



## RADIO TEST REPORT

Test Report No. : 28EE0154-HO

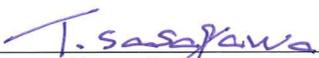
Applicant : Sharp Corporation, Communication Systems Group.  
Type of Equipment : WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable  
Model No. : SX862  
FCC ID : APYHRO00065  
Test standard : FCC Part 15 Subpart C 2007 Section 15.207, Section 15.247  
Test Result : Complied

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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.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Date of test:

January 7 and 16, 2008

Tested by:

  
Tomotaka Sasagawa  
EMC Services

  
Takumi Shimada  
EMC Services

Approved by :

  
Hironobu Shimoji  
Assistant Manager of EMC Services



NVLAP LAB CODE: 200572-0

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\*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 (09.01.08)

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## **SECTION 1: Customer information**

Company Name : Sharp Corporation, Communication Systems Group.  
Address : 2-13-1 Iida Hachihonmatsu, Higashihiroshima-City, Hiroshima, 739-0192  
Japan  
Telephone Number : +81-82-420-1837  
Facsimile Number : +81-82-420-1654  
Contact Person : Tetsuya Maekawa

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

### **2.1 Identification of E.U.T.**

Type of Equipment : WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable  
Model No. : SX862  
Serial No. : 004401/11/108146/5 (Conducted Emission / Radiated Emission)  
004401/11/108126/7 (Antenna Terminal Conducted test)  
Rating : AC 120V/60Hz, DC 4.0V  
Country of Manufacture : Japan  
Receipt Date of Sample : December 27, 2007  
Condition of EUT : Engineering 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: SX862 (referred to as the EUT in this report) is the WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable.

Clock frequency in the system : 26MHz

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

Equipment Type : Transceiver  
Frequency of Operation : 2402MHz-2480MHz  
Bandwidth & Channel Spacing : 1MHz & 1MHz  
Modulation : FHSS  
Power Supply : DC2.9V  
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 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] 17.7dB 2.50582MHz, N Rx, Mid Ch. [AV] 13.8dB 2.49837MHz, N Tx, Low Ch.	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		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		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		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	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	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	[Tx] 5.9dB 2483.5MHz, Ver, AV [Rx] 14.9dB 7323.0MHz, Hor, AV	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.

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

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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)

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

#### Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty 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	2.0 x 2.0m	-
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)**

<b>Test</b>	<b>Mode</b>	<b>Tested frequency</b>
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), Payload: PRBS9	2402MHz 2441MHz 2480MHz
	Receiving (Rx)	2441MHz
Band Edge Compliance (Conducted)	Transmitting (Tx), DH5, Payload: PRBS9 -Hopping ON -Hopping OFF	2402MHz 2480MHz
	(Radiated)	Transmitting (Tx), DH5
99% Occupied Bandwidth	Transmitting (Tx), Payload: PRBS9 -Hopping ON -Hopping OFF	2402MHz 2441MHz 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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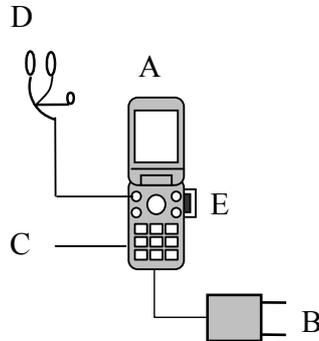
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#### 4.2 Configuration and peripherals



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

#### Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable	SX862	004401/11/108146/5*1) 004401/11/108126/7*2)	Sharp Corporation	EUT
B	AC CHARGER	XN-1QC73	PDA	HOSIDEN	-
C	Rechargeable Lithium-ion Battery	XN-1BT91	QLA	SANYO	-
D	Stereo Handsfree*1)	RPHOHA018 AF	-		-
E	MicroSD Memory Card	SDSDQ-128	-		

\*1) Used for Conducted Emission / Radiated Emission tests

\*2) Used for Antenna Terminal Conducted test

#### List of cables used

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

\*1) Used for Conducted Emission / Radiated Emission tests

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## **SECTION 5: Conducted Emission**

### **Test Procedure and conditions**

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

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

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

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

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

**Detector** : 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

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## **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: 3MHz
- 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: Z-axis/ Vertical:Z-axis)**

**This page has been submitted for a separate exhibit.**

**APPENDIX 2: Data of EMI test**

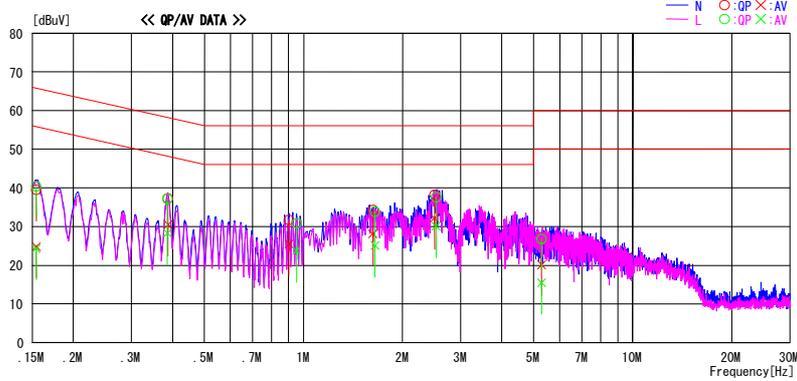
**Conducted Emission**  
**Tx, Ch. Low**

**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation  
 Kind of EUT : WCDMA & Tri-band GSM Dual mode Mobile Phone/  
 Bluetooth Enable  
 Model No. : SX862  
 Serial No. : 004401/11/108146/5  
 Mode / Remarks : Transmitting 2402MHz  
 Report No. : 28EE0154-HO  
 Power : AC 120V / 60Hz  
 Temp./Humi. : 21deg.C / 40%  
 Operator : Tomotaka Sasagawa

LIMIT : FCC15.207 QP  
 FCC15.207 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]	
0.15442	39.2	24.5	0.3	39.5	24.8	65.8	55.8	26.3	31.0	N
0.38732	37.0	30.2	0.3	37.3	30.5	58.1	48.1	20.8	17.6	N
0.90219	31.5	25.2	0.3	31.8	25.5	56.0	46.0	24.2	20.5	N
1.62423	33.9	27.7	0.4	34.3	28.1	56.0	46.0	21.7	17.9	N
2.49837	37.7	31.7	0.5	38.2	32.2	56.0	46.0	17.8	13.8	N
5.28412	26.1	19.3	0.8	26.9	20.1	60.0	50.0	33.1	29.9	N
0.15420	40.1	24.0	0.3	40.4	24.3	65.8	55.8	25.4	31.5	L
0.38565	36.9	28.0	0.3	37.2	28.3	58.2	48.2	21.0	19.9	L
0.95215	30.6	23.4	0.3	30.9	23.7	56.0	46.0	25.1	22.3	L
1.64898	33.5	24.7	0.4	33.9	25.1	56.0	46.0	22.1	20.9	L
2.52668	37.1	29.6	0.5	37.6	30.1	56.0	46.0	18.4	15.9	L
5.28435	26.0	14.7	0.8	26.8	15.5	60.0	50.0	33.2	34.5	L

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.

## Conducted Emission Tx, Ch. Mid

### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber  
Date : 2008/01/07

Company	: Sharp Corporation	Report No.	: 28EE0154-HO
Kind of EUT	: WCDMA & Tri-band GSM Dual mode	Power	: AC 120V / 60Hz
	Mobil phone / Bluetooth Enable	Temp./Humi.	: 21deg. C / 40%
Model No.	: SX862	Operator	: Tomotaka Sasagawa
Serial No.	: 004401/11/108146/5		
Mode / Remarks	: Transmitting 2441MHz		
LIMIT	: FCC15.207 QP		
	FCC15.207 AV		

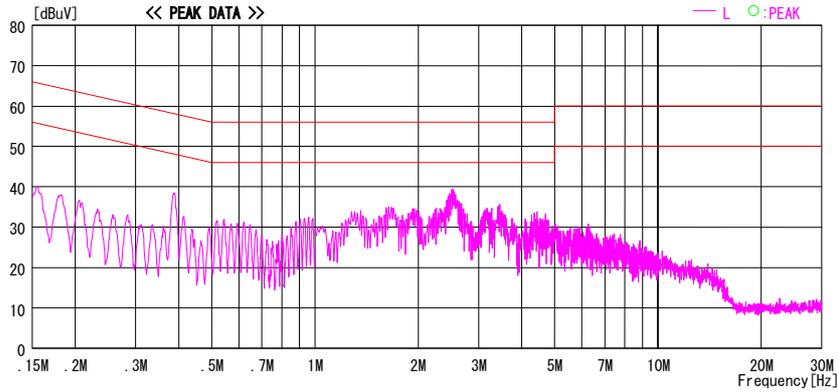
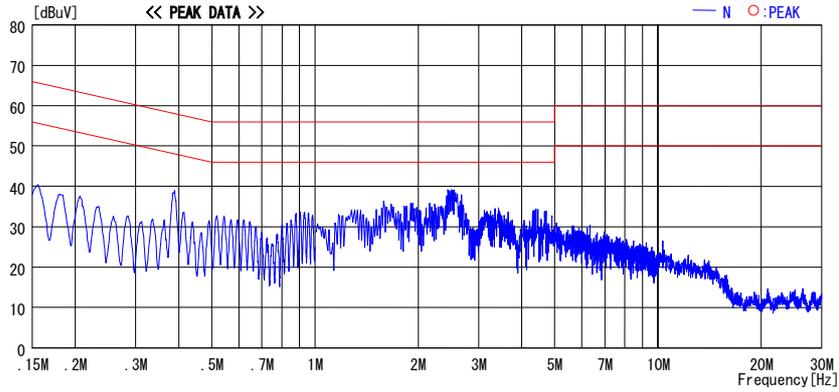


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuA]=READING[dBuV]+C.F[dB] (Probe factor+CABLE LOSS)  
 Except for the above table: adequate margin data below the limits.

