



RADIO TEST REPORT

Test Report No. : 28IE0209-HO

Applicant : Sharp Corporation, Communication Systems Group.
Type of Equipment : WCDMA & Tri-band (900/1800/1900) GSM Dual mode
Mobile Phone / Bluetooth enable
Model No. : 825SH
FCC ID : APYHRO00069
Test regulation : FCC Part 15 Subpart C 2008
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: May 12, 2008

Tested by:


Motoya Imura
EMC Services


Takumi Shimada
EMC Services

Approved by :


Mitsuru Fujimura
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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SECTION 1: Customer information

Company Name : Sharp Corporation, Communication Systems Group.
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Japan
Telephone Number : +81-82-420-1936
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Contact Person : Seiichi Ichikawa

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. : 825SH
Serial No. : 004401/11/123404/9 (Antenna Terminal conducted test)
004401/11/123415/5 (Conducted Emission test and Radiated Emission test)
Rating : AC 120V/60Hz, DC4.0V
Receipt Date of Sample : May 8, 2008
Country of Mass-production : Japan
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: 825SH (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 frequency(ies) in the system : 26MHz, 32.768kHz

[Bluetooth Part]

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
Operating temperature range : -10 to +55 deg. C.

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SECTION 3: Test specification, procedure & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C: 2008, final revised on March 24, 2008

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)

This EUT provides stable voltage(DC2.9V) constantly to RF Module regardless of input voltage and Radiated Emission test was performed with the New Battery. 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	[Tx] QP 18.0dB, 0.22088MHz, L AV 24.1dB, 0.22088MHz, L [Rx] QP 17.6dB, 0.22199MHz, L AV 24.3dB, 0.22199MHz, L	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] 10.6dB 24800.0MHz, AV Hori. / Vert. [Rx] 21.0dB 806.00MHz, QP Hori. / Vert.	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.

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 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	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)

Test	Mode	Tested frequency
Conducted Emission	Bluetooth(BT), Transmitting (Tx), DH5, Payload: PRBS9	2402MHz 2441MHz 2480MHz
	Bluetooth(BT), Receiving (Rx)	2441MHz
Carrier Frequency Separation	Bluetooth(BT), Transmitting (Tx) (Hopping ON)/Inquiry, DH5 Payload: PRBS9	2402MHz 2441MHz 2480MHz
20dB Bandwidth	Bluetooth(BT), Transmitting (Tx) (Hopping Off)/Inquiry, DH5 Payload: PRBS9	2402MHz 2441MHz 2480MHz
Number of Hopping Frequency	Bluetooth(BT), Transmitting (Tx) (Hopping ON)/Inquiry, DH5 Payload: PRBS9	-
Dwell time	Bluetooth(BT), Transmitting (Tx) (Hopping ON)/Inquiry -DH1 -DH3 -DH5	-
Maximum Peak Output Power	Bluetooth(BT), Transmitting (Tx) (Hopping Off)/Inquiry, Payload: PRBS9 -DH5	2402MHz 2441MHz 2480MHz
Spurious Emission (Conducted/Radiated)	Bluetooth(BT), Transmitting (Tx), DH5, Payload: PRBS9	2402MHz 2441MHz 2480MHz
	Bluetooth(BT), Receiving (Rx)	2441MHz
Band Edge Compliance (Conducted)	Bluetooth(BT), Transmitting (Tx), DH5, Payload: PRBS9 -Hopping ON -Hopping OFF	2402MHz 2480MHz
99% Occupied Bandwidth	Bluetooth(BT), Transmitting (Tx), DH5, 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 125mW of AFH mode was used for the test.

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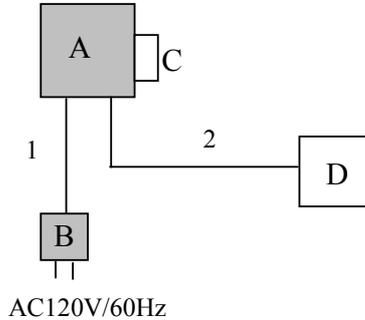
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4.2 Configuration and peripherals



- * 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	825SH	004401/11/123404/9 *2) 004401/11/123415/5 *1)	Sharp Corporation	EUT
B	AC Charger*1)	ZTDAA1	QEA	Sharp Corporation	EUT
C	Lithium-Ion Battery	SHBBW1	-	Sharp Corporation	
D	Stereo Handsfree	-	-	Sharp Corporation	-

*1) Used for Conducted Emission and Radiated Emission tests

*2) Used for Antenna Terminal Conducted tests

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

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SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a urethane platform of nominal size, 0.5m by 1.0m, 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)

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 urethane platform of nominal size, 1.0m by 1.0m, raised 80cm above the conducting ground plane. The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).

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: 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:Y-axis)

This page has been submitted for a separate exhibit.

APPENDIX 2: Data of EMI test

Conducted Emission
Tx, Ch:Low (DH5)

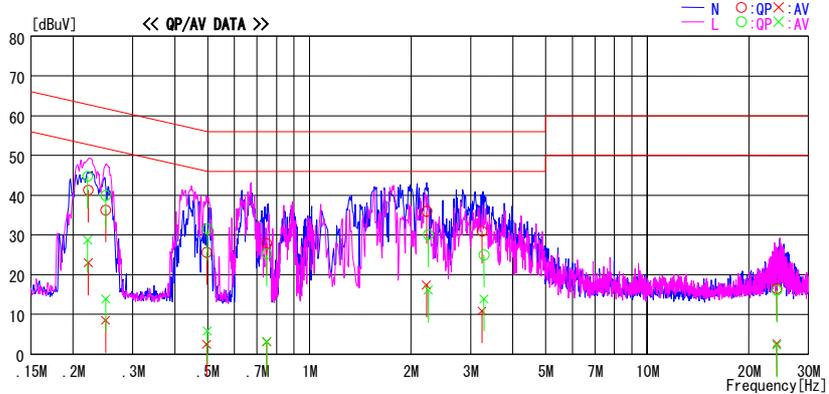
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/13

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5
Report No. : 28IE209-HO
Power : AC 120V/60Hz
Temp./Humi. : 24deg. C./43%
Operator : Motoya Imura

Mode / Remarks : BT, Tx 2402MHz, DH5

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]	
0.22179	41.0	22.7	0.3	41.3	23.0	62.8	52.8	21.5	29.8	N
0.24944	36.0	8.2	0.3	36.3	8.5	61.8	51.8	25.5	43.3	N
0.49674	25.3	2.2	0.3	25.6	2.5	56.1	46.1	30.5	43.6	N
0.74775	27.5	2.8	0.3	27.8	3.1	56.0	46.0	28.2	42.9	N
2.22184	35.6	17.0	0.4	36.0	17.4	56.0	46.0	20.0	28.6	N
3.24300	30.4	10.3	0.6	31.0	10.9	56.0	46.0	25.0	35.1	N
24.17137	14.7	0.8	1.8	16.5	2.6	60.0	50.0	43.5	47.4	N
0.22088	44.5	28.4	0.3	44.8	28.7	62.8	52.8	18.0	24.1	L
0.24980	39.6	13.6	0.3	39.9	13.9	61.8	51.8	21.9	37.9	L
0.49877	31.3	5.6	0.3	31.6	5.9	56.0	46.0	24.4	40.1	L
0.74839	24.9	2.9	0.3	25.2	3.2	56.0	46.0	30.8	42.8	L
2.24769	29.7	15.7	0.4	30.1	16.1	56.0	46.0	25.9	29.9	L
3.28300	24.4	13.3	0.6	25.0	13.9	56.0	46.0	31.0	32.1	L
24.17137	14.3	0.5	1.8	16.1	2.3	60.0	50.0	43.9	47.7	L

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV]=READING [dBuV]+C.F [dB] (L1SN LOSS+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 (DH5)

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/13

Company : Sharp Corporation
 Kind of EUT : Mobile Phone
 Model No. : 825SH
 Serial No. : 004401/11/123415/5

Report No. : 28IE209-HO
 Power : AC 120V/60Hz
 Temp./Humi. : 24deg. C./43%
 Operator : Motoya Imura

