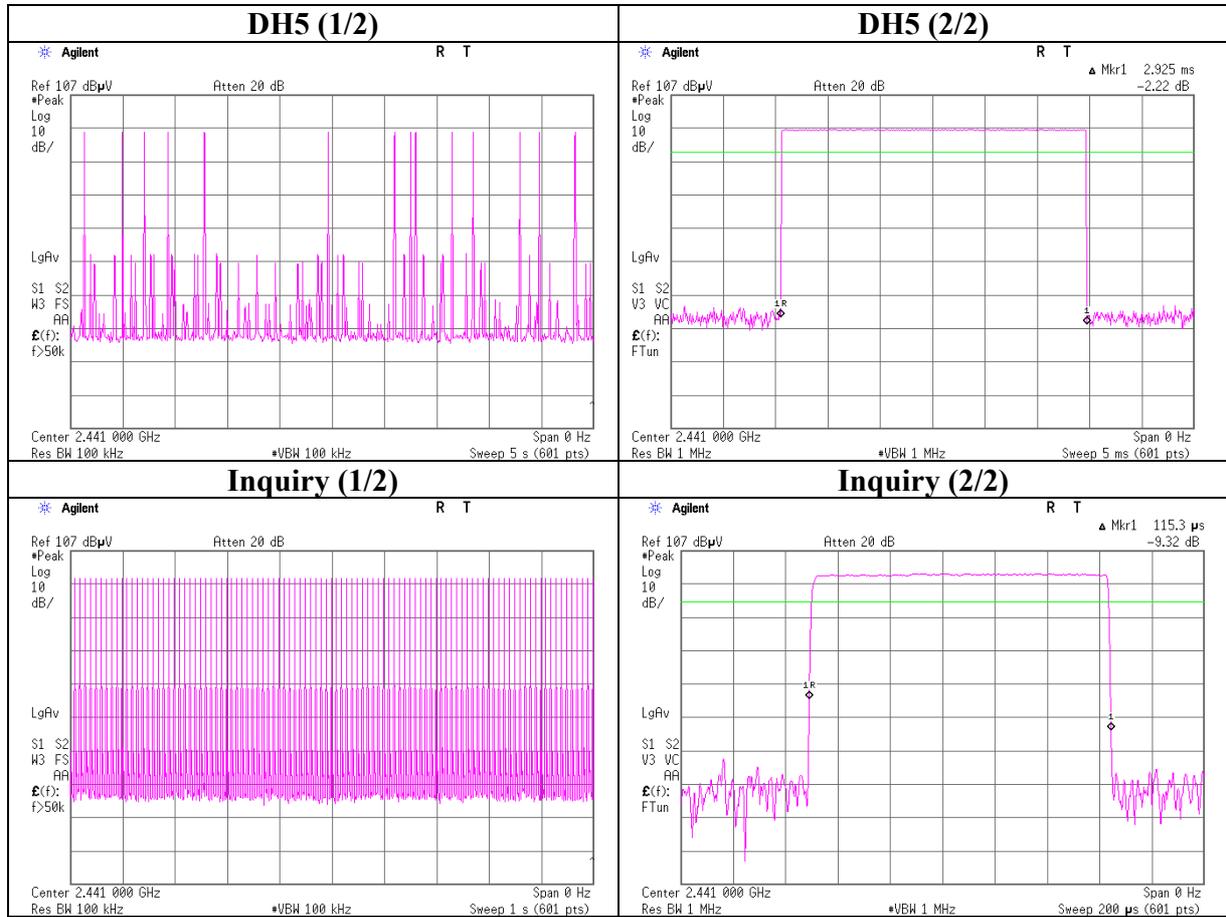
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

Dwell time



Dwell time



Maximum Peak Output Power

<p> Company : Sharp Corporation Equipment : WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable Model No. : 922SH Serial No. : 004401/11/092624/9 Power : DC3.7V Mode : Tx(Hopping Off)/Inquiry </p>	<p style="text-align: center;">UL Japan, Inc.</p> <p> Head Office EMC Lab. No.7 Shielded Room Test Report No. : 28EE0073-HO Regulation : FCC15.247(b)(1)/RSS-210A8.4(2) Test distance : - Date : 12/14/2007 Temperature : 23deg.C Humidity : 40% Engineer : Norihisa Hashimoto </p>
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Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-10.12	0.15	10.02	0.05	1.01	20.97	125	20.92
Mid	2441.0	-9.96	0.15	10.02	0.21	1.05	20.97	125	20.76
High	2480.0	-9.77	0.15	10.02	0.40	1.10	20.97	125	20.57
Inquiry	2441.0	-9.67	0.15	10.02	0.50	1.12	20.97	125	20.47

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.

Radiated Spurious Emission (below 1GHz)
Tx, Ch. Low

*The test result is rounded off to one or two decimal places, so some differences might be observed.

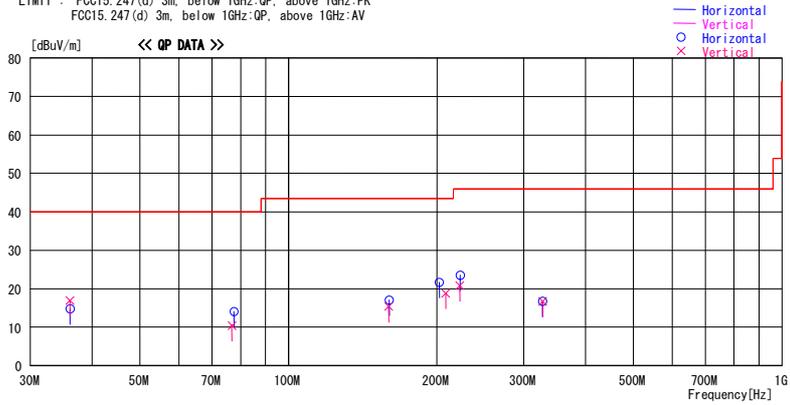
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
 Date : 2007/12/12

Company : Sharp Corporation
 Kind of EUT : WCDMA & Tri-band (900/1800/1900) GSM Dual mode
 Model No. : 922SH
 Serial No. : 004401/11/092473/1
 Mode / Remarks : Transmitting 2402MHz (Max-axis H:Z-Open / V:Z-Close)