## Conducted Emission Tx, Ch. High

### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2008/01/07

Company	: Sharp Corporation	Report No.	: 28EE0154-HO
Kind of EUT	: WCDMA & Tri-band GSM Dual mode	Power	: AC 120V / 60Hz
	: Mobile phone / Bluetooth Enable	Temp./Humi.	: 21deg. C / 40%
Model No.	: SY862	Operator	: Tomotaka Sasagawa
Serial No.	: 004401/11/108146/5		
Mode / Remarks	: Transmitting 2480MHz		
LIMIT	: FCC15.207 QP		
	: FCC15.207 AV		

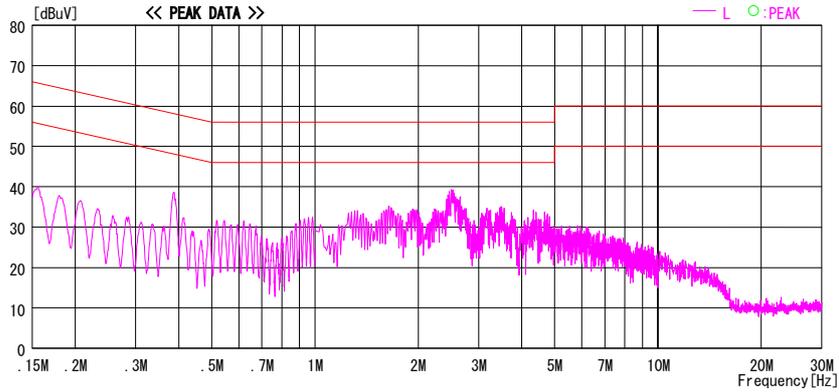
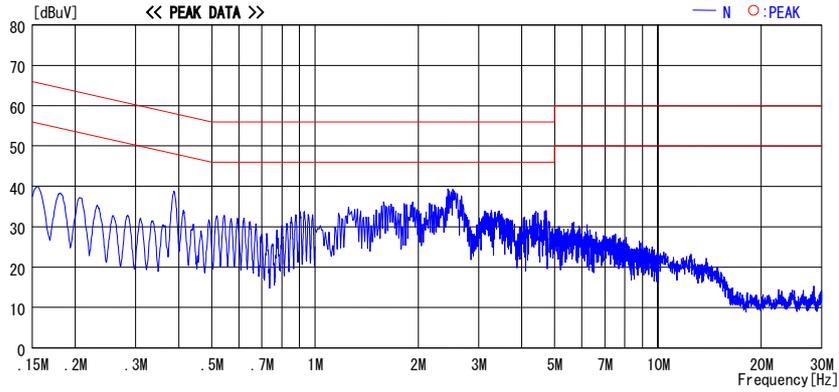


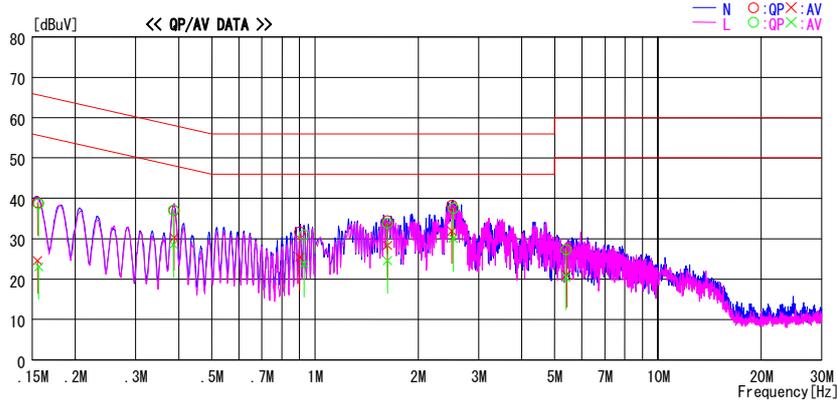
CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuA]=READING[dBuV]+C.F[dB] (Probe factor+CABLE LOSS)  
 Except for the above table: adequate margin data below the limits.

## Conducted Emission Rx, Ch. Mid

### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation	Report No. : 28EE0154-HO
Kind of EUT : WCDMA & Tri-band GSM Dual mode	Power : AC 120V / 60Hz
Mobile phone / Bluetooth Enable	Temp./Humi. : 21deg. C / 40%
Operator : Tomotaka Sasagawa	
Model No. : SX862	
Serial No. : Q04401/11/108146/5	
Mode / Remarks : Receiving 2441MHz	
LIMIT : FCC15.207 QP	
FCC15.207 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]	
0.15520	38.7	24.3	0.3	39.0	24.6	65.7	55.7	26.7	31.1	N
0.38853	36.7	30.0	0.3	37.0	30.3	58.1	48.1	21.1	17.8	N
0.90250	31.4	25.1	0.3	31.7	25.4	56.0	46.0	24.3	20.6	N
1.62606	34.0	27.9	0.4	34.4	28.3	56.0	46.0	21.6	17.7	N
2.50582	37.8	31.4	0.5	38.3	31.9	56.0	46.0	17.7	14.1	N
5.42267	26.7	20.3	0.8	27.5	21.1	60.0	50.0	32.5	28.9	N
0.15644	38.4	22.8	0.3	38.7	23.1	65.7	55.7	27.0	32.6	L
0.38659	36.8	28.2	0.3	37.1	28.5	58.1	48.1	21.0	19.6	L
0.92810	30.6	23.4	0.3	30.9	23.7	56.0	46.0	25.1	22.3	L
1.62592	33.5	24.2	0.4	33.9	24.6	56.0	46.0	22.1	21.4	L
2.53174	37.1	29.5	0.5	37.6	30.0	56.0	46.0	18.4	16.0	L
5.39749	26.5	19.7	0.8	27.3	20.5	60.0	50.0	32.7	29.5	L

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

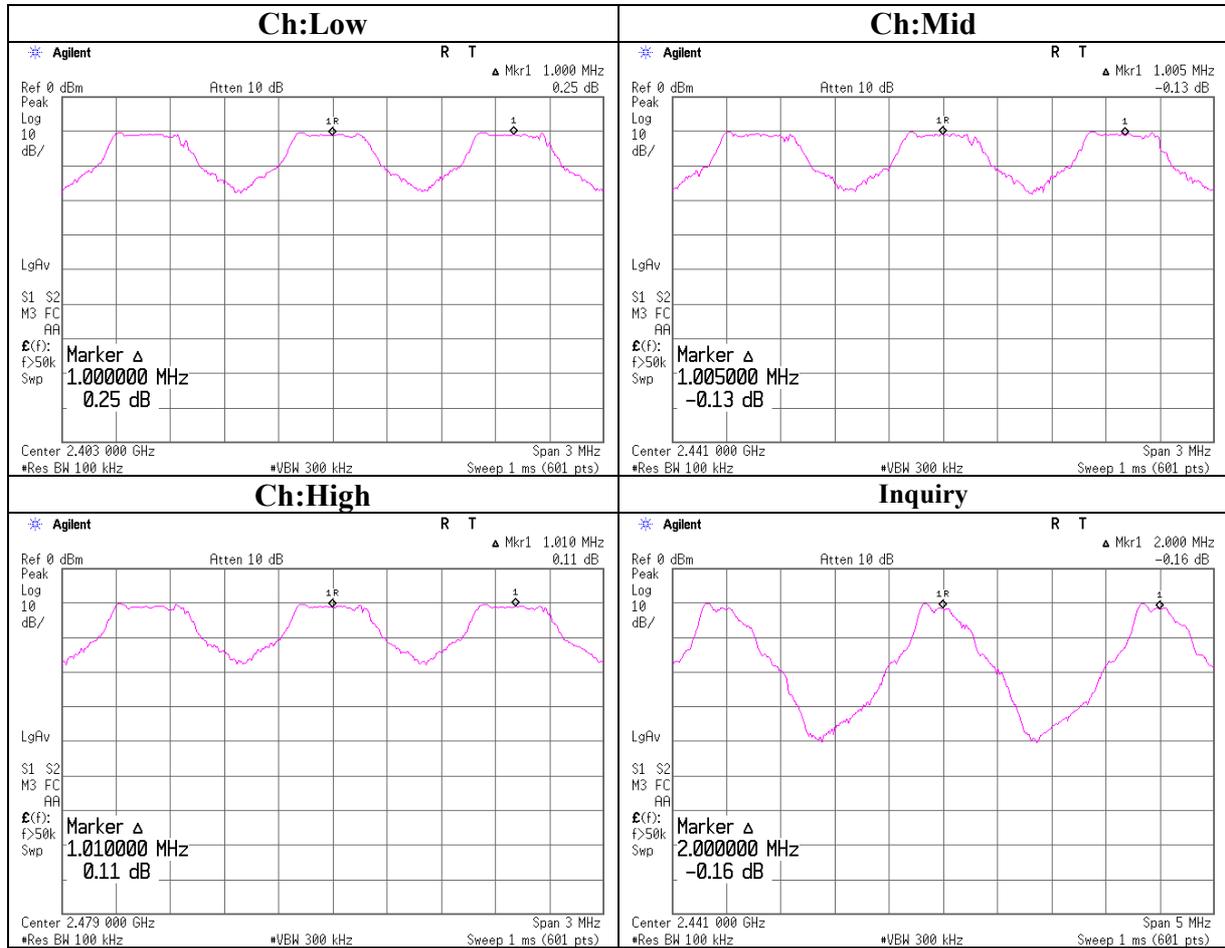
UL Japan, Inc.  
Head Office EMC Lab. No.6 Shielded Room

Company : Sharp Corporation  
Equipment : WCDMA & Tri-band GSM Dual mode  
Mobile phone / Bluetooth Enable  
Model No. : SX862  
Serial No. : 004401/11/108126/7  
Power : AC 120V / 60Hz  
Mode : Bluetooth Tx(Hopping on)/Inquiry