Mode / Remarks : BT, Tx 2441MHz, DH5

LIMIT : FCC15.207 QP
 FCC15.207 AV

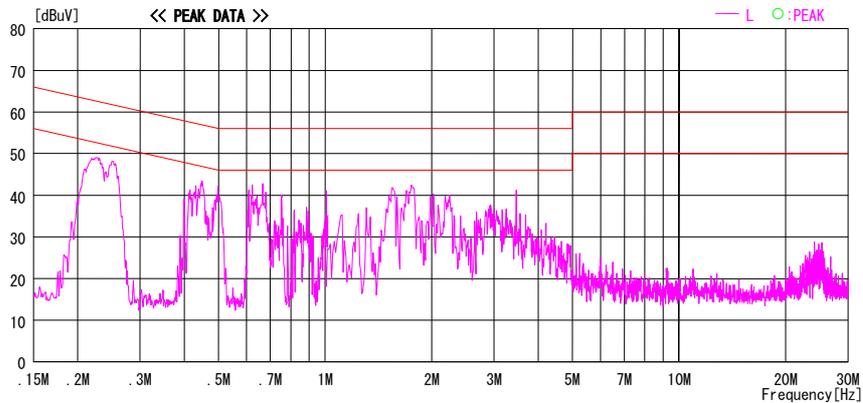
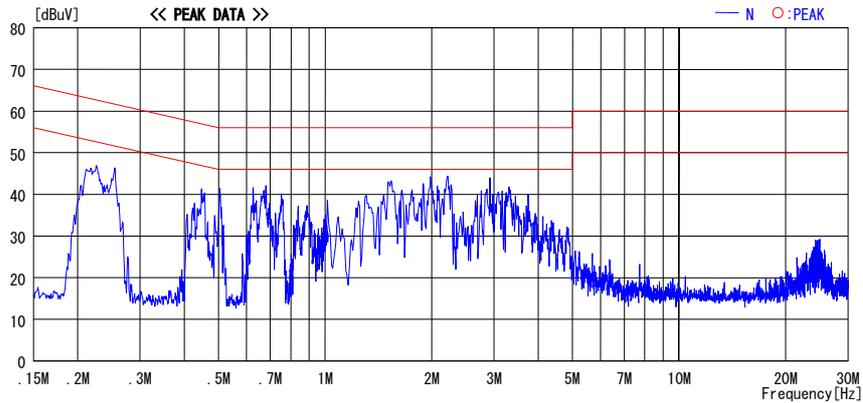


CHART: WITH FACTOR, Peak hold data. CALCURATION: RESULT [dBuV]=READING [dBuV]+C. F [dB] (LISN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, Ch:High (DH5)

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2008/05/13

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5

Report No. : 28IE209-HO
Power : AC 120V/60Hz
Temp./Humi. : 24deg. C. /43%
Operator : Motoya Imura

Mode / Remarks : BT, Tx 2480MHz, DH5

LIMIT : FCC15.207 QP
FCC15.207 AV

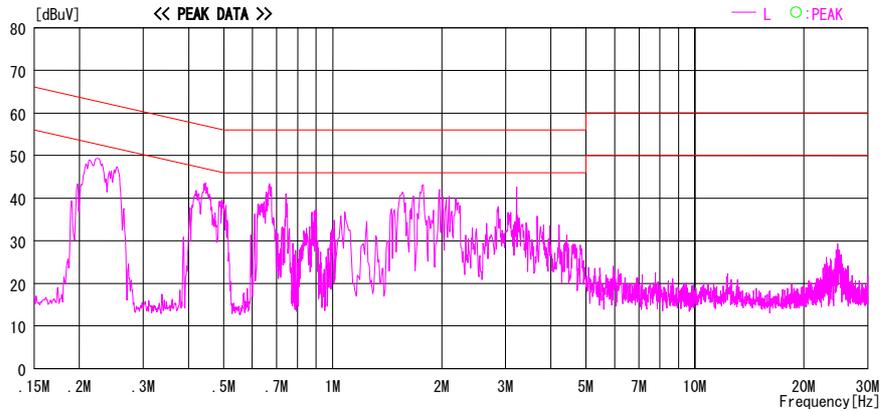
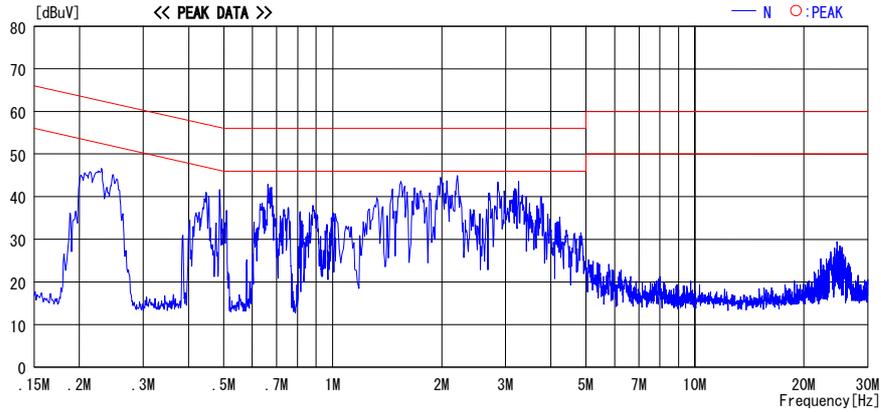


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (L ISN LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Rx, Ch:Mid (DH5)

DATA OF CONDUCTED EMISSION TEST

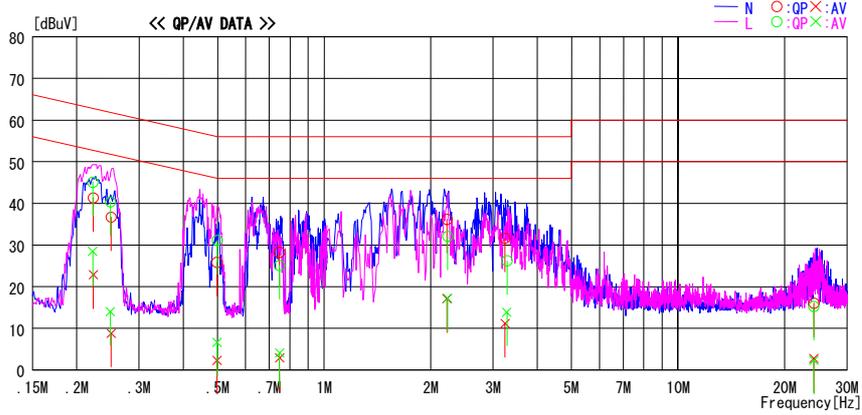
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/13

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5

Report No. : 281E209-HO
Power : AC 120V/60Hz
Temp./Humi. : 24deg. C./43%
Operator : Motoya Imura

Mode / Remarks : Rx 2441MHz, DH5)

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]	
0.22280	41.0	22.5	0.3	41.3	22.8	62.7	52.7	21.4	29.9	N
0.25036	36.4	8.5	0.3	36.7	8.8	61.7	51.7	25.0	42.9	N
0.49844	25.6	2.0	0.3	25.9	2.3	56.0	46.0	30.1	43.7	N
0.74780	27.9	2.6	0.3	28.2	2.9	56.0	46.0	27.8	43.1	N
2.22187	35.7	16.7	0.4	36.1	17.1	56.0	46.0	19.9	28.9	N
3.24354	31.0	10.6	0.6	31.6	11.2	56.0	46.0	24.4	34.8	N
24.19019	14.2	0.9	1.8	16.0	2.7	60.0	50.0	44.0	47.3	N
0.22199	44.8	28.1	0.3	45.1	28.4	62.7	52.7	17.6	24.3	L
0.24897	40.0	13.7	0.3	40.3	14.0	61.8	51.8	21.5	37.8	L
0.49882	30.8	6.3	0.3	31.1	6.6	56.0	46.0	24.9	39.4	L
0.74785	24.8	3.8	0.3	25.1	4.1	56.0	46.0	30.9	41.9	L
2.23175	31.7	16.8	0.4	32.1	17.2	56.0	46.0	23.9	28.8	L
3.28394	25.6	13.3	0.6	26.2	13.9	56.0	46.0	29.8	32.1	L
24.17225	13.5	0.5	1.8	15.3	2.3	60.0	50.0	44.7	47.7	L