Report No. : 28EE0073-HO
 Power : AC 120V / 60Hz
 Temp./Humi. : 22deg. C. / 42%
 Operator : Norihisa Hashimoto

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
 FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB]	Loss & Gain [dB]						
36.090	23.2	QP	16.4	-24.8	14.8	166	313	Hori.	40.0	25.2
36.090	25.3	QP	16.4	-24.8	16.9	353	100	Vert.	40.0	23.1
77.590	31.3	QP	7.0	-24.2	14.1	211	240	Hori.	40.0	25.9
76.840	27.6	QP	7.0	-24.2	10.4	210	100	Vert.	40.0	29.6
160.200	24.8	QP	15.6	-23.3	17.1	339	208	Hori.	43.5	26.4
159.800	23.2	QP	15.5	-23.3	15.4	0	100	Vert.	43.5	28.1
202.300	27.8	QP	16.7	-22.8	21.7	38	153	Hori.	43.5	21.8
208.600	24.7	QP	16.8	-22.7	18.8	10	100	Vert.	43.5	24.7
223.100	29.2	QP	16.9	-22.6	23.5	39	148	Hori.	46.0	22.5
222.600	26.5	QP	16.9	-22.6	20.8	325	100	Vert.	46.0	25.2
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Hori.	46.0	29.3
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Vert.	46.0	29.3

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)

Radiated Spurious Emission (below 1GHz)
Tx, Ch. Mid

*The test result is round off to one or two decimal places, so some differences might be observed.

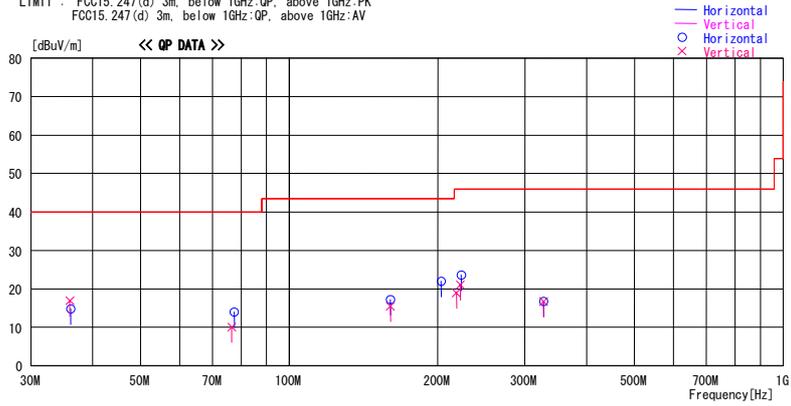
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
 Date : 2007/12/12

Company : Sharp Corporation
 Kind of EUT : WCDMA & Tri-band (900/1800/1900) GSM Dual mode
 Model No. : 922SH
 Serial No. : 004401/11/092473/1
 Mode / Remarks : Transmitting 2441MHz (Max-axis H:Z-Open / V:Z-Close)

Report No. : 28EE0073-HO
 Power : AC 120V / 60Hz
 Temp./Humid. : 22deg.C / 42%
 Operator : Norihisa Hashimoto

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
 FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss &	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain					[dBuV/m]	[dB]
			[dB/m]	[dB]	[dBuV/m]	[Deg.]	[cm]		[dBuV/m]	[dB]
36.090	23.2	QP	16.4	-24.8	14.8	151	327	Hori.	40.0	25.2
35.969	29.2	QP	16.5	-24.8	16.9	298	100	Vert.	40.0	23.1
77.430	31.2	QP	7.0	-24.2	14.0	214	245	Hori.	40.0	26.0
76.505	27.3	QP	7.0	-24.2	10.1	207	100	Vert.	40.0	29.9
160.280	24.9	QP	15.6	-23.3	17.2	343	199	Hori.	43.5	26.3
160.280	23.2	QP	15.6	-23.3	15.5	0	100	Vert.	43.5	28.0
203.080	28.1	QP	16.7	-22.8	22.0	34	164	Hori.	43.5	21.5
218.191	24.8	QP	16.9	-22.7	19.0	5	100	Vert.	46.0	27.0
223.160	29.3	QP	16.9	-22.6	23.6	32	139	Hori.	46.0	22.4
222.195	26.8	QP	16.9	-22.6	21.1	322	100	Vert.	46.0	24.9
327.680	22.1	QP	16.5	-21.9	16.7	327	100	Hori.	46.0	29.3
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Vert.	46.0	29.3

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)

Radiated Spurious Emission (below 1GHz)

Tx, Ch. High

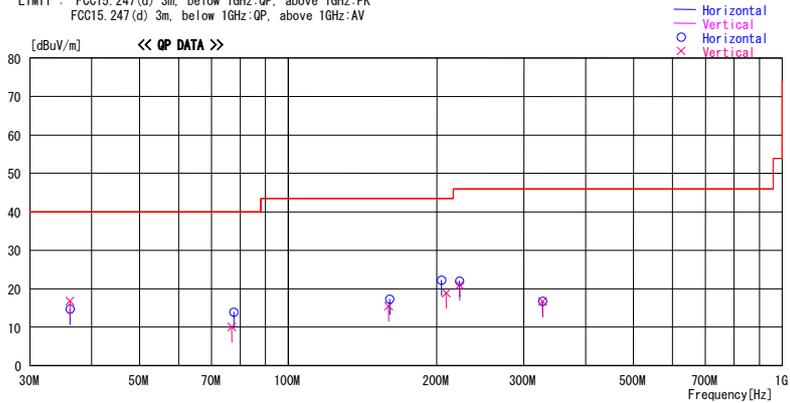
*The test result is round off to one or two decimal places, so some differences might be observed.

DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2007/12/12

Company : Sharp Corporation Kind of EUT : WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable Model No. : 922SH Serial No. : 004401/11/092473/1 Mode / Remarks : Transmitting 2480MHz (Max-axis H:Z-Open / V:Z-Close)	Report No. : 28EE0073-HO Power : AC 120V / 60Hz Temp./Humi. : 22deg. C. / 42% Operator : Norihisa Hashimoto
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LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
 FCC15.247(d) 3m, below 1GHz:Q, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg.]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB]	Loss & Gain [dB]						
36.150	23.1	QP	16.4	-24.8	14.7	168	303	Hori.	40.0	25.3
36.150	25.2	QP	16.4	-24.8	16.8	41	100	Vert.	40.0	23.2
77.640	31.1	QP	7.0	-24.2	13.9	210	238	Hori.	40.0	26.1
76.840	27.3	QP	7.0	-24.2	10.1	218	100	Vert.	40.0	29.9
160.680	24.9	QP	15.6	-23.2	17.3	339	200	Hori.	43.5	26.2
159.700	23.3	QP	15.5	-23.3	15.5	0	100	Vert.	43.5	28.0
204.520	28.2	QP	16.8	-22.8	22.2	37	167	Hori.	43.5	21.3
209.020	24.8	QP	16.8	-22.7	18.9	9	100	Vert.	43.5	24.6
222.520	27.7	QP	16.9	-22.6	22.0	41	151	Hori.	46.0	24.0
222.520	26.7	QP	16.9	-22.6	21.0	333	100	Vert.	46.0	25.0
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Hori.	46.0	29.3
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Vert.	46.0	29.3

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)

Radiated Spurious Emission (below 1GHz)
Rx, Ch. Mid

*The test result is round off to one or two decimal places, so some differences might be observed.

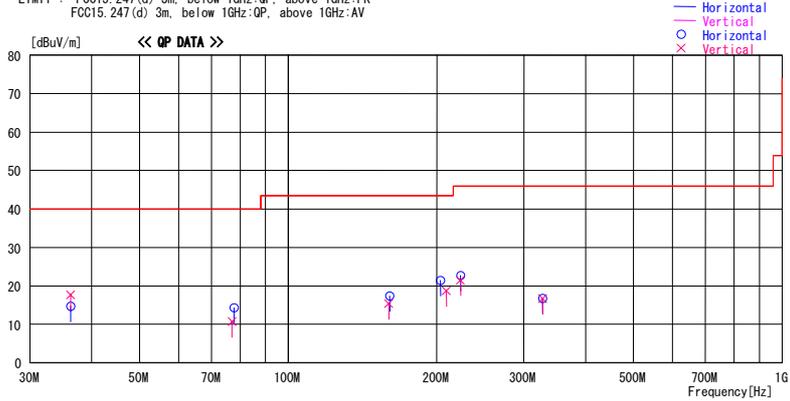
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2007/12/13

Company : Sharp Corporation
Kind of EUT : WDMA & Tri-band (900/1800/1900) GSM Dual mode
Model No. : 922SH
Serial No. : 004401/11/092473/1
Mode / Remarks : Receiving 2441MHz (Max-axis H:Z-Open / V:Z-Close)

Report No. : 28EE0073-HO
Power : AC 120V / 60Hz
Temp./Humid. : 22deg.C / 42%
Operator : Norihisa Hashimoto

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss &	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain					[dBuV/m]	[dB]
			[dB/m]	[dB]	[dBuV/m]	[Deg.]	[cm]		[dBuV/m]	[dB]
36.243	23.2	QP	16.3	-24.8	14.7	170	308	Hori.	40.0	25.3
36.243	26.2	QP	16.3	-24.8	17.7	59	100	Vert.	40.0	22.3
77.680	31.5	QP	7.0	-24.2	14.3	223	239	Hori.	40.0	25.7
76.960	27.9	QP	7.0	-24.2	10.7	215	100	Vert.	40.0	29.3
160.560	25.0	QP	15.6	-23.2	17.4	346	195	Hori.	43.5	26.1
159.840	23.2	QP	15.5	-23.3	15.4	0	100	Vert.	43.5	28.1
203.480	27.5	QP	16.7	-22.8	21.4	28	163	Hori.	43.5	22.1
209.120	24.6	QP	16.8	-22.7	18.7	6	100	Vert.	43.5	24.8
223.400	28.4	QP	16.9	-22.6	22.7	28	152	Hori.	46.0	23.3
223.320	27.2	QP	16.9	-22.6	21.5	333	100	Vert.	46.0	24.5
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Hori.	46.0	29.3
327.680	22.1	QP	16.5	-21.9	16.7	0	100	Vert.	46.0	29.3

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)

Radiated Spurious Emission (above 1GHz)
Tx, Ch. Low

UL Japan, Inc.
Head Office EMC Lab. No4 Semi Anechoic Chamber

Company : Sharp Corporation
Equipment : WCDMA & Tri-band (900/1800/1900)
Model No. : 922SH
Sample No. : 004401/11/092473/1
Power : AC120V / 60Hz
Mode : Transmitting mode 2402MHz
Remarks : Hor Open-Z , Ver Close-Z-axis

REPORT NO : 28EE0073-HO
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 12/12/2007
TEMPERATURE : 22deg.C
HUMIDITY : 42%
ENGINEER : Norihisa Hashimoto

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	48.2	46.7	27.0	32.1	2.5	0.0	45.6	44.1	73.9	28.3	29.8
2	*2400.0	80.8	78.4	27.0	32.1	2.5	0.0	78.2	75.8	73.9	-	-
3	4804.0	49.8	49.0	30.8	31.2	3.4	0.0	52.8	52.0	73.9	21.1	21.9
4	7206.0	50.6	48.4	35.7	32.5	4.2	0.0	58.1	55.9	73.9	15.9	18.1
5	9608.0	48.5	48.7	38.2	32.9	5.3	0.0	59.1	59.3	73.9	14.8	14.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14412.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	16814.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	19216.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	21618.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	24020.0	45.6	45.5	38.7	32.2	8.1	0.0	50.7	50.6	73.9	23.2	23.3

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	36.4	35.1	27.0	32.1	2.5	0.0	33.8	32.5	53.9	20.1	21.4
2	*2400.0	67.3	65.3	27.0	32.1	2.5	0.0	64.7	62.7	53.9	-	-
3	4804.0	37.8	35.6	30.8	31.2	3.4	0.0	40.8	38.6	53.9	13.1	15.3
4	7206.0	39.9	36.8	35.7	32.5	4.2	0.0	47.4	44.3	53.9	6.6	9.7
5	9608.0	36.3	36.2	38.2	32.9	5.3	0.0	46.9	46.8	53.9	7.0	7.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	14412.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	16814.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	19216.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	21618.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	24020.0	33.0	33.0	38.7	32.2	8.1	0.0	38.1	38.1	53.9	15.8	15.8