Regulation : FCC15.247(a)(1)/RSS-210A8.1(b)  
Test distance : -  
Date : 01/16/2008  
Temperature : 23deg.C  
Humidity : 32%  
Engineer : Takumi Shimada

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	>two-thirds of 0.945MHz (20dB Bandwidth) or 25[kHz](whichever is greater)
Mid	2441.0	1.005	>two-thirds of 0.950MHz (20dB Bandwidth) or 25[kHz](whichever is greater)
High	2480.0	1.010	>two-thirds of 0.955MHz (20dB Bandwidth) or 25[kHz](whichever is greater)
Inquiry	2441.0	2.000	>two-thirds of 0.780MHz (20dB Bandwidth) or 25[kHz](whichever is greater)

### Carrier Frequency Separation



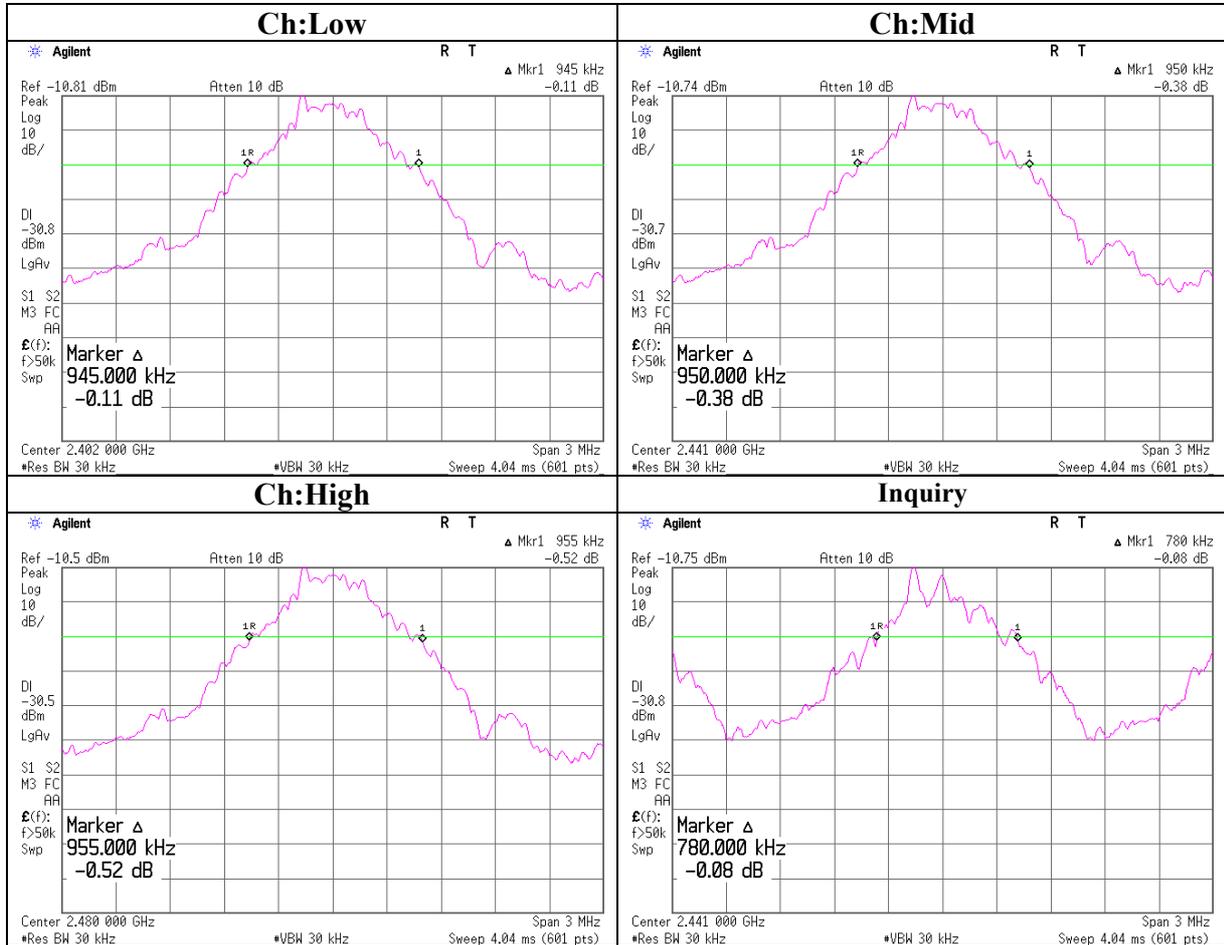
## 20dB Bandwidth

UL Japan, Inc.  
Head Office EMC Lab. No.6 Shielded Room

Company	: Sharp Corporation	Regulation	: FCC15.247(a)(1)/RSS-210A8.1(b)
Equipment	: WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable	Test distance	: -
Model No.	: SX862	Date	: 01/16/2008
Serial No.	: 004401/11/108126/7	Temperature	: 23deg.C
Power	: AC 120V / 60Hz	Humidity	: 32%
Mode	: Bluetooth Tx(Hopping off)/Inquiry	Engineer	: Takumi Shimada

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.945	-
Mid	2441.0	0.950	-
High	2480.0	0.955	-
Inquiry	2441.0	0.780	-

**20dB Bandwidth**



## Number of Hopping Frequency

UL Japan, Inc.  
Head Office EMC Lab. No.6 Shielded Room

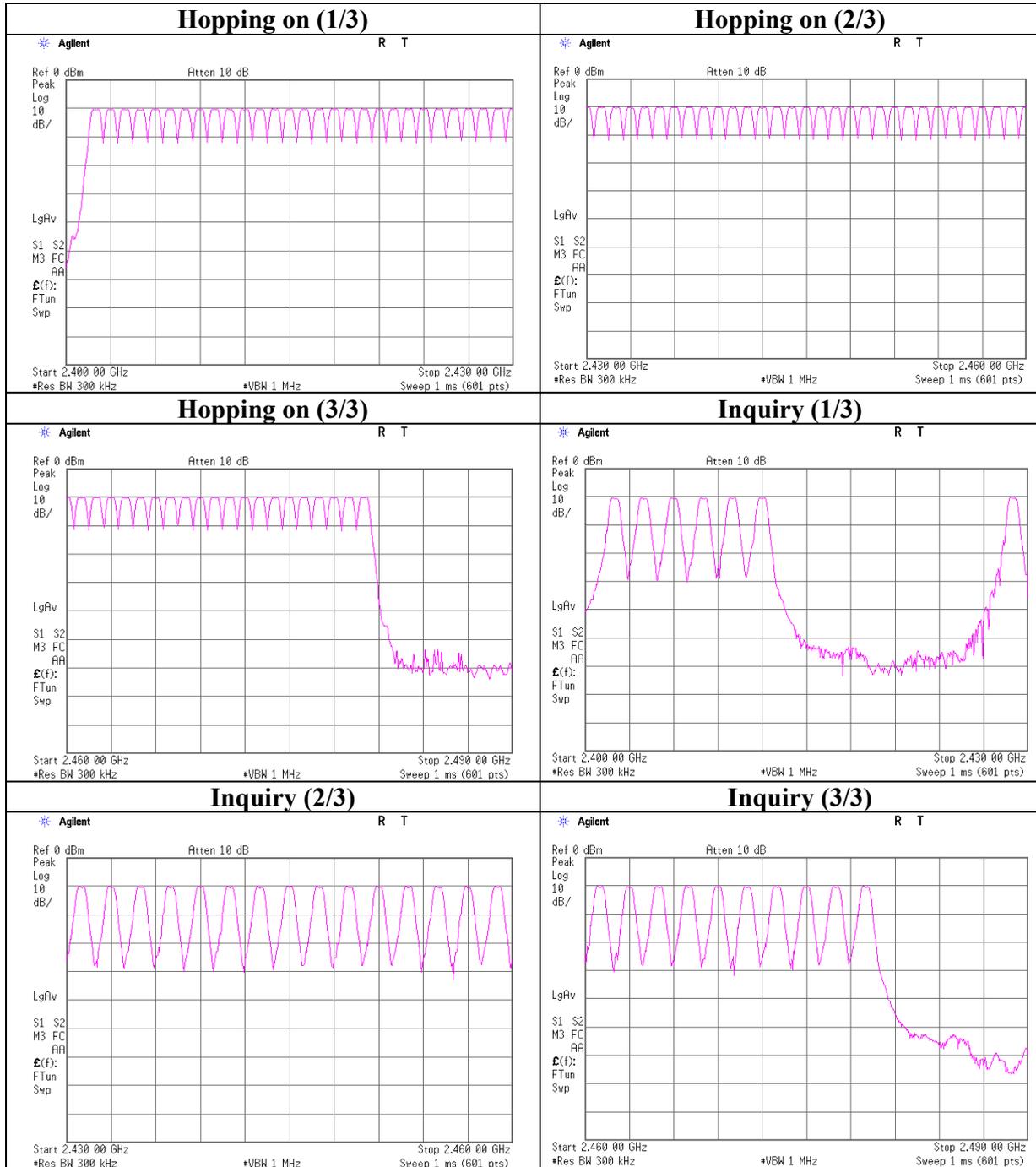
Company : Sharp Corporation  
Equipment : WCDMA & Tri-band GSM Dual mode  
                  Mobile phone / Bluetooth Enable  
Model No. : SX862  
Serial No. : 004401/11/108126/7  
Power : AC 120V / 60Hz  
Mode : Bluetooth Tx(Hopping on)/Inquiry

Regulation : FCC15.247(a)(1)/RSS-210A8.1(b)  
Test distance : -  
Date : 01/16/2008  
Temperature : 23deg.C  
Humidity : 32%  
Engineer : Takumi Shimada