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

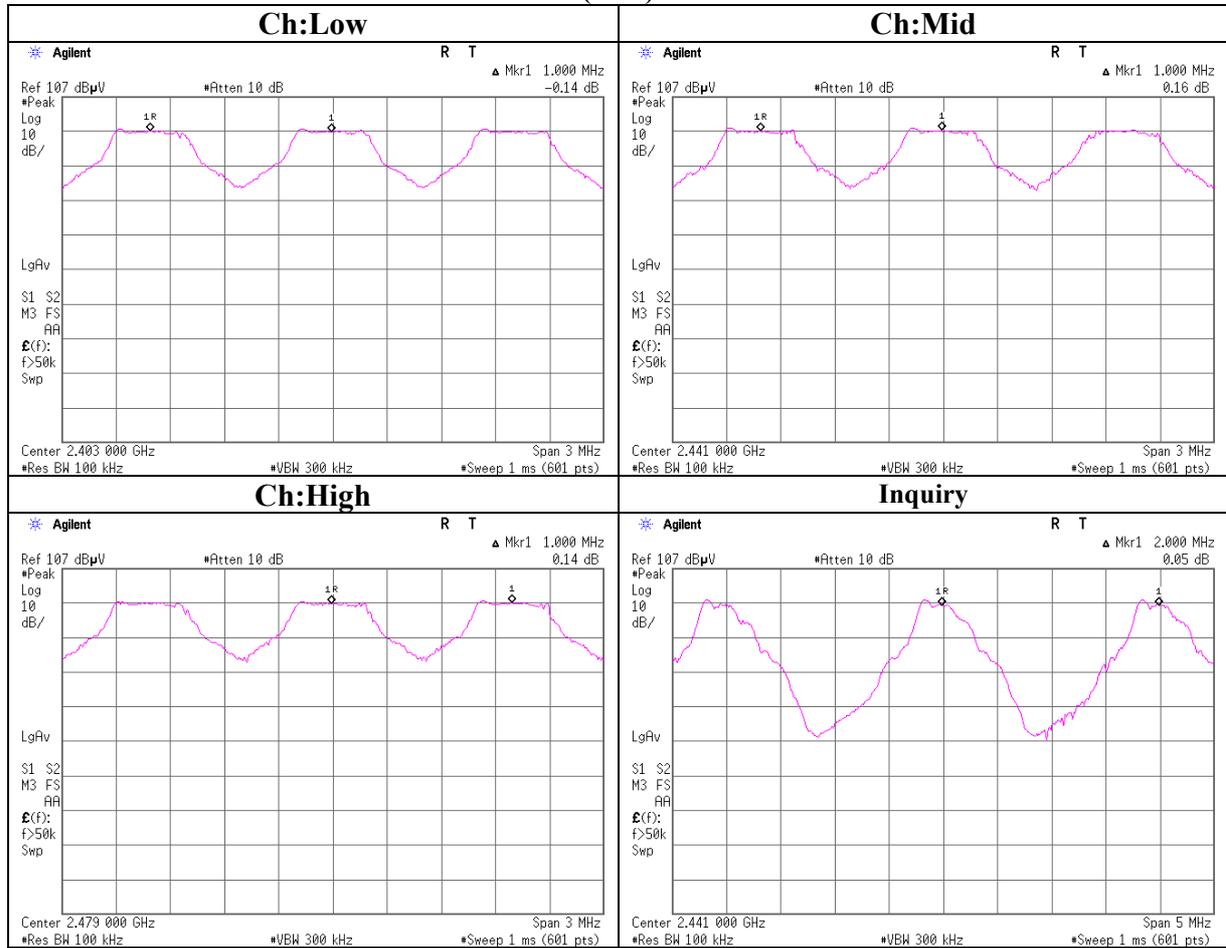
Carrier Frequency Separation
(DH5)

UL Japan, Inc.
Head Office EMC Lab. No.3 measurement room

COMPANY	: Sharp Corporation	TEST REPORT No.	: 28IE0209-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	: 825SH	TEST DISTANCE	: -
S/ N	: 004401/11/123404/9	DATE	: 05/12/2008
POWER	: AC 120V/60Hz	TEMPERATURE	: 24deg.C
MODE	: BT, Tx(Hopping on)/Inquiry, DH5	HUMIDITY	: 43%
		ENGINEER	: Motoya Imura

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	0.619 [MHz] (two-thirds of 20dB Bandwidth 0.929 [MHz]) or 25[kHz] (whichever is grater)
Mid	2441.0	1.000	0.618 [MHz] (two-thirds of 20dB Bandwidth 0.927 [MHz]) or 25[kHz] (whichever is grater)
High	2480.0	1.000	0.625 [MHz] (two-thirds of 20dB Bandwidth 0.937 [MHz]) or 25[kHz] (whichever is grater)
Inquiry	2441.0	2.000	0.511 [MHz] (two-thirds of 20dB Bandwidth 0.767 [MHz]) or 25[kHz] (whichever is grater)

Carrier Frequency Separation
(DH5)



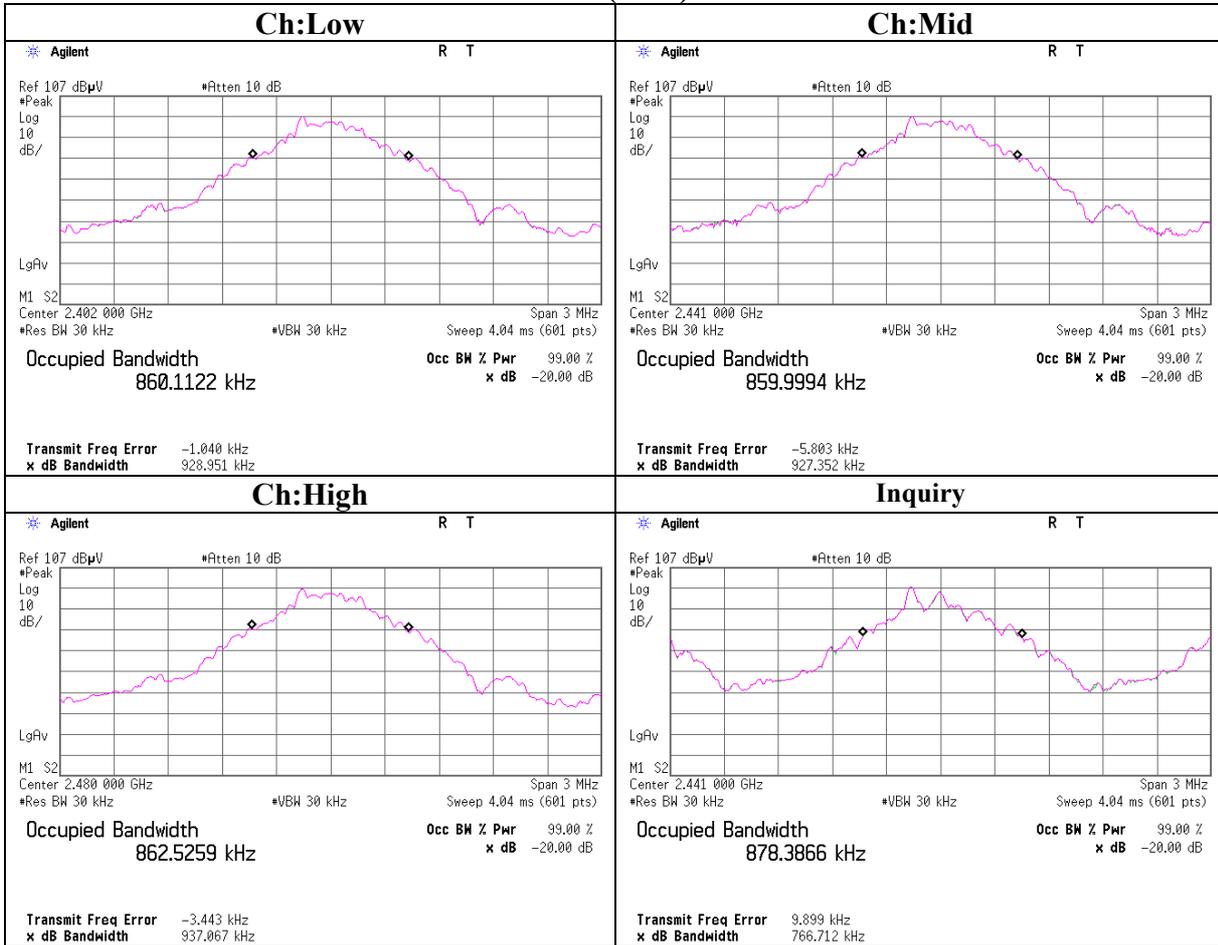
20dB Bandwidth
(DH5)

Company : Sharp Corporation
Equipment : WCDMA&Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable
Model No. : 825SH
Serial No. : 004401/11/123404/9
Power : AC 120V/60Hz
Mode : BT, Tx (Hopping off) /Inquiry, DH5

UL Japan, Inc.
Head Office EMC Lab. No.3 measurement room
Test Report No. : 28IE0209-HO
Regulation : FCC15.247(a)(1)/RSS-210A8.1(a)
Test distance : -
Date : 05/12/2008
Temperature : 24deg.C
Humidity : 43%
Engineer : Motoya Imura

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.929	-
Mid	2441.0	0.927	-
High	2480.0	0.937	-
Inquiry	2441.0	0.767	-

20dB Bandwidth
(DH5)