* 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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2402.0	104.3	101.8	27.0	32.1	2.5	0.0	101.7	99.2	Funda-20dB	31.7	32.3
2	2400.0	52.6	49.5	27.0	32.1	2.5	0.0	50.0	46.9	Funda-20dB	31.7	32.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

- *Except for the above table : All other spurious emissions were less than 20dB for the limit.
- *In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.
- *The test result is round off to one or two decimal places, so some differences might be observed.
- *Hi-Pass Filter was not used for factor 0.0dB of the above table.
- *NS:Non Signal

Radiated Spurious Emission (above 1GHz)
Tx, Ch. Mid

UL Japan, Inc.
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company	: Sharp Corporation	REPORT NO	: 28EE0073-HO
Equipment	: WCDMA & Tri-band (900/1800/1900)	REGULATION	: FCC15.247(d)/RSS-210A.5
	: GSM Dual mode Mobile Phone / Bluetooth enable	TEST DISTANCE	: 3/1m
Model No.	: 922SH	DATE	: 12/12/2007
Sample No.	: 004401/11/092473/1	TEMPERATURE	: 22deg.C
Power	: AC120V / 60Hz	HUMIDITY	: 42%
Mode	: Transmitting mode 2441MHz	ENGINEER	: Norihisa Hashimoto
Remarks	: Hor Open-Z , Ver Close-Z-axis		

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 [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4882.0	45.8	44.4	31.0	31.2	3.4	0.0	49.0	47.6	73.9	24.9	26.3
2	7323.0	46.7	45.3	35.9	32.5	4.3	0.0	54.3	52.9	73.9	19.6	21.0
3	9764.0	42.2	42.3	38.3	32.9	5.4	0.0	53.0	53.1	73.9	20.9	20.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	NS	NS	-	-	-	-	-	-	73.9	-	-
5	14646.0	NS	NS	-	-	-	-	-	-	73.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	24410.0	45.3	45.2	38.8	32.2	8.2	0.0	50.6	50.5	73.9	23.3	23.4

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 [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4882.0	35.1	32.9	31.0	31.2	3.4	0.0	38.3	36.1	53.9	15.6	17.8
2	7323.0	36.5	33.7	35.9	32.5	4.3	0.0	44.1	41.3	53.9	9.8	12.6
3	9764.0	29.8	29.6	38.3	32.9	5.4	0.0	40.6	40.4	53.9	13.3	13.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	NS	NS	-	-	-	-	-	-	53.9	-	-
5	14646.0	NS	NS	-	-	-	-	-	-	53.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	24410.0	32.9	32.9	38.8	32.2	8.2	0.0	38.2	38.2	53.9	15.7	15.7

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

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

*The test result is round off to one or two decimal places, so some differences might be observed.

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

*NS:Non Signal

Radiated Spurious Emission (above 1GHz)
Tx, Ch. High

UL Japan, Inc.
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company	: Sharp Corporation	REPORT NO	: 28EE0073-HO
Equipment	: WCDMA & Tri-band (900/1800/1900)	REGULATION	: FCC15.247(d)/RSS-210A8.5
	GSM Dual mode Mobile Phone / Bluetooth enable	TEST DISTANCE	: 3/m
Model No.	: 922SH	DATE	: 12/12/2007
Sample No.	: 004401/11/092473/1	TEMPERATURE	: 22deg.C
Power	: AC120V / 60Hz	HUMIDITY	: 42%
Mode	: Transmitting mode 2480MHz	ENGINEER	: Norihisa Hashimoto
Remarks	: Hor Open-Z , Ver Close-Z-axis		

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 [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	59.2	54.7	27.2	32.1	2.6	0.0	56.9	52.4	73.9	17.0	21.5
2	4960.0	45.2	41.2	31.2	31.2	3.4	0.0	48.6	44.6	73.9	25.3	29.3
3	7440.0	45.6	43.0	36.1	32.6	4.3	0.0	53.4	50.8	73.9	20.5	23.1
4	9920.0	41.6	42.0	38.4	32.9	5.4	0.0	52.5	52.9	73.9	21.4	21.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	73.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	24800.0	45.3	45.1	38.9	32.2	8.3	0.0	50.8	50.6	73.9	23.1	23.3

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 [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	51.6	47.6	27.2	32.1	2.6	0.0	49.3	45.3	53.9	4.6	8.6
2	4960.0	35.8	34.8	31.2	31.2	3.4	0.0	39.2	38.2	53.9	14.7	15.7
3	7440.0	33.3	31.1	36.1	32.6	4.3	0.0	41.1	38.9	53.9	12.8	15.0
4	9920.0	31.2	30.3	38.4	32.9	5.4	0.0	42.1	41.2	53.9	11.8	12.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	53.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	24800.0	33.0	32.9	38.9	32.2	8.3	0.0	38.5	38.4	53.9	15.4	15.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

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

*The test result is round off to one or two decimal places, so some differences might be observed.

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

*NS:Non Signal

Radiated Spurious Emission (above 1GHz)
Rx, Ch. Mid

UL Japan, Inc.
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company	: Sharp Corporation	REPORT NO	: 28EE0073-HO
Equipment	: WCDMA & Tri-band (900/1800/1900)	REGULATION	: FCC15.247(d)/RSS-210A8.5
	: GSM Dual mode Mobile Phone / Bluetooth enable	TEST DISTANCE	: 3/1m
Model No.	: 922SH	DATE	: 12/12/2007
Sample No.	: 004401/11/092473/1	TEMPERATURE	: 22deg.C
Power	: AC120V / 60Hz	HUMIDITY	: 42%
Mode	: Receiving mode 2441MHz	ENGINEER	: Norihisa Hashimoto
Remarks	: Hor Open-Z , Ver Close-Z-axis		