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

Mode	Number of channel [number]	Limit [time]
Inquiry	32	$\geq 15$

**Number of Hopping Frequency**



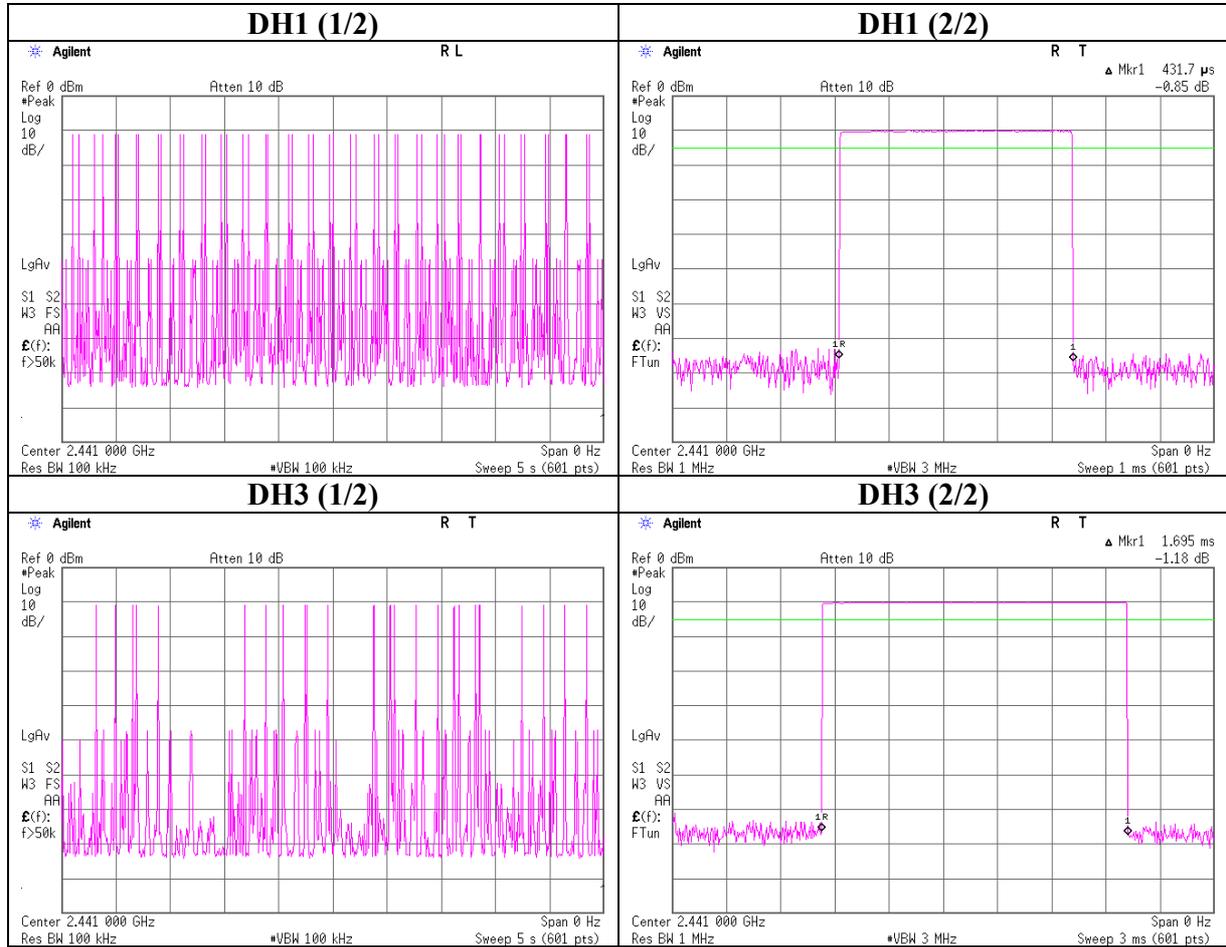
### Dwell time

UL Japan, Inc.  
Head Office EMC Lab. No.6 Shielded Room

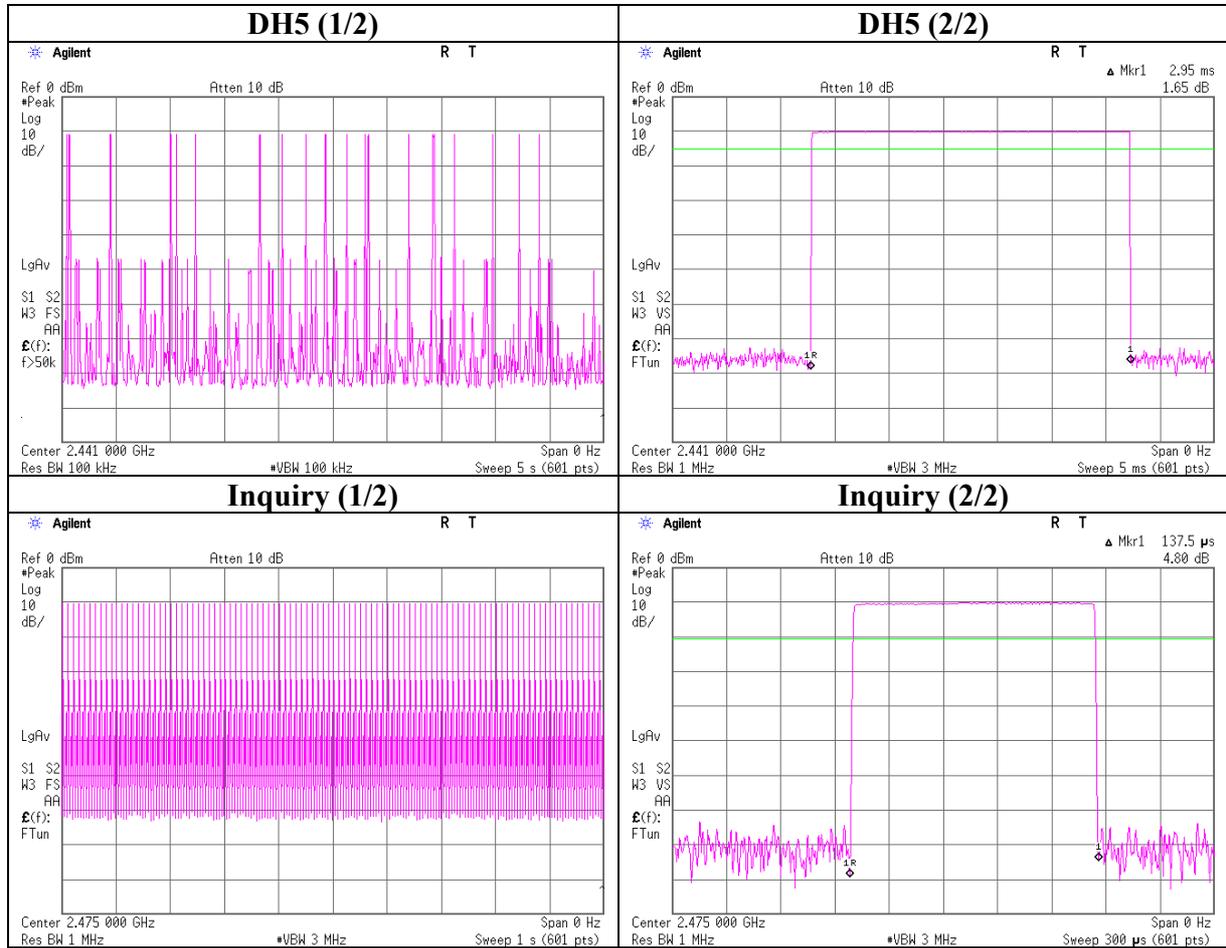
Company : Sharp Corporation Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)  
Equipment : WCDMA & Tri-band GSM Dual mode Test distance : -  
Mobile phone / Bluetooth Enable Date : 01/16/2008  
Model No. : SX862 Temperature : 23deg.C  
Serial No. : 004401/11/108126/7 Humidity : 32%  
Power : AC 120V / 60Hz Engineer : Takumi Shimada  
Mode : Tx (Hopping on) / Inquiry

Mode	Number of transmission		Length of transmission time [msec]	Result [msec]	Limit [msec]
	in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period				
DH1	50 times / 5 sec. x	31.6 sec. = 316 times	0.432	136	400
DH3	24 times / 5 sec. x	31.6 sec. = 151 times	1.695	256	400
DH5	18 times / 5 sec. x	31.6 sec. = 117 times	2.950	345	400
Inquiry	100 times / 1 sec. x	12.8 sec. = 1280 times	0.138	176	400

**Dwell time**



**Dwell time**



## Maximum Peak Output Power

UL Japan, Inc.  
Head Office EMC Lab. No.6 Shielded Room

Company	: Sharp Corporation	Regulation	: FCC15.247(b)(1)/RSS-210A8.4(2)
Equipment	: WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth Enable	Test distance	: -
Model No.	: SX862	Date	: 01/16/2008
Serial No.	: 004401/11/108146/5	Temperature	: 23deg.C
Power	: AC 120V / 60Hz	Humidity	: 32%
Mode	: Tx(Hopping Off)/Inquiry	Engineer	: Takumi Shimada

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-10.18	1.16	10.08	1.06	1.28	20.97	125	19.91
Mid	2441.0	-10.02	1.17	10.08	1.23	1.33	20.97	125	19.74
High	2480.0	-9.96	1.17	10.08	1.29	1.35	20.97	125	19.68
Inquiry	2441.0	-10.27	1.17	10.08	0.98	1.25	20.97	125	19.99

Sample Calculation:

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

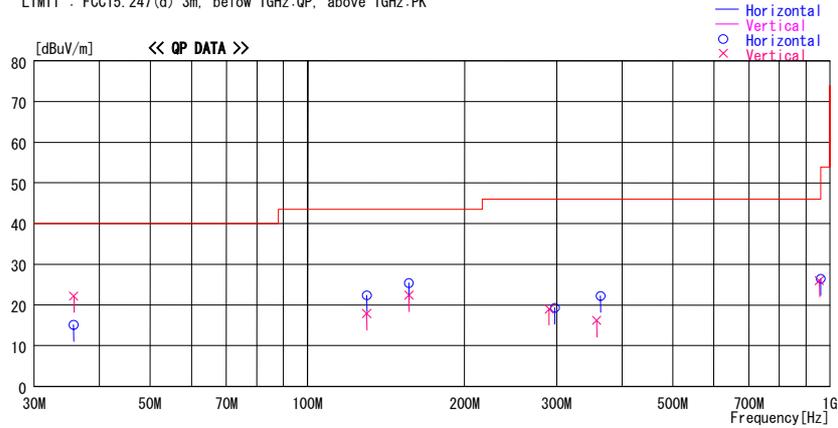
\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