Number of Hopping Frequency

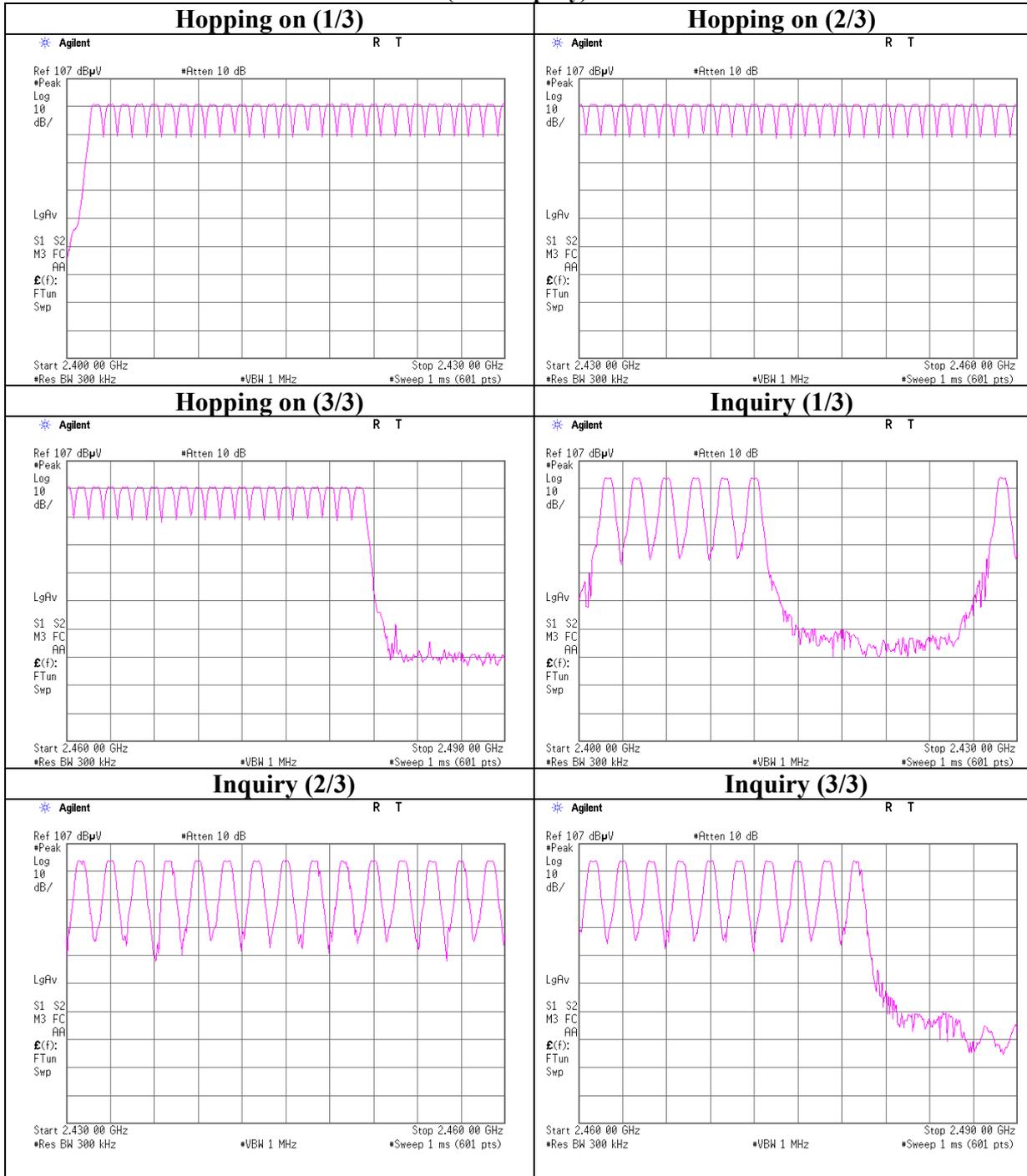
Company : Sharp Corporation
Equipment : WCDMA&Tri-band(900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable
Model No. : 825SH
Serial No. : 004401/11/123404/9
Power : AC 120V/60Hz
Mode : BT, Tx (Hopping on)/Inquiry, DH5

UL Japan, Inc.
Head Office EMC Lab. No3 measurement room
Test Report No. : 28IE0209-HO
Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
Test distance : -
Date : 05/12/2008
Temperature : 24deg.C
Humidity : 43%
Engineer : Motoya Imura

Mode	Number of channel [number]	Limit [time]
DH5	79	≥15

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

**Number of Hopping Frequency
(DH5/Inquiry)**



Dwell time

Company	: Sharp Corporation	Regulation	: FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
Equipment	: WCDMA&Tri-band(900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	Test distance	: -
Model No.	: 825SH	Date	: 05/12/2008
Serial No.	: 004401/11/123404/9	Temperature	: 24deg.C
Power	: AC 120V/60Hz	Humidity	: 43%
Mode	: BT, Tx (Hopping on)/Inquiry	Engineer	: Motoya Imura

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	52.4 times / 5 sec. x 31.6 sec. = 332 times	0.413	137	400
DH3	26.0 times / 5 sec. x 31.6 sec. = 165 times	1.679	277	400
DH5	18.6 times / 5 sec. x 31.6 sec. = 118 times	2.950	348	400
Inquiry	100.0 times / 1 sec. x 12.8 sec. = 1280 times	0.140	179	400

* Average data of 5 tests.(except Inquiry)

*DH1 / 1:52 2:52 3:52 4:53 5:53 =52.4times

*DH3 / 1:25 2:26 3:29 4:25 5:25 =26.0times

*DH5 / 1:18 2:19 3:19 4:19 5:18 =18.6times

UL Japan, Inc.

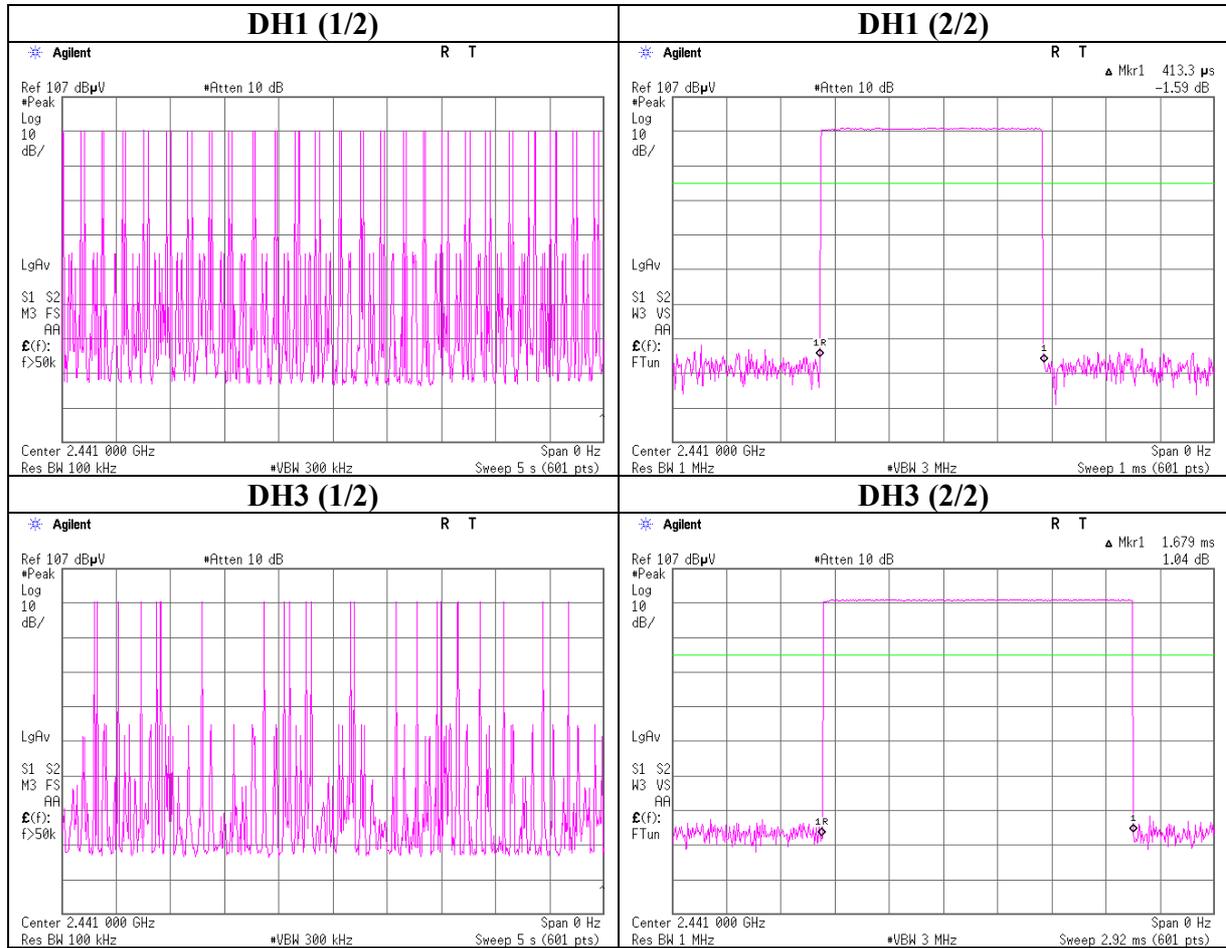
Head Office EMC Lab.