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

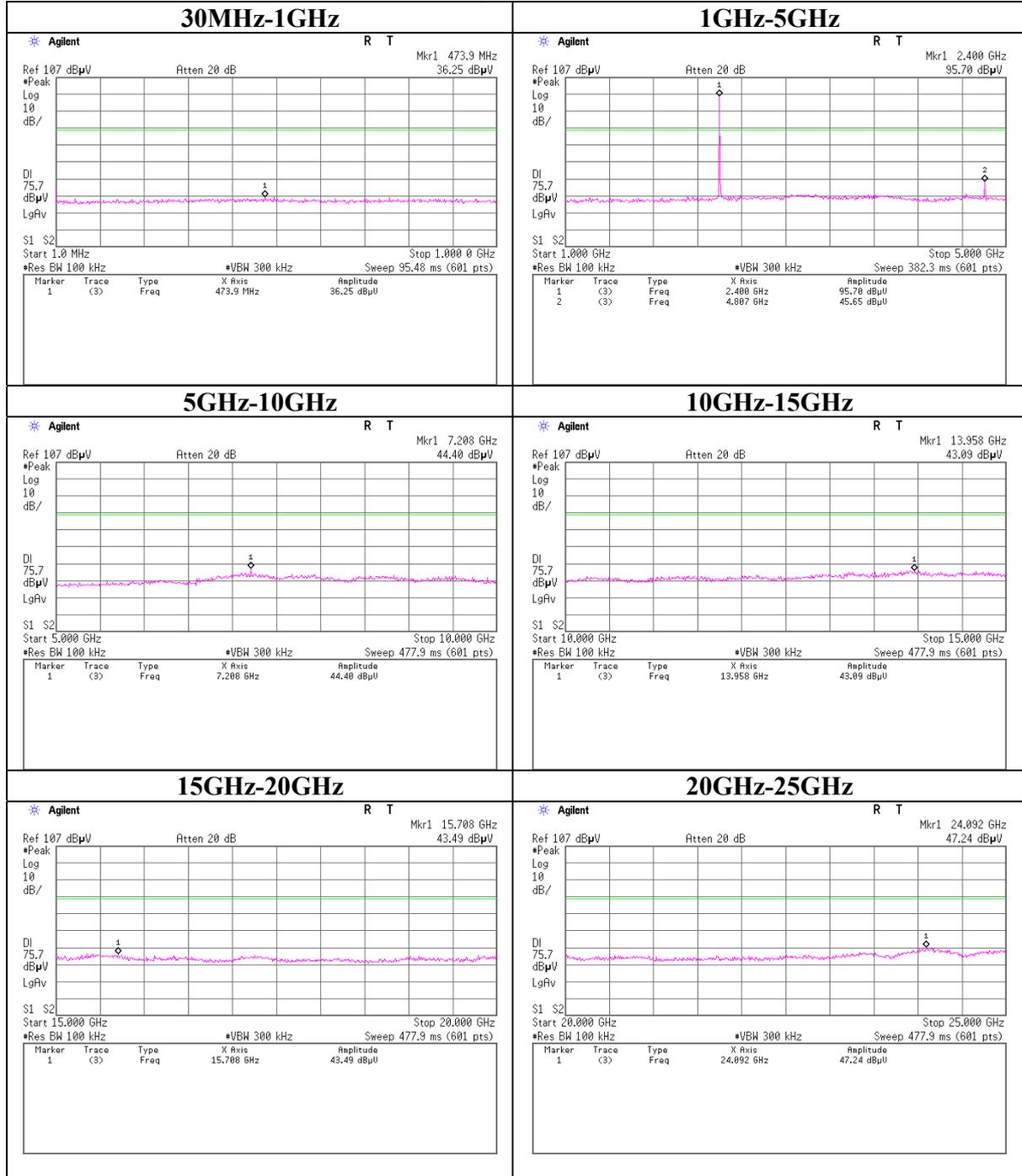
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2441.0	40.5	41.1	27.1	32.1	2.5	0.0	38.0	38.6	73.9	35.9	35.3
2	4882.0	41.5	40.8	31.0	31.2	3.4	0.0	44.7	44.0	73.9	29.2	29.9
3	7323.0	41.9	42.1	35.9	32.5	4.3	0.0	49.5	49.7	73.9	24.4	24.2

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

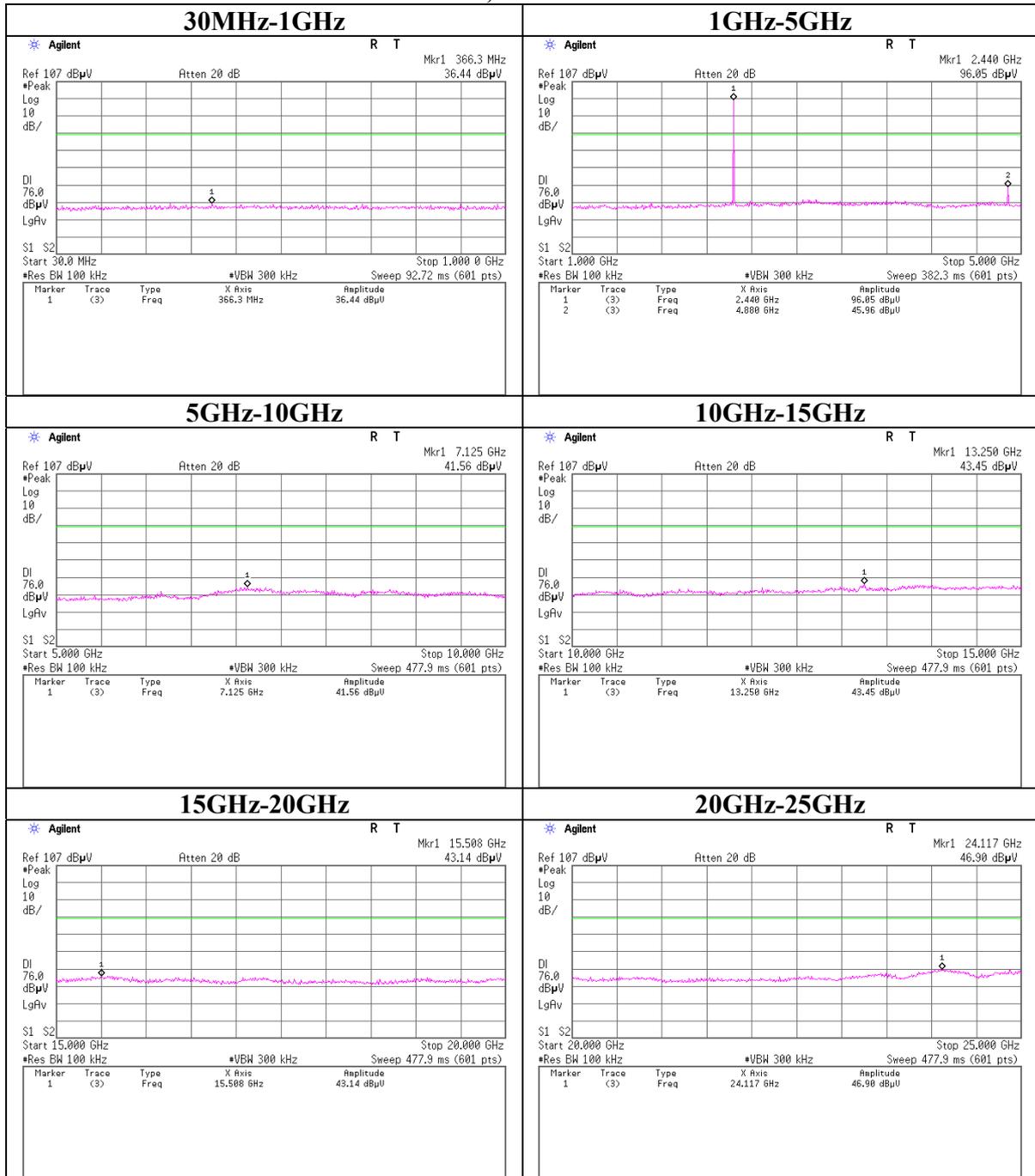
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2441.0	32.0	29.8	27.1	32.1	2.5	0.0	29.5	27.3	73.9	44.4	46.6
2	4882.0	29.6	29.6	31.0	31.2	3.4	0.0	32.8	32.8	53.9	21.1	21.1
3	7323.0	29.4	30.0	35.9	32.5	4.3	0.0	37.0	37.6	53.9	16.9	16.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The test result is round off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