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

**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation Report No. : 28EE0154-HO  
Kind of EUT : WCDMA & Tri-band GSM Dual mode Power : AC 120V / 60Hz  
Mobile phone / Bluetooth Enable Temp./Humi. : 21deg. C. / 45%  
Model No. : SX862 Operator : Tomotaka Sasagawa  
Serial No. : 004401/11/108146/5  
Mode / Remarks : Transmitting 2402MHz (Max-axis H:Z-axis / V:Z-axis)  
LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
35.715	30.6	QP	16.5	-24.9	22.2	92	100	Vert.	40.0	17.8
35.670	23.4	QP	16.6	-24.9	15.1	107	300	Hori.	40.0	24.9
129.899	27.6	QP	13.9	-23.6	17.9	64	100	Vert.	43.5	25.6
130.003	32.1	QP	13.9	-23.6	22.4	200	300	Hori.	43.5	21.1
156.550	33.2	QP	15.5	-23.3	25.4	0	300	Hori.	43.5	18.1
156.550	30.2	QP	15.5	-23.3	22.4	128	100	Vert.	43.5	21.1
297.350	21.9	QP	19.5	-22.1	19.3	1	300	Hori.	46.0	26.7
290.280	22.0	QP	19.2	-22.2	19.0	175	100	Vert.	46.0	27.0
363.995	27.6	QP	16.3	-21.7	22.2	0	100	Hori.	46.0	23.8
357.930	21.8	QP	16.1	-21.7	16.2	337	100	Vert.	46.0	29.8
959.570	21.1	QP	22.7	-17.4	26.4	212	100	Hori.	46.0	19.6
955.260	20.8	QP	22.6	-17.4	26.0	359	100	Vert.	46.0	20.0

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

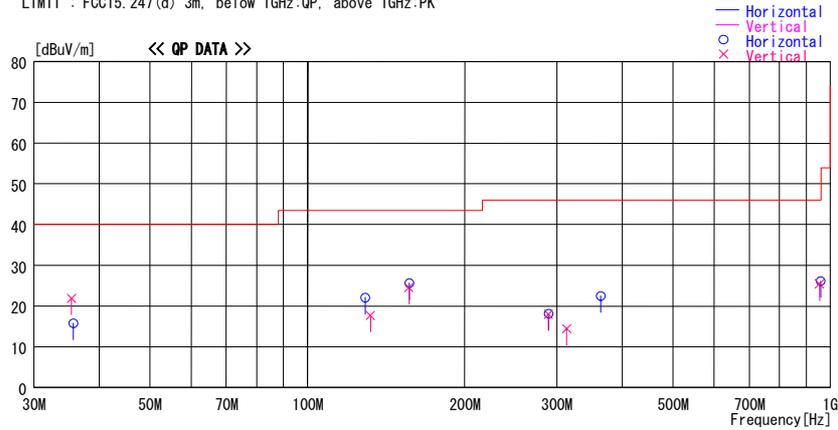
\*The test result is rounded off to one or two decimal places, so some differences might be observed.

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

**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation Report No. : 28EE0154-HO  
Kind of EUT : WCDMA & Tri-band GSM Dual mode Power : AC 120V / 60Hz  
Mobile phone / Bluetooth Enable Temp./Humi. : 21deg.C. / 45%  
Model No. : SX862 Operator : Tomotaka Sasagawa  
Serial No. : 004401/11/108146/5  
Mode / Remarks : Transmitting 2441MHz (Max-axis H:Z-axis / V:Z-axis)  
LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor	Gain						
35.400	30.1	QP	16.7	-24.9	21.9	0	100	Vert.	40.0	18.1
35.670	24.1	QP	16.6	-24.9	15.8	355	300	Hori.	40.0	24.2
132.059	27.2	QP	14.1	-23.6	17.7	0	100	Vert.	43.5	25.8
129.112	31.9	QP	13.8	-23.6	22.1	359	300	Hori.	43.5	21.4
156.360	32.4	QP	15.4	-23.3	24.5	187	100	Vert.	43.5	19.0
156.630	33.4	QP	15.5	-23.3	25.6	359	300	Hori.	43.5	17.9
288.930	21.1	QP	19.1	-22.2	18.0	0	100	Vert.	46.0	28.0
289.200	21.2	QP	19.1	-22.2	18.1	350	300	Hori.	46.0	27.9
363.992	27.9	QP	16.3	-21.7	22.5	335	100	Hori.	46.0	23.5
313.300	21.9	QP	14.5	-22.0	14.4	287	100	Vert.	46.0	31.6
958.776	20.9	QP	22.6	-17.4	26.1	353	100	Hori.	46.0	19.9
953.811	20.2	QP	22.6	-17.4	25.4	0	100	Vert.	46.0	20.6

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)

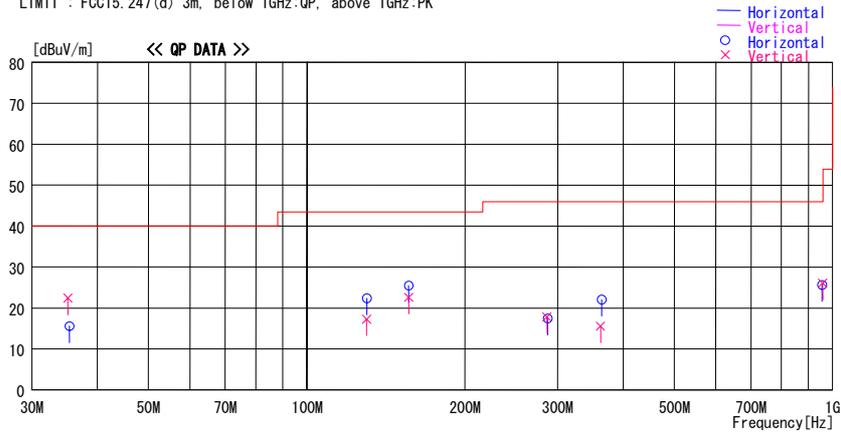
\*The test result is rounded off to one or two decimal places, so some differences might be observed.

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

**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation Report No. : 28EE0154-HO  
Kind of EUT : WCDMA & Tri-band GSM Dual mode Mobile Power : AC 120V / 60Hz  
phone / Bluetooth Enable Temp./Humi. : 21deg. C. / 45%  
Model No. : SX862 Operator : Tomotaka Sasagawa  
Serial No. : 004401/11/108146/5  
Mode / Remarks : Transmitting 2480MHz (Max-axis H:Z-axis / V:Z-axis)  
LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Loss & Gain [dB]						
35.130	30.4	QP	16.9	-24.9	22.4	35	100	Vert.	40.0	17.6
35.400	23.8	QP	16.7	-24.9	15.6	359	300	Hori.	40.0	24.4
129.998	27.0	QP	13.9	-23.6	17.3	0	100	Vert.	43.5	26.2
130.221	32.1	QP	13.9	-23.6	22.4	295	300	Hori.	43.5	21.1
156.330	30.5	QP	15.4	-23.3	22.6	0	100	Vert.	43.5	20.9
156.221	33.4	QP	15.4	-23.3	25.5	349	300	Hori.	43.5	18.0
286.230	21.0	QP	19.0	-22.2	17.8	20	100	Vert.	46.0	28.2
287.310	20.7	QP	19.0	-22.2	17.5	359	300	Hori.	46.0	28.5
362.301	21.1	QP	16.2	-21.7	15.6	337	100	Vert.	46.0	30.4
363.993	27.5	QP	16.3	-21.7	22.1	348	100	Hori.	46.0	23.9
955.911	20.4	QP	22.6	-17.4	25.6	334	100	Hori.	46.0	20.4
958.012	20.9	QP	22.6	-17.4	26.1	0	100	Vert.	46.0	19.9

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)

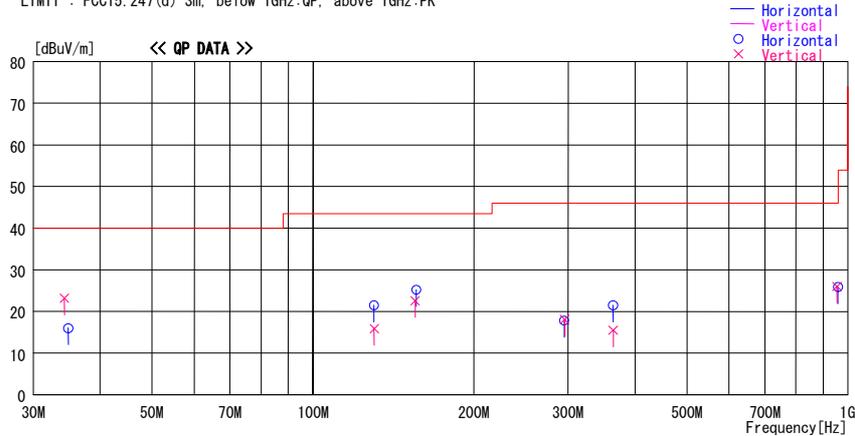
\*The test result is rounded off to one or two decimal places, so some differences might be observed.