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

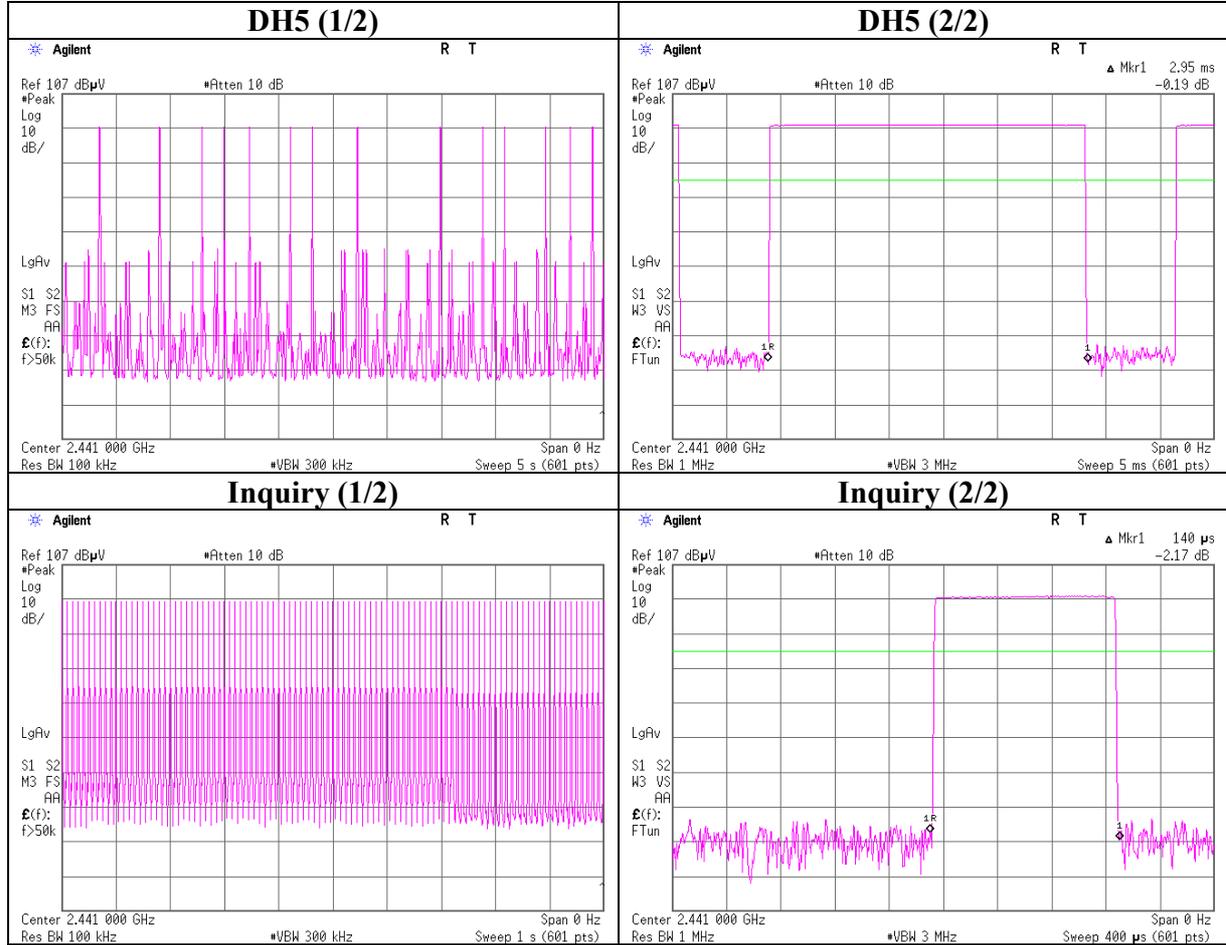
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

Dwell time



Dwell time



**Maximum Peak Output Power
(DH5)**

UL Japan, Inc.

Head Office EMC Lab. No.3 measurement room

Company : Sharp Corporation
Equipment : WCDMA&Tri-band(900/1800/1900) GSM
Dual mode Mobile Phone / Bluetooth enable
Model No. : 825SH
Serial No. : 004401/11/123404/9
Power : AC 120V/60Hz
Mode : BT, Tx(Hopping Off)/Inquiry, DH5

Test Report No. : 28IE0209-HO
Regulation : FCC15.247(b)(1)/RSS-210A8.4(2)
Test distance : -
Date : 05/12/2008
Temperature : 24deg.C
Humidity : 43%
Engineer : Motoya Imura

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-8.54	0.15	10.09	1.70	1.48	20.97	125	19.27
Mid	2441.0	-8.50	0.15	10.09	1.74	1.49	20.97	125	19.23
High	2480.0	-8.63	0.15	10.09	1.61	1.45	20.97	125	19.36
Inquiry	2441.0	-5.68	0.15	10.09	4.56	2.86	20.97	125	16.41

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.

UL Japan, Inc.

Head Office EMC Lab.

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

Telephone : +81 596 24 8116

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Radiated Spurious Emission (below 1GHz)
Tx, Ch:Low (DH5)

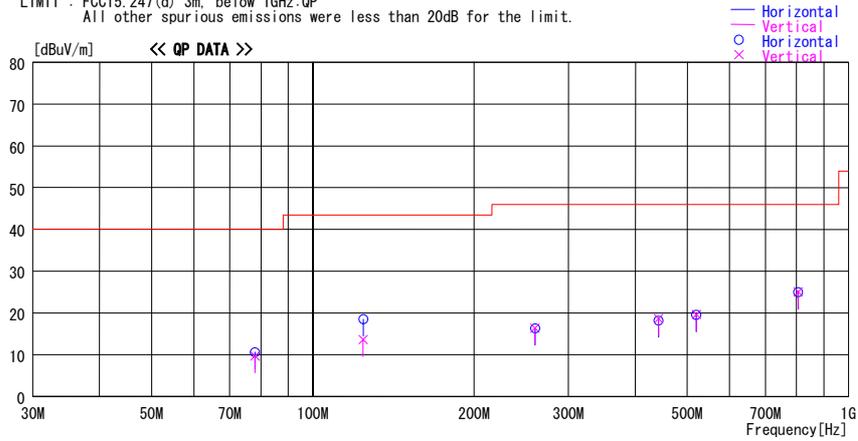
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/12

Company : Sharp Corporation Report No. : 281E0209-HO
Kind of EUT : Mobile Phone Power : AC 120V/60Hz
Model No. : 825SH Temp./Humi. : 22deg. C/50%
Serial No. : 004401/11/123415/5 Operator : Takumi Shimada

Mode / Remarks : BT, Tx 2402MHz, DH5 Worst-axis(Hor:Z, Ver:Y)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
78.000	27.5	QP	6.4	-24.2	9.7	38	100	Vert.	40.0	30.3	
78.001	28.4	QP	6.4	-24.2	10.6	65	169	Hori.	40.0	29.4	
124.122	24.2	QP	13.0	-23.6	13.6	287	120	Vert.	43.5	29.9	
124.188	29.1	QP	13.0	-23.6	18.5	185	174	Hori.	43.5	25.0	
260.000	21.7	QP	17.2	-22.5	16.4	0	100	Vert.	46.0	29.6	
260.000	21.6	QP	17.2	-22.5	16.3	0	100	Hori.	46.0	29.7	
442.000	22.1	QP	17.7	-21.2	18.6	0	100	Vert.	46.0	27.4	
442.000	21.7	QP	17.7	-21.2	18.2	0	100	Hori.	46.0	27.8	
520.000	22.0	QP	18.3	-20.7	19.6	0	100	Vert.	46.0	26.4	
520.000	22.0	QP	18.3	-20.7	19.6	0	100	Hori.	46.0	26.4	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Vert.	46.0	21.0	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Hori.	46.0	21.0	

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 (DH5)

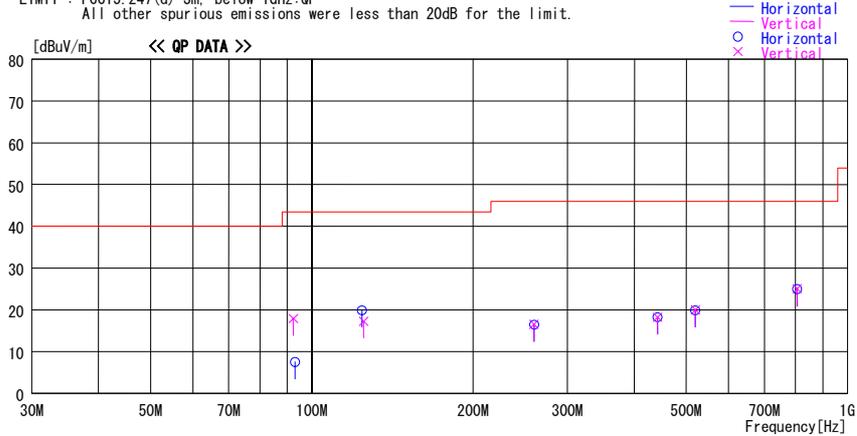
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/12

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5
Report No. : 28IE0209-HO
Power : AC 120V/60Hz
Temp./Humi. : 22deg.C/50%
Operator : Takumi Shimada

Mode / Remarks : BT, Tx 2441MHz, DH5 Worst-axis(Hor:Z, Ver:Y)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
92.990	22.8	QP	8.7	-24.0	7.5	137	100	Hori.	43.5	36.0	
92.407	33.3	QP	8.6	-24.0	17.9	169	212	Vert.	43.5	25.6	
124.103	30.5	QP	13.0	-23.6	19.9	26	300	Hori.	43.5	23.6	
124.950	27.8	QP	13.1	-23.6	17.3	311	100	Vert.	43.5	26.2	
260.000	21.8	QP	17.2	-22.5	16.5	0	100	Hori.	46.0	29.5	
260.000	21.8	QP	17.2	-22.5	16.5	0	100	Vert.	46.0	29.5	
442.000	21.7	QP	17.7	-21.2	18.2	0	100	Vert.	46.0	27.8	
442.000	21.8	QP	17.7	-21.2	18.3	0	100	Hori.	46.0	27.7	
520.000	22.4	QP	18.3	-20.7	20.0	0	100	Vert.	46.0	26.0	
520.000	22.3	QP	18.3	-20.7	19.9	0	100	Hori.	46.0	26.1	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Hori.	46.0	21.0	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Vert.	46.0	21.0	