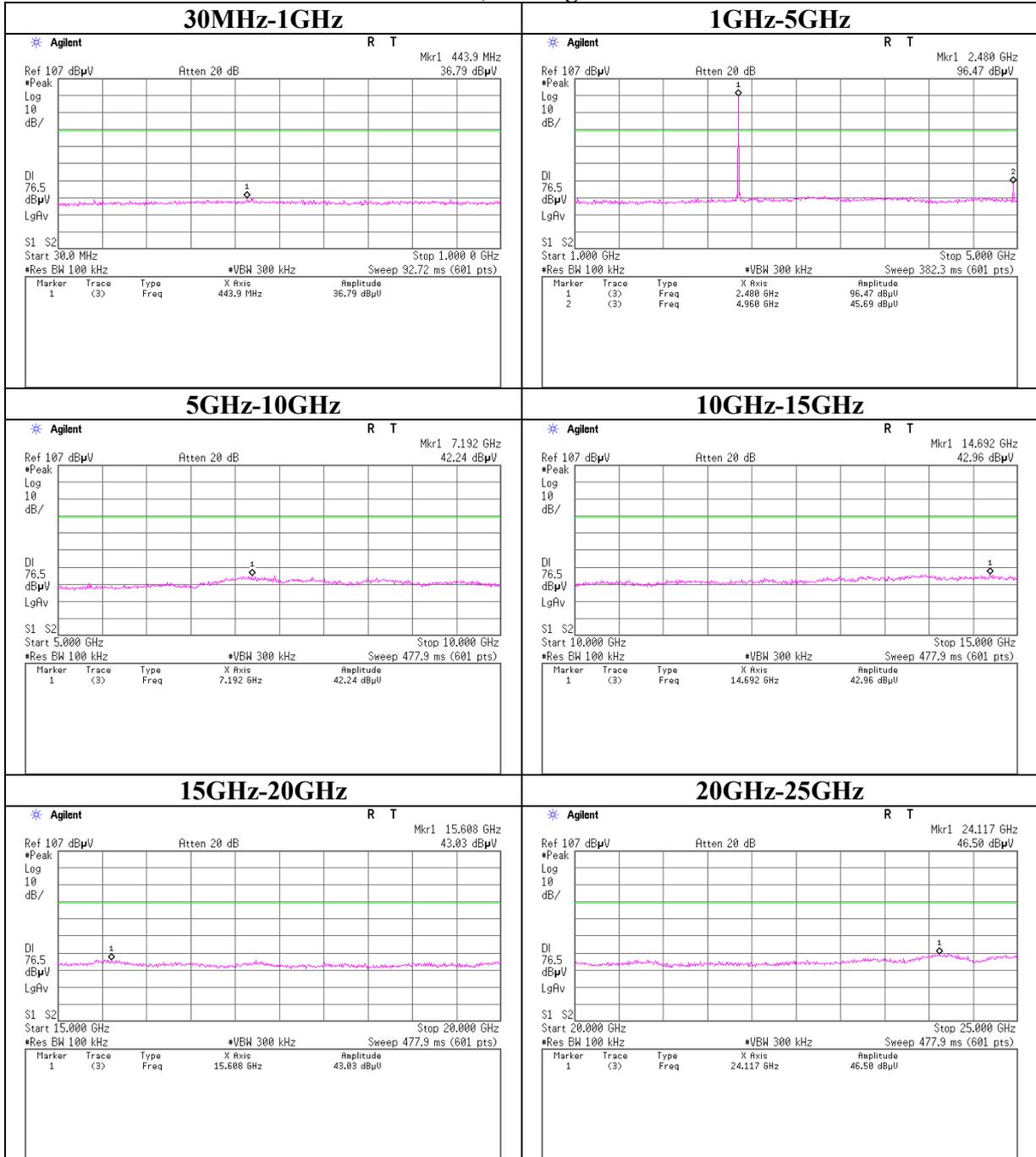
Conducted Spurious Emission
Tx, Ch:Low



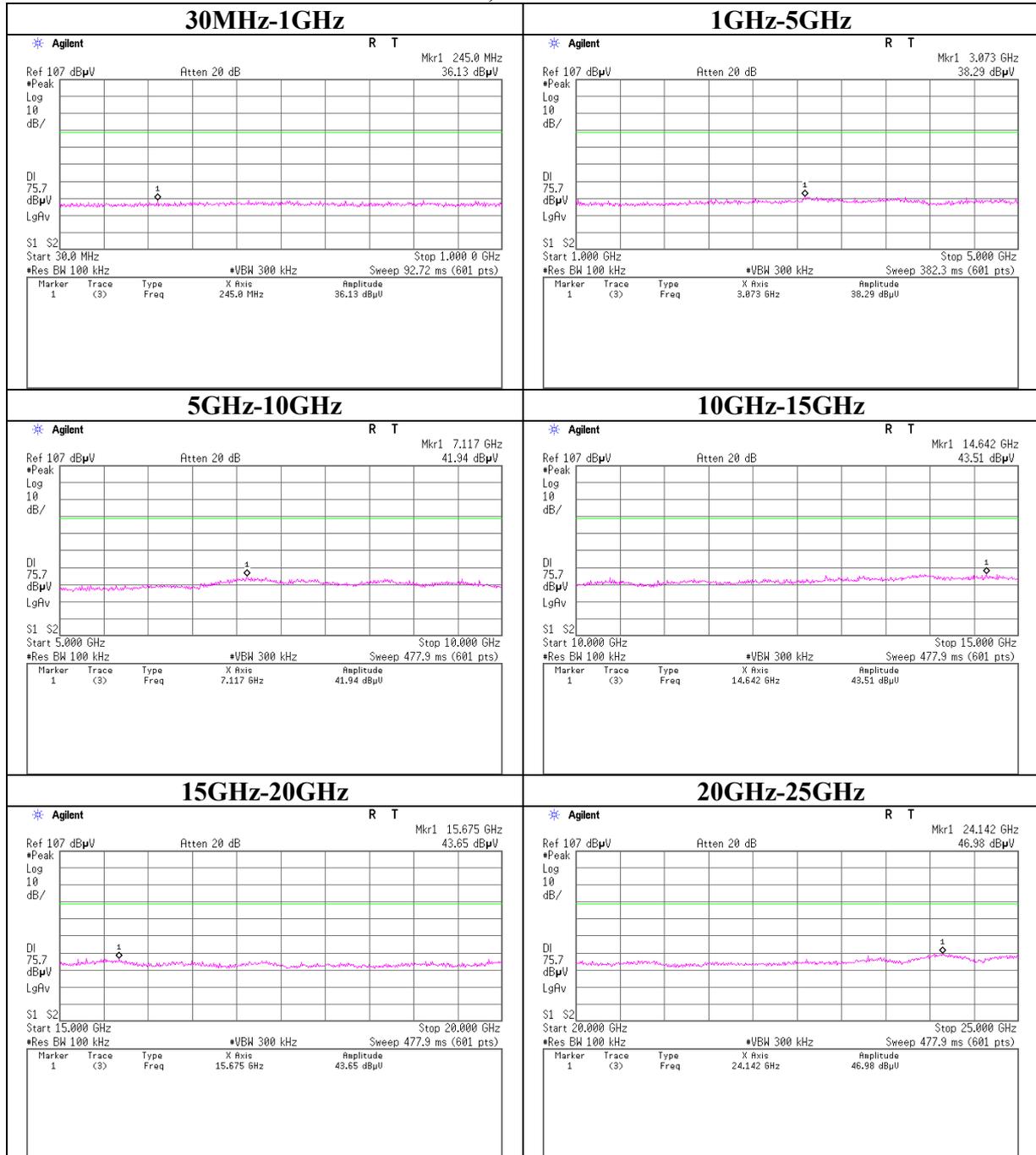
Conducted Spurious Emission
Tx, Ch:Mid



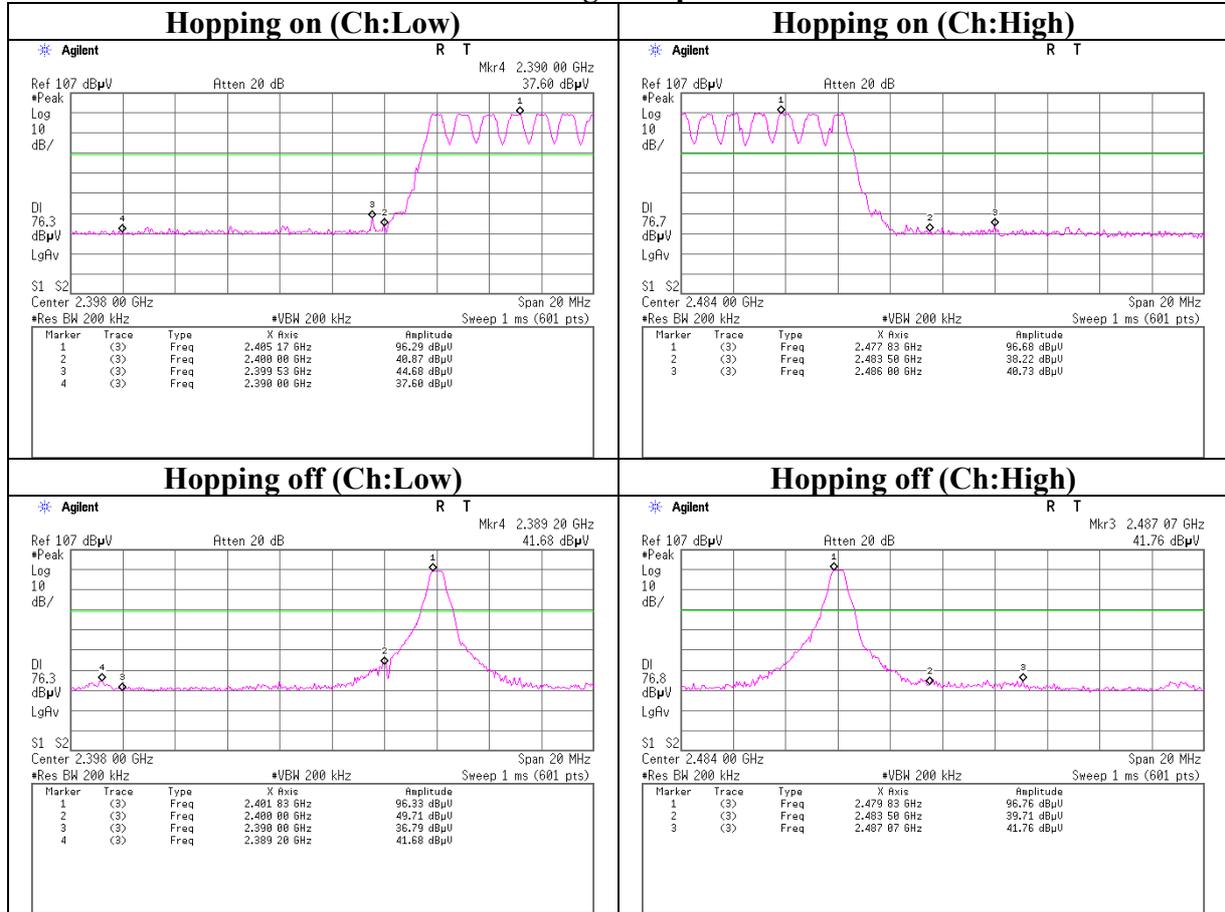
Conducted Spurious Emission
Tx, Ch:High



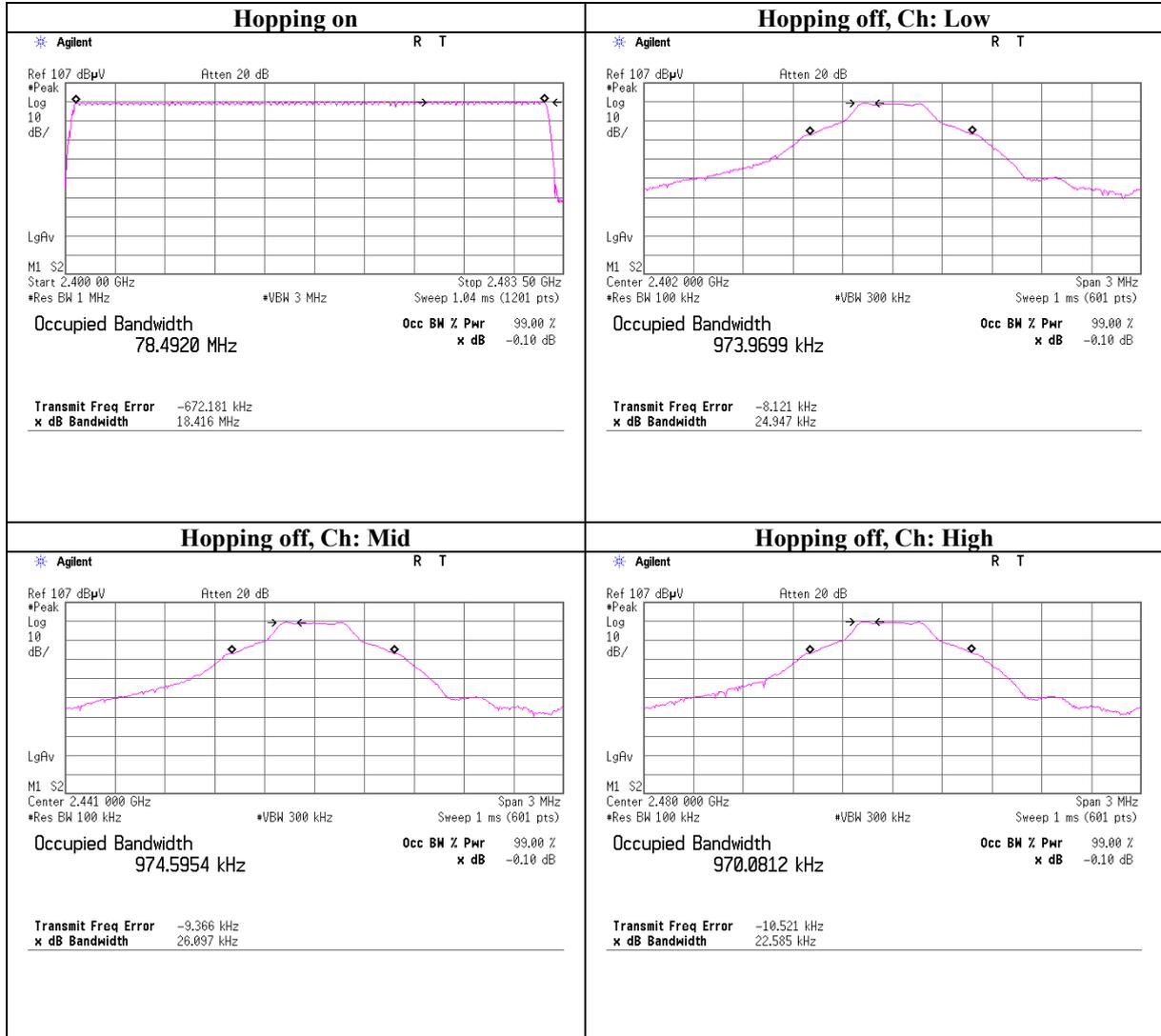
Conducted Spurious Emission
Rx, Ch:Mid



Conducted Spurious Emission Band Edge compliance



99% Occupied Bandwidth



APPENDIX 3:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE/CE	2007/03/03 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	RE/CE	2006/01/19 * 24
MJM-07	Measure	PROMART	SEN1955	RE/CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE/CE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	RE	2007/06/01 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	RE/CE	2007/09/14 * 12
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/01/19 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2007/01/19 * 12
MCC-50	Coaxial cable	UL Japan	-	RE/CE	2007/03/06 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	RE	2007/03/12 * 12
MAT-31	Attenuator(6dB)	TME	UFA-01	RE	2007/03/05 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2007/08/16 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	RE	2007/04/06 * 12
MCC-57	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/03/30 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	RE	2007/03/12 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2007/02/22 * 12
MRENT-62	Spectrum Analyzer	Agilent	E4448A	AT	2007/11/27 * 12
MCC-06	Microwave Cable 1G-26.5GHz 1m	Suhner	SUCOFLEX 104	AT	2007/02/26 * 12
MPM-09	Power Meter	Anritsu	ML2495A	AT	2007/09/22 * 12
MAT-23	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2007/03/07 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	AT	2007/11/12 * 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.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

**Test Item: CE: Conducted Emission
RE: Radiated Emission
AT: Antenna Terminal Conducted test**

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