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

**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2008/01/07

Company : Sharp Corporation Report No. : 28EE0154-HO  
Kind of EUT : WCDMA & Tri-band GSM Dual mode Power : AC 120V / 60Hz  
Mobile phone / Bluetooth Enable Temp./Humi. : 21deg.C / 45%  
Operator : Tomotaka Sasagawa  
Model No. : SX862  
Serial No. : 004401/11/108146/5  
Mode / Remarks : Receiving 2441MHz (Max-axis H:Z-axis / V:Z-axis)  
LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	
			Factor [dB/m]	Loss& Gain [dB]					[dBuV/m]	[dB]
34.320	30.8	QP	17.3	-24.9	23.2	0	100	Vert.	40.0	16.8
34.860	23.8	QP	17.1	-24.9	16.0	359	300	Hori.	40.0	24.0
129.887	31.2	QP	13.9	-23.6	21.5	31	300	Hori.	43.5	22.0
130.221	25.6	QP	13.9	-23.6	15.9	0	100	Vert.	43.5	27.6
155.320	30.5	QP	15.4	-23.3	22.6	167	100	Vert.	43.5	20.9
156.090	33.1	QP	15.4	-23.3	25.2	359	300	Hori.	43.5	18.3
294.870	20.6	QP	19.4	-22.1	17.9	359	300	Hori.	46.0	28.1
295.663	20.8	QP	19.4	-22.1	18.1	88	100	Vert.	46.0	27.9
363.998	26.9	QP	16.3	-21.7	21.5	359	100	Hori.	46.0	24.5
364.401	20.9	QP	16.3	-21.7	15.5	179	100	Vert.	46.0	30.5
958.334	20.7	QP	22.6	-17.4	25.9	359	100	Hori.	46.0	20.1
954.332	20.8	QP	22.6	-17.4	26.0	265	100	Vert.	46.0	20.0

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

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

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

UL Japan, Inc.  
Head Office EMC Lab. No3 Semi Anechoic Chamber

Company : Sharp Corporation  
Equipment : WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth enable  
Model No. : SX862  
Sample No. : 004401/11/108146/5  
Power : AC120V / 60Hz  
Mode : Transmitting mode 2402MHz  
Remarks : Hor Z -axis, Ver Z-axis

REPORT NO : 28EE0154-HO  
REGULATION : FCC15.247(d)/RSS-210A8.5  
TEST DISTANCE : 3/1m  
DATE : 01/07/2008  
TEMPERATURE : 22deg.C  
HUMIDITY : 42%  
ENGINEER : Tomotaka Sasagawa

**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]		Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss									
1	2390.0	40.5	41.2	27.3	31.5	3.0	0.0	39.3	40.0	73.9	34.6	33.9	
2	*2400.0	71.6	75.3	27.3	31.5	3.0	0.0	70.4	74.1	73.9	-	-	
3	4804.0	41.9	44.5	31.5	30.8	4.7	0.4	47.7	50.3	73.9	26.2	23.6	
4	7206.0	41.5	41.4	35.4	31.3	5.6	0.4	51.6	51.5	73.9	22.3	22.4	
5	9608.0	40.9	41.1	37.7	31.9	7.0	0.5	54.2	54.4	73.9	19.7	19.5	
		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	45.4	45.9	38.7	32.2	8.1	0.0	50.5	51.0	73.9	23.4	22.9	

**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]		Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss									
1	2390.0	29.9	29.8	27.3	31.5	3.0	0.0	28.7	28.6	53.9	25.2	25.3	
2	*2400.0	59.7	61.6	27.3	31.5	3.0	0.0	58.5	60.4	53.9	-	-	
3	4804.0	30.2	35.6	31.5	30.8	4.7	0.4	36.0	41.4	53.9	17.9	12.5	
4	7206.0	29.6	29.6	35.4	31.3	5.6	0.4	39.7	39.7	53.9	14.2	14.2	
5	9608.0	30.0	29.9	37.7	31.9	7.0	0.5	43.3	43.2	53.9	10.6	10.7	
		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	35.9	36.2	38.7	32.2	8.1	0.0	41.0	41.3	53.9	12.9	12.6	

\* 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]		Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss									
1	2402.0	91.8	98.1	27.3	31.5	3.0	0.0	90.6	96.9	-	-	-	
2	2400.0	42.9	46.5	27.3	31.5	3.0	0.0	41.7	45.3	Funda-20dB	28.9	31.6	

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. No3 Semi Anechoic Chamber

Company	: Sharp Corporation	REPORT NO	: 28EE0154-HO
Equipment	: WCDMA & Tri-band GSM Dual mode Mobile phone / Bluetooth enable	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model No.	: SX862	TEST DISTANCE	: 3/1m
Sample No.	: 004401/11/108146/5	DATE	: 01/07/2008
Power	: AC120V / 60Hz	TEMPERATURE	: 22deg.C
Mode	: Transmitting mode 2441MHz	HUMIDITY	: 42%
Remarks	: Hor Z -axis, Ver Z-axis	ENGINEER	: Tomotaka Sasagawa

**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
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	4882.0	42.6	46.1	31.7	30.7	4.7	0.4	48.7	52.2	73.9	25.2	21.7
2	7323.0	41.0	40.8	35.9	31.3	5.3	0.4	51.3	51.1	73.9	22.6	22.8
3	9764.0	40.2	41.2	38.2	32.1	6.6	0.5	53.4	54.4	73.9	20.5	19.5
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
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	44.7	45.0	38.8	30.3	9.4	0.0	53.1	53.4	73.9	20.8	20.5

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV]	VER					HOR	VER		HOR	VER
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	4882.0	30.9	35.5	31.7	30.7	4.7	0.4	37.0	41.6	53.9	16.9	12.3
2	7323.0	29.5	30.1	35.9	31.3	5.3	0.4	39.8	40.4	53.9	14.1	13.5
3	9764.0	29.7	29.8	38.2	32.1	6.6	0.5	42.9	43.0	53.9	11.0	10.9
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
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	35.6	34.9	38.8	30.3	9.4	0.0	44.0	43.3	53.9	9.9	10.6

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. No3 Semi Anechoic Chamber

Company : Sharp Corporation  
Equipment : WCDMA & Tri-band GSM Dual mode Mobile phone / REPORT NO : 28EE0154-HO  
Bluetooth enable REGULATION : FCC15.247(d)/RSS-210A8.5  
Model No. : SX862 TEST DISTANCE : 3/1m  
Sample No. : 004401/11/108146/5 DATE : 01/07/2008  
Power : AC120V / 60Hz TEMPERATURE : 22deg.C  
Mode : Transmitting mode 2480MHz HUMIDITY : 42%  
Remarks : Hor Z -axis, Ver Z-axis ENGINEER : Tomotaka Sasagawa

**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
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	2483.5	49.1	57.5	27.4	31.5	3.1	0.0	48.1	56.5	73.9	25.8	17.4
2	4960.0	43.7	47.0	31.8	30.7	4.8	0.4	50.0	53.3	73.9	23.9	20.6
3	7440.0	40.5	40.5	36.1	31.3	5.4	0.4	51.1	51.1	73.9	22.8	22.8
4	9920.0	40.5	40.4	38.2	32.2	6.6	0.5	53.6	53.5	73.9	20.3	20.4
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
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	44.9	38.9	30.1	9.4	0.0	54.0	53.6	73.9	19.9	20.3

**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
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	2483.5	43.1	49.0	27.4	31.5	3.1	0.0	42.1	48.0	53.9	11.8	5.9
2	4960.0	32.4	37.5	31.8	30.7	4.8	0.4	38.7	43.8	53.9	15.2	10.1
3	7440.0	30.2	30.4	36.1	31.3	5.4	0.4	40.8	41.0	53.9	13.1	12.9
4	9920.0	30.6	30.1	38.2	32.2	6.6	0.5	43.7	43.2	53.9	10.2	10.7
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
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	35.1	34.7	38.9	30.1	9.4	0.0	43.8	43.4	53.9	10.1	10.5

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. No3 Semi Anechoic Chamber

Company : Sharp Corporation  
Equipment : WCDMA & Tri-band GSM Dual mode Mobile Phone / REPORT NO : 28EE0154-HO  
Bluetooth enable REGULATION : FCC15.247(d)/RSS-210A8.5  
Model No. : SX862 TEST DISTANCE : 3/1m  
Sample No. : 004401/11/108146/5 DATE : 01/07/2008  
Power : AC120V / 60Hz TEMPERATURE : 22deg.C  
Mode : Receiving mode 2441MHz HUMIDITY : 42%  
Remarks : Hor Z -axis, Ver Z-axis ENGINEER : Tomotaka Sasagawa