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 (below 1GHz)
Tx, Ch:High (DH5)

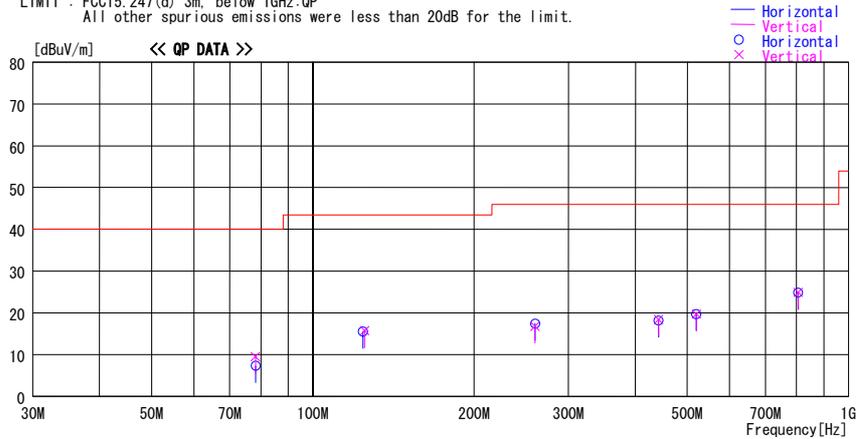
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2008/05/12

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5
Report No. : 28IE0209-HO
Power : AC 120V/60Hz
Temp./Humi. : 22deg.C/50%
Operator : Takumi Shimada

Mode / Remarks : BT, Tx 2480MHz, DH5 Worst-axis(Hor:Z, Ver:Y)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
78.150	25.2	QP	6.4	-24.2	7.4	284	183	Hori.	40.0	32.6	
78.150	27.3	QP	6.4	-24.2	9.5	214	298	Vert.	40.0	30.5	
124.050	26.1	QP	13.0	-23.6	15.5	87	127	Hori.	43.5	28.0	
125.001	26.2	QP	13.1	-23.6	15.7	151	214	Vert.	43.5	27.8	
260.000	22.1	QP	17.2	-22.5	16.8	0	100	Vert.	46.0	29.2	
260.000	22.8	QP	17.2	-22.5	17.5	87	127	Hori.	46.0	28.5	
442.000	21.9	QP	17.7	-21.2	18.4	0	100	Vert.	46.0	27.6	
442.000	21.7	QP	17.7	-21.2	18.2	0	100	Hori.	46.0	27.8	
520.000	22.1	QP	18.3	-20.7	19.7	0	100	Hori.	46.0	26.3	
520.000	22.1	QP	18.3	-20.7	19.7	0	100	Vert.	46.0	26.3	
806.000	21.8	QP	21.8	-18.7	24.9	0	100	Hori.	46.0	21.1	
806.000	21.8	QP	21.8	-18.7	24.9	0	100	Vert.	46.0	21.1	

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

*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

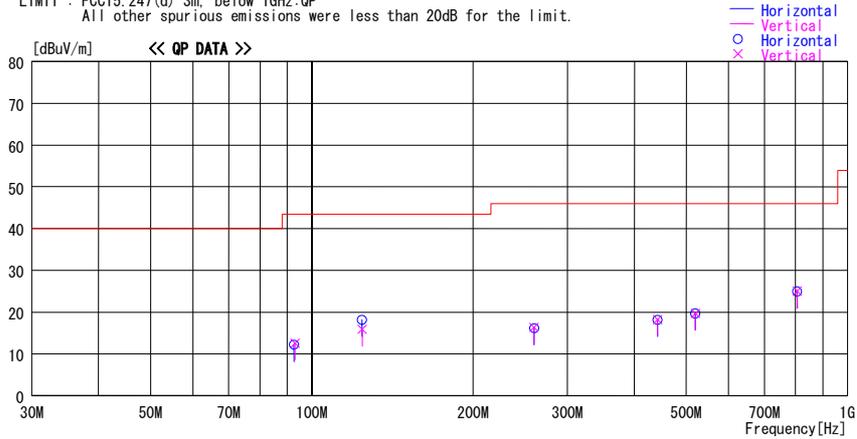
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2008/05/12

Company : Sharp Corporation
Kind of EUT : Mobile Phone
Model No. : 825SH
Serial No. : 004401/11/123415/5
Report No. : 281E0209-HO
Power : AC 120V/60Hz
Temp./Humi. : 22deg. C/50%
Operator : Takumi Shimada

Mode / Remarks : BT, Rx 2441MHz, DH5 Worst-axis(Hor:Z, Ver:Y)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
92.552	27.6	QP	8.6	-24.0	12.2	142	100	Hori.	43.5	31.3	
93.051	27.9	QP	8.7	-24.0	12.6	211	169	Vert.	43.5	30.9	
124.150	26.5	QP	13.0	-23.6	15.9	308	100	Vert.	43.5	27.6	
124.043	28.8	QP	13.0	-23.6	18.2	259	100	Hori.	43.5	25.3	
260.000	21.7	QP	17.2	-22.5	16.4	0	100	Vert.	46.0	29.6	
260.000	21.5	QP	17.2	-22.5	16.2	0	100	Hori.	46.0	29.8	
442.000	21.7	QP	17.7	-21.2	18.2	0	100	Hori.	46.0	27.8	
442.000	21.7	QP	17.7	-21.2	18.2	0	100	Vert.	46.0	27.8	
520.000	22.1	QP	18.3	-20.7	19.7	0	100	Hori.	46.0	26.3	
520.000	22.1	QP	18.3	-20.7	19.7	0	100	Vert.	46.0	26.3	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Hori.	46.0	21.0	
806.000	21.9	QP	21.8	-18.7	25.0	0	100	Vert.	46.0	21.0	

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 (above 1GHz)
Tx, Ch:Low (DH5)

Company	: Sharp Corporation	REPORT NO	: 28IE0209-HO
Equipment	: WCDMA&Tri-band(900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model No.	: 825SH	TEST DISTANCE	: 3/1m
Sample No.	: 004401/11/123415/5	DATE	: 05/12/2008 : 05/12/2008
Power	: AC 120V/60Hz	TEMPERATURE	: 24deg.C : 24deg.C
Mode	: BT Tx DHS 2402MHz	HUMIDITY	: 45% : 45%
Remarks	: Hor Z , Ver Y-axis	ENGINEER	: Takumi Shimada : Motoya Imura

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	42.5	42.5	26.7	32.8	2.6	0.0	39.0	39.0	73.9	34.9	34.9
2	2400.0	65.0	61.4	26.7	32.8	2.6	0.0	61.5	57.9	73.9	12.4	16.0
3	4804.0	42.0	40.3	31.2	30.7	4.1	0.8	47.4	45.7	73.9	26.5	28.2
4	7206.0	42.6	42.8	35.6	31.4	4.6	0.7	52.1	52.3	73.9	21.8	21.6
5	9608.0	43.1	43.7	38.3	32.0	5.4	1.1	55.9	56.5	73.9	18.0	17.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	-	-	-	-	-	-	-	-	-	-	-
7	14412.0	-	-	-	-	-	-	-	-	-	-	-
8	16814.0	-	-	-	-	-	-	-	-	-	-	-
9	19216.0	-	-	-	-	-	-	-	-	-	-	-
10	21618.0	-	-	-	-	-	-	-	-	-	-	-
11	24020.0	49.1	48.6	38.4	31.2	7.7	0.0	54.5	54.0	73.9	19.4	19.9

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	28.8	28.6	26.7	32.8	2.6	0.0	25.3	25.1	53.9	28.6	28.8
2	2400.0	35.4	35.2	26.7	32.8	2.6	0.0	31.9	31.7	53.9	22.0	22.2
3	4804.0	27.2	27.2	31.2	30.7	4.1	0.8	32.6	32.6	53.9	21.3	21.3
4	7206.0	28.5	28.5	35.6	31.4	4.6	0.7	38.0	38.0	53.9	15.9	15.9
5	9608.0	28.8	28.8	38.3	32.0	5.4	1.1	41.6	41.6	53.9	12.3	12.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	-	-	-	-	-	-	-	-	-	-	-
7	14412.0	-	-	-	-	-	-	-	-	-	-	-
8	16814.0	-	-	-	-	-	-	-	-	-	-	-
9	19216.0	-	-	-	-	-	-	-	-	-	-	-
10	21618.0	-	-	-	-	-	-	-	-	-	-	-
11	24020.0	35.5	35.3	38.4	31.2	7.7	0.0	40.9	40.7	53.9	13.0	13.2

* Reference data

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.

Radiated Spurious Emission (above 1GHz)
Tx, Ch:Mid (DH5)

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company	: Sharp Corporation	REPORT NO	: 28IE0209-HO
Equipment	: WCDMA&Tri-band (900/1800/1900)GSM Dual mode Mobile Phone / Bluetooth enable	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model No.	: 825SH	TEST DISTANCE	: 3/1m
Sample No.	: 004401/11/123415/5	DATE	: 05/12/2008 : 05/12/2008
Power	: AC 120V/60Hz	TEMPERATURE	: 24deg.C : 24deg.C
Mode	: BT Tx DH5 2441MHz	HUMIDITY	: 45% : 45%
Remarks	: Hor Z , Ver Y-axis	ENGINEER	: Takumi Shimada : Motoya Imura

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 [dBuV]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4882.0	41.5	41.0	31.3	30.6	4.1	0.8	47.1	46.6	73.9	26.8	27.3
2	7323.0	43.6	42.3	35.8	31.4	4.6	0.7	53.3	52.0	73.9	20.6	21.9
3	9764.0	42.8	42.6	38.4	32.1	5.5	1.2	55.8	55.6	73.9	18.1	18.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	-	-	-	-	-	-	-	-	-	-	-
5	14646.0	-	-	-	-	-	-	-	-	-	-	-
6	17087.0	-	-	-	-	-	-	-	-	-	-	-
7	19528.0	-	-	-	-	-	-	-	-	-	-	-
8	21969.0	-	-	-	-	-	-	-	-	-	-	-
9	24410.0	49.2	48.8	38.6	30.6	7.7	0.0	55.4	55.0	73.9	18.5	18.9

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 [dBuV]	VER [dBuV]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4882.0	27.3	27.2	31.3	30.6	4.1	0.8	32.9	32.8	53.9	21.0	21.1
2	7323.0	28.8	28.8	35.8	31.4	4.6	0.7	38.5	38.5	53.9	15.4	15.4
3	9764.0	28.6	28.5	38.4	32.1	5.5	1.2	41.6	41.5	53.9	12.3	12.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	-	-	-	-	-	-	-	-	-	-	-
5	14646.0	-	-	-	-	-	-	-	-	-	-	-
6	17087.0	-	-	-	-	-	-	-	-	-	-	-
7	19528.0	-	-	-	-	-	-	-	-	-	-	-
8	21969.0	-	-	-	-	-	-	-	-	-	-	-
9	24410.0	35.4	35.2	38.6	30.6	7.7	0.0	41.6	41.4	53.9	12.3	12.5

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.

Radiated Spurious Emission (above 1GHz)
Tx, Ch:High (DH5)

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

Company	: Sharp Corporation	REPORT NO	: 28IE0209-HO
Equipment	: WCDMA&Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model No.	: 825SH	TEST DISTANCE	: 3/1m
Sample No.	: 004401/11/123415/5	DATE	: 05/12/2008 : 05/12/2008
Power	: AC 120V/60Hz	TEMPERATURE	: 24deg.C : 24deg.C
Mode	: BT Tx DH5 2480MHz	HUMIDITY	: 45% : 45%
Remarks	: Hor Z , Ver Y-axis	ENGINEER	: Takumi Shimada : Motoya Imura

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	2483.5	55.0	53.9	26.9	32.8	2.7	0.0	51.8	50.7	73.9	22.1	23.2
2	4960.0	41.6	40.8	31.5	30.6	4.1	0.8	47.4	46.6	73.9	26.5	27.3
3	7440.0	43.3	43.4	36.0	31.4	4.7	0.7	53.3	53.4	73.9	20.6	20.5
4	9920.0	43.8	43.3	38.5	32.2	5.5	1.2	56.8	56.3	73.9	17.1	17.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12400.0	-	-	-	-	-	-	-	-	-	-	-
6	14880.0	-	-	-	-	-	-	-	-	-	-	-
7	17360.0	-	-	-	-	-	-	-	-	-	-	-
8	19840.0	-	-	-	-	-	-	-	-	-	-	-
9	22320.0	-	-	-	-	-	-	-	-	-	-	-
10	24800.0	50.3	50.5	38.9	30.0	7.8	0.0	57.5	57.7	73.9	16.4	16.2

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	2483.5	32.3	31.5	26.9	32.8	2.7	0.0	29.1	28.3	53.9	24.8	25.6
2	4960.0	27.1	27.1	31.5	30.6	4.1	0.8	32.9	32.9	53.9	21.0	21.0
3	7440.0	28.7	28.6	36.0	31.4	4.7	0.7	38.7	38.6	53.9	15.2	15.3
4	9920.0	29.1	29.1	38.5	32.2	5.5	1.2	42.1	42.1	53.9	11.8	11.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12400.0	-	-	-	-	-	-	-	-	-	-	-
6	14880.0	-	-	-	-	-	-	-	-	-	-	-
7	17360.0	-	-	-	-	-	-	-	-	-	-	-
8	19840.0	-	-	-	-	-	-	-	-	-	-	-
9	22320.0	-	-	-	-	-	-	-	-	-	-	-
10	24800.0	36.1	36.1	38.9	30.0	7.8	0.0	43.3	43.3	53.9	10.6	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 Fiter was not used for factor 0.0dB of the above table.

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

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

Company	: Sharp Corporation	REPORT NO	: 28IE0209-HO
Equipment	: WCDMA & Tri-band (900/1800/1900) GSM Dual mode Mobile Phone / Bluetooth enable	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model No.	: 825SH	TEST DISTANCE	: 3m
Sample No.	: 004401/11/123415/5	DATE	: 05/12/2008
Power	: AC 120V/60Hz	TEMPERATURE	: 22deg.C
Mode	: BT Rx 2441MHz	HUMIDITY	: 50%
Remarks	: Hor Z , Ver Y-axis	ENGINEER	: Takumi Shimada

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	2320.0	42.7	42.1	26.6	32.8	2.6	0.0	39.1	38.5	73.9	34.8	35.4
2	2441.0	42.3	41.9	26.8	32.8	2.7	0.0	39.0	38.6	73.9	34.9	35.3

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

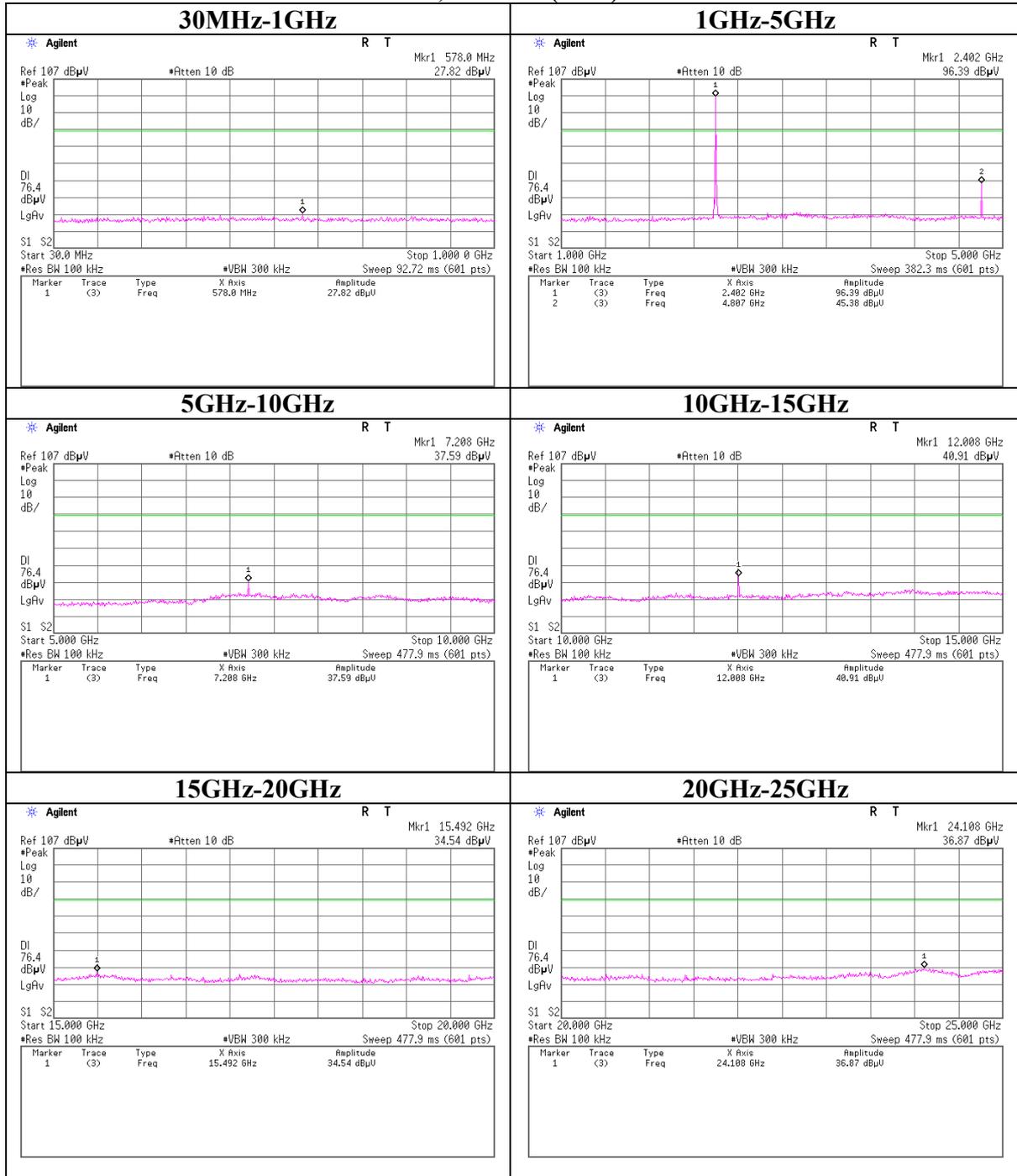
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2320.0	28.9	31.2	26.6	32.8	2.6	0.0	25.3	27.6	53.9	28.6	26.3
2	2441.0	29.2	31.9	26.8	32.8	2.7	0.0	25.9	28.6	53.9	28.0	25.3