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

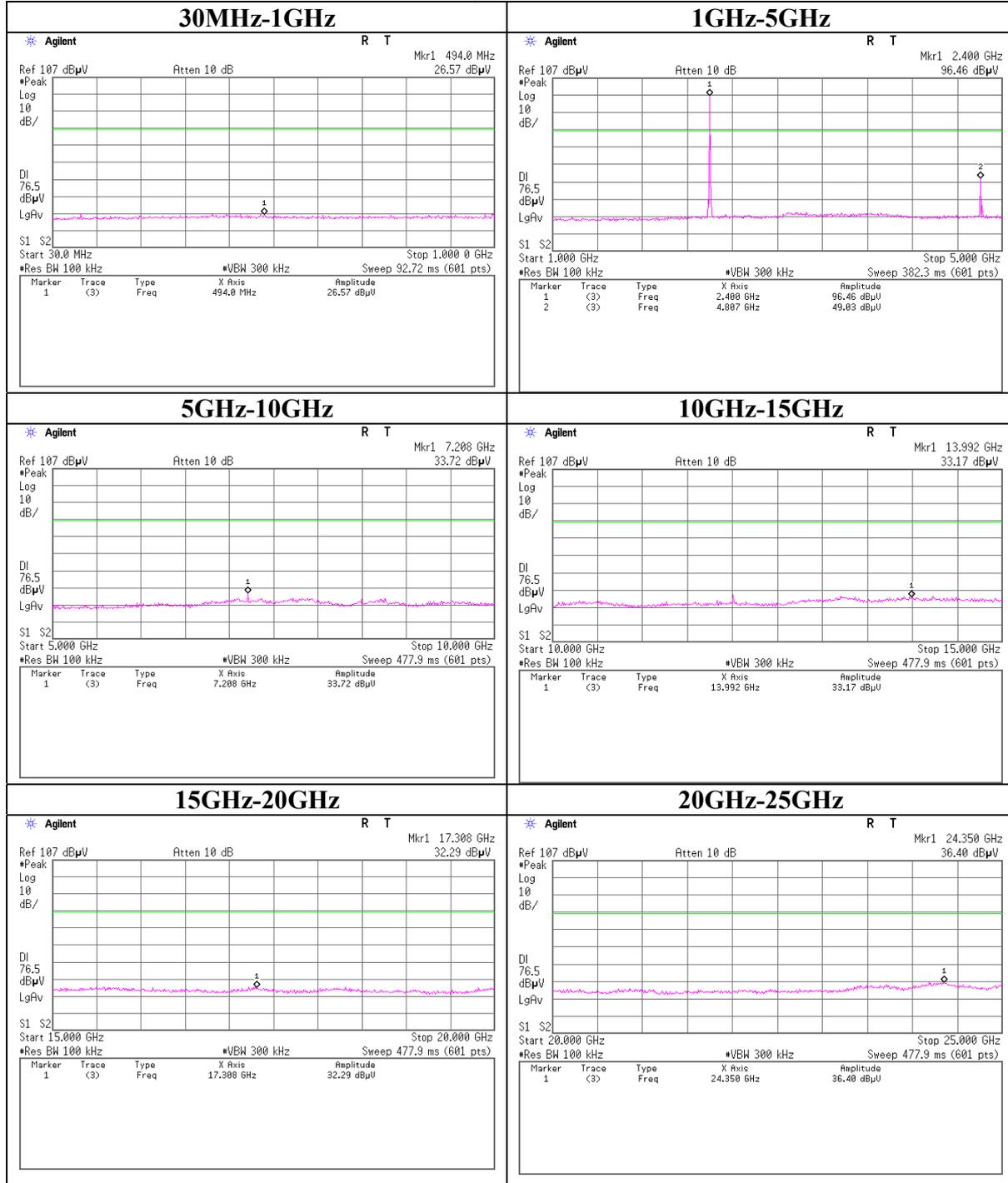
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2441.0	41.6	40.9	27.4	31.5	3.1	0.0	40.6	39.9	73.9	33.3	34.0
2	4882.0	39.2	39.9	31.7	30.7	3.9	0.0	44.1	44.8	73.9	29.8	29.1
3	7323.0	40.1	39.5	35.9	31.3	4.6	0.0	49.3	48.7	73.9	24.6	25.2

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

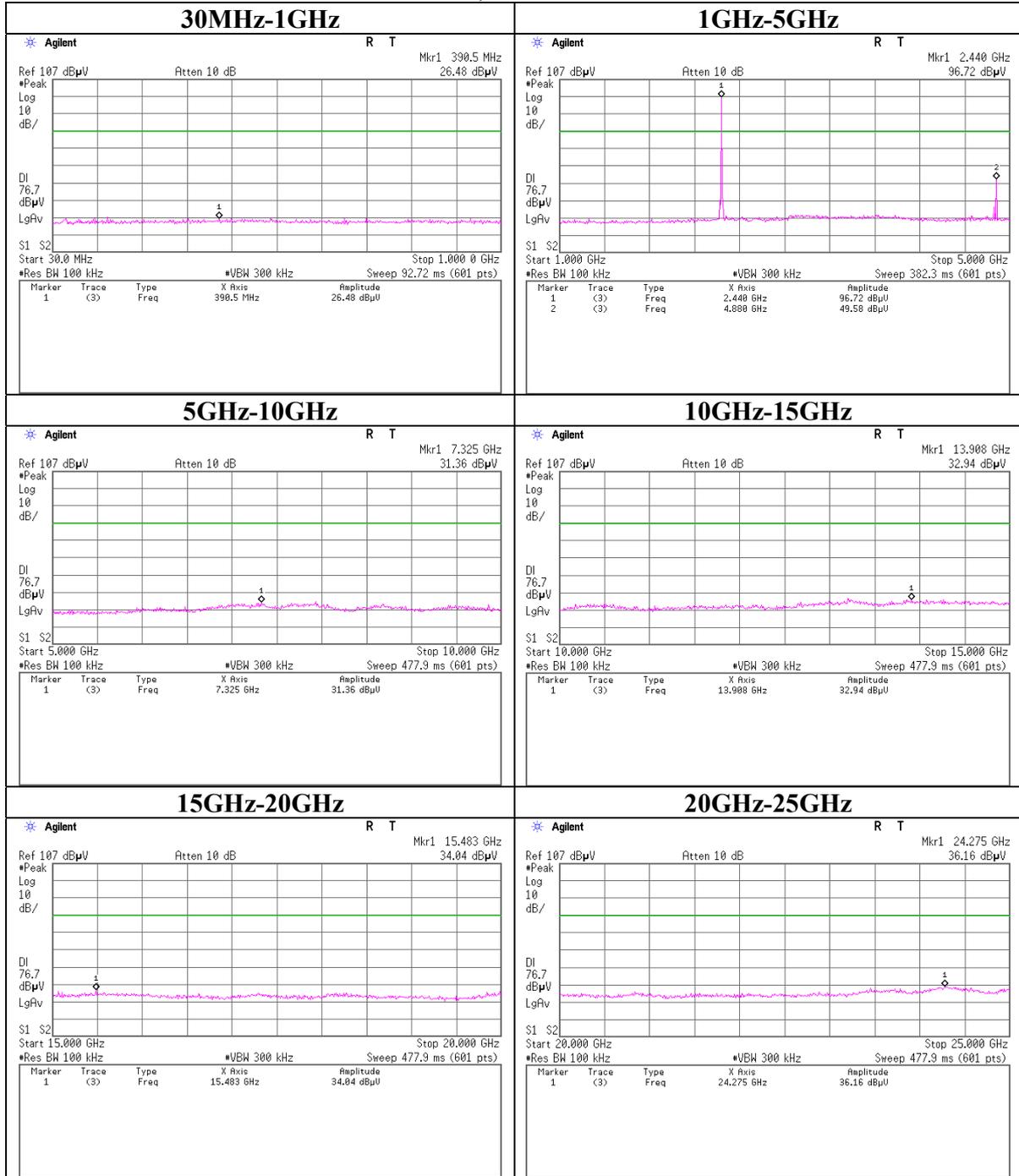
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2441.0	29.5	29.8	27.1	32.1	2.5	0.0	27.0	27.3	73.9	46.9	46.6
2	4882.0	29.8	30.1	31.7	30.7	3.9	0.0	34.7	35.0	53.9	19.2	18.9
3	7323.0	29.8	29.7	35.9	31.3	4.6	0.0	39.0	38.9	53.9	14.9	15.0

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.

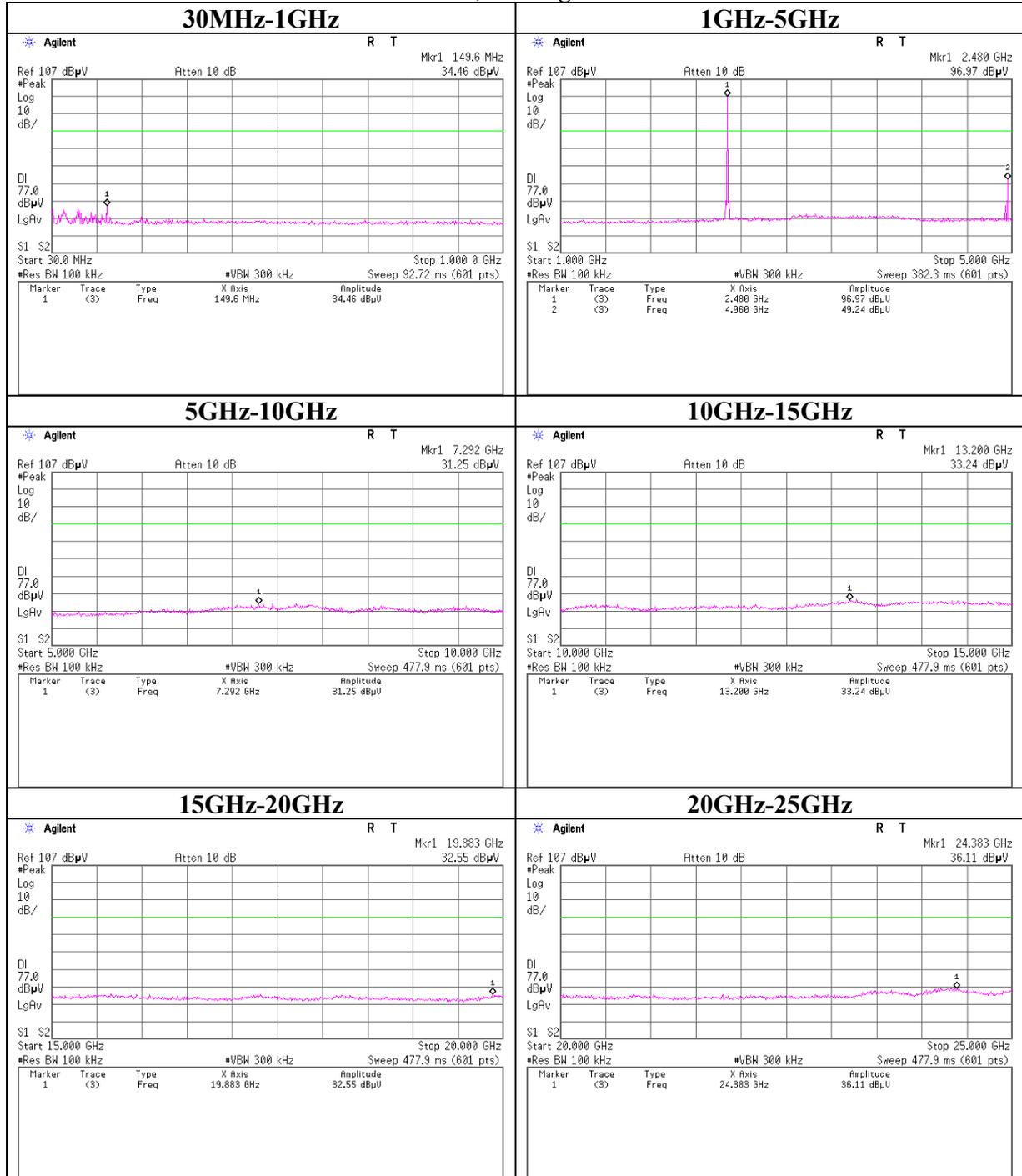
**Conducted Spurious Emission**  
**Tx, Ch:Low**



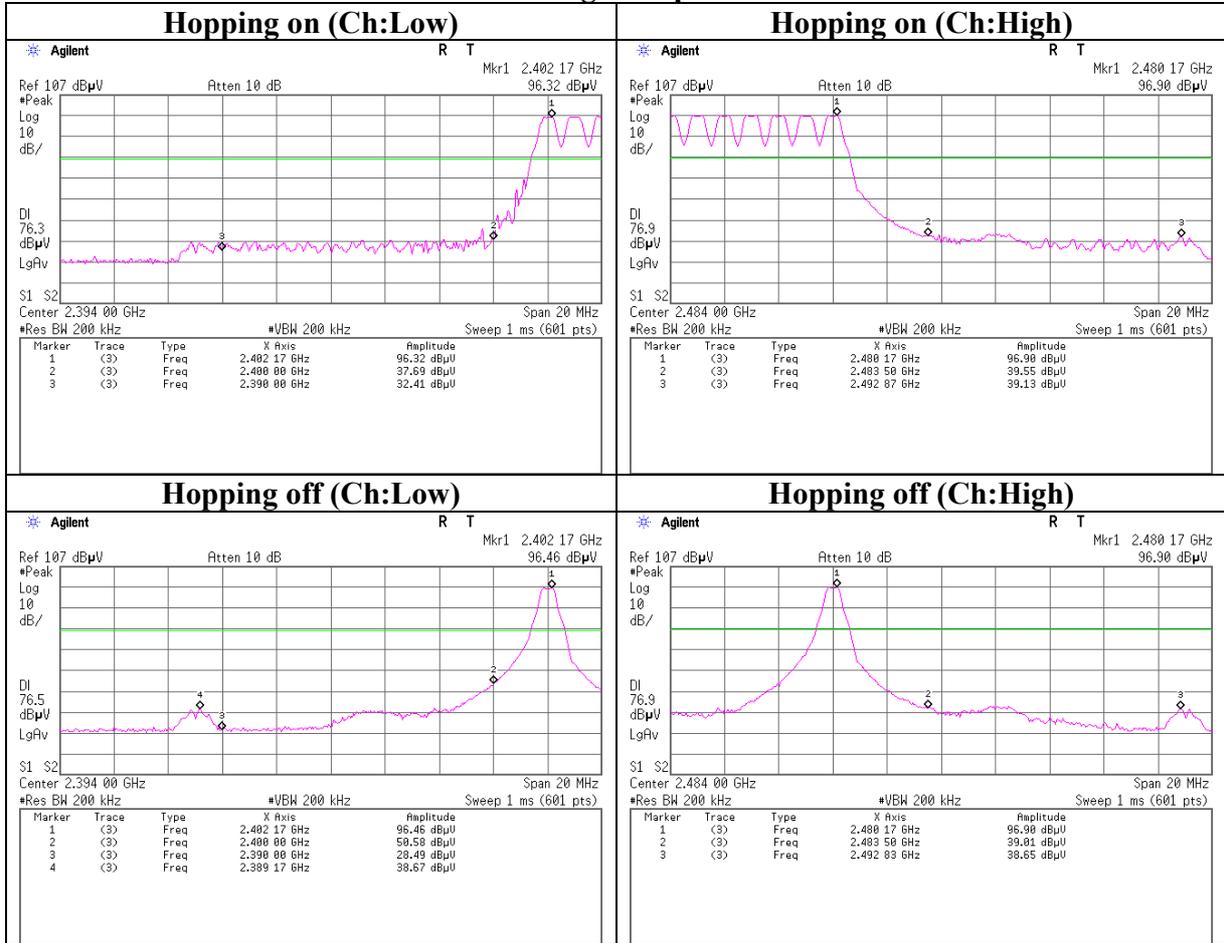
**Conducted Spurious Emission**  
**Tx, Ch:Mid**



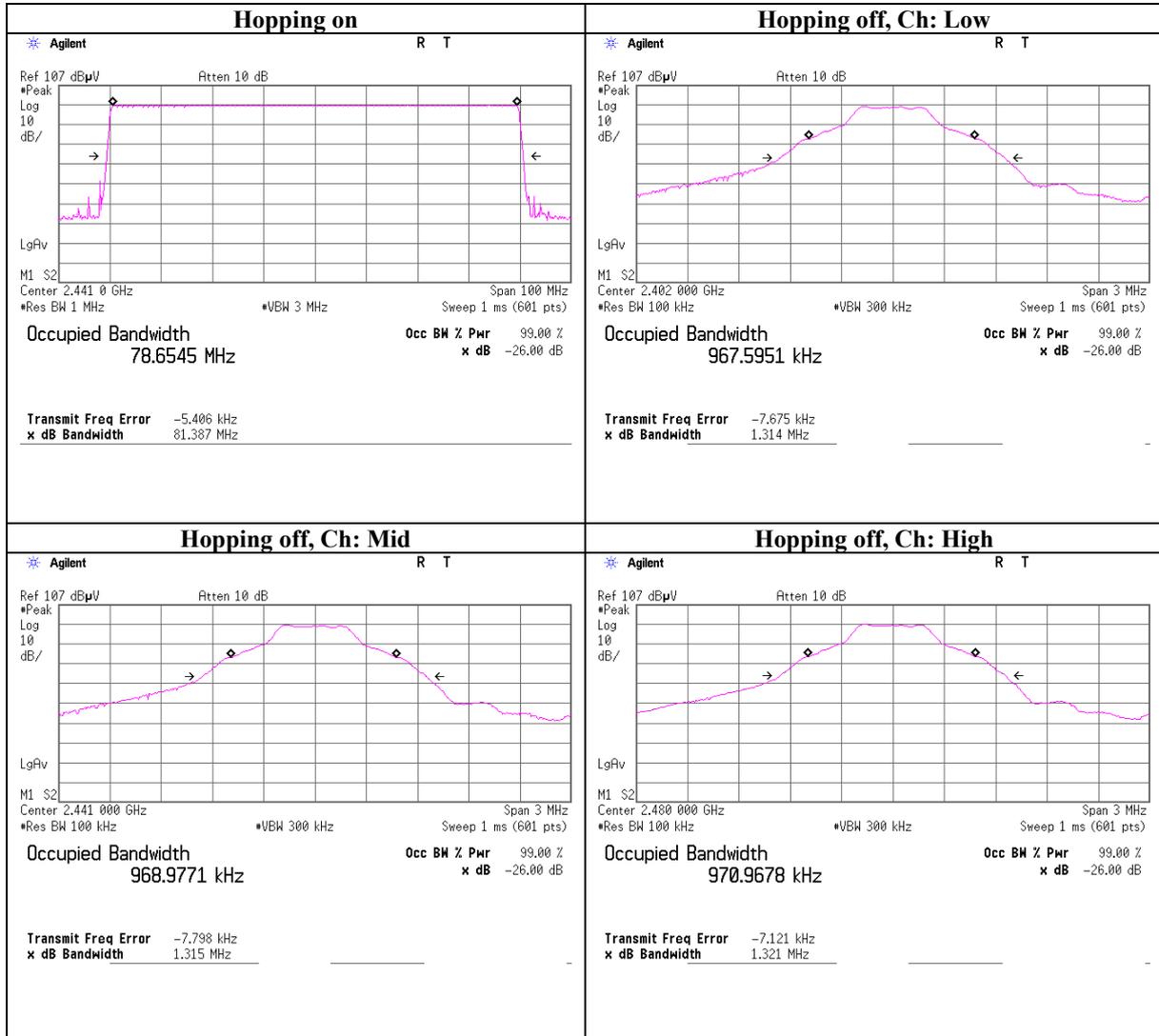
**Conducted Spurious Emission**  
**Tx, Ch:High**



**Conducted Spurious Emission**  
**Band Edge compliance**



### 99% Occupied Bandwidth



### **APPENDIX 3:Test instruments**

#### **EMI test equipment**

<b>Control No.</b>	<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Test Item</b>	<b>Calibration Date * Interval(month)</b>
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE / CE	-
MAEC-03	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE / CE	2007/03/05 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	RE / CE	2008/01/10 * 12
MJM-06	Measure	PROMART	SEN1955	RE / CE	-
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2007/04/14 * 12
MCC-56	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/03/29 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	RE	2007/12/10 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	RE	2007/03/02 * 12
MSA-09	Spectrum Analyzer	Advantest	R3273	RE / CE	2007/12/21 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	RE	2007/04/06 * 12
MCC-25	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/27 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/01/19 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2007/01/19 * 12
MAT-31	Attenuator(6dB)	TME	UFA-01	RE	2007/03/05 * 12
MCC-51	Coaxial cable	UL Japan	-	RE / CE	2007/07/26 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	RE / CE	2007/03/01 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2007/02/22 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	AT	2008/01/10 * 12
MCC-66	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2007/04/03 * 12
MAT-25	Attenuator(10dB)(above 1GHz)	Agilent	8493C	AT	2007/06/28 * 12
MPM-09	Power Meter	Anritsu	ML2495A	AT	2007/09/22 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	AT	2007/07/04 * 12
MPSE-12	Power Sensor	Anritsu	MA2411B	AT	2007/09/22 * 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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