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

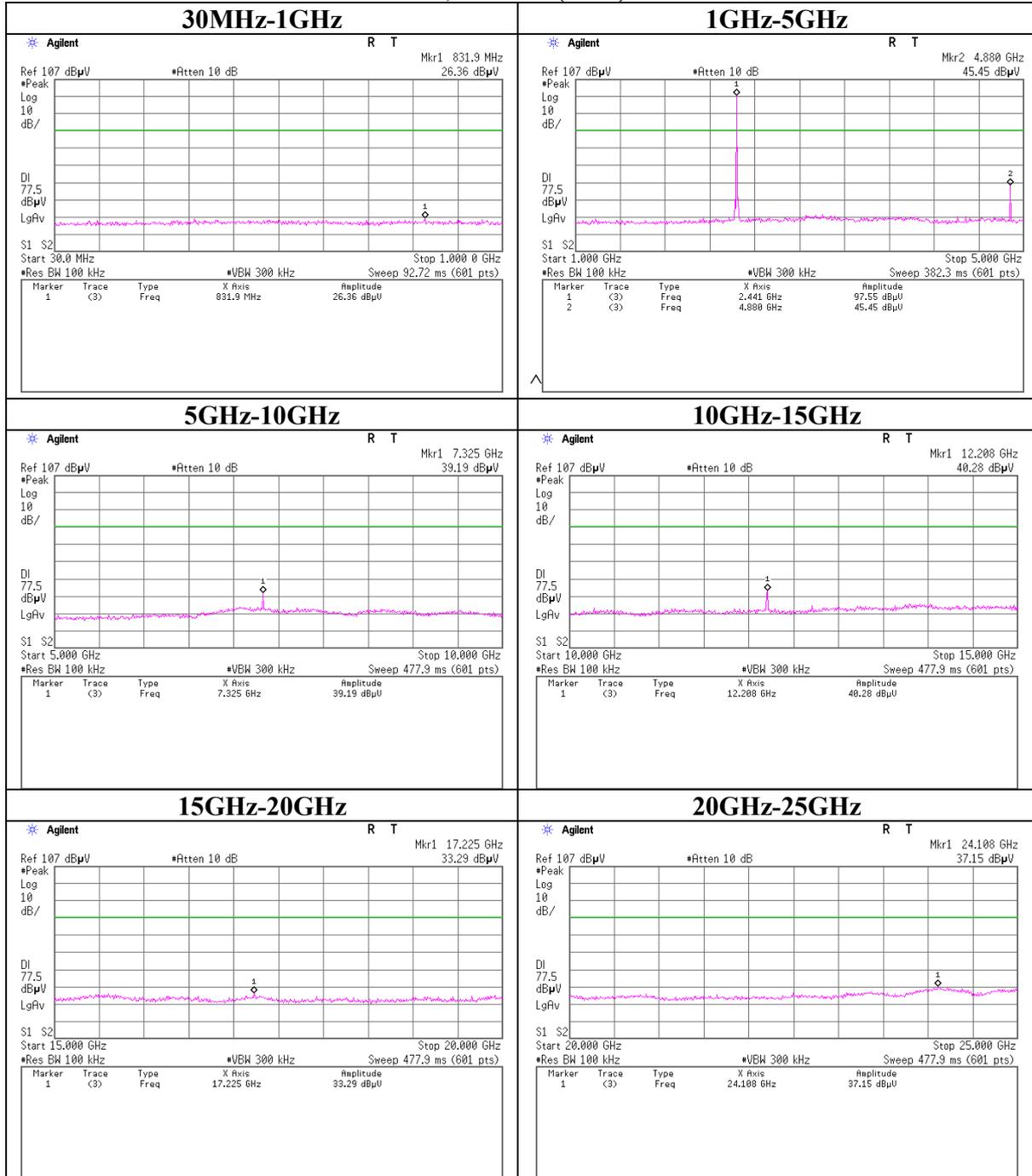
*The test result is round off to one or two decimal places, so some differences might be observed.

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

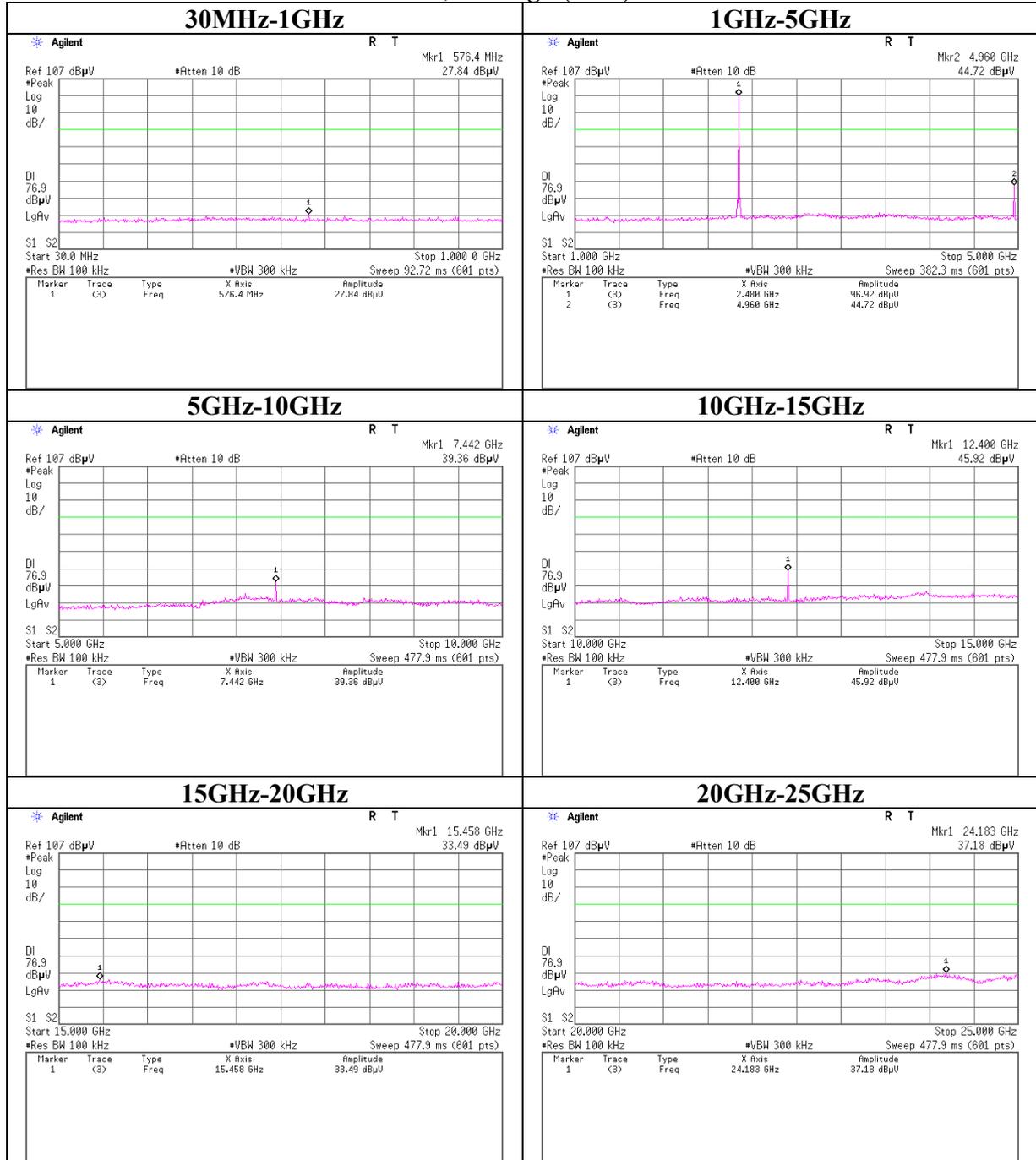
Conducted Spurious Emission
Tx, Ch:Low (DH5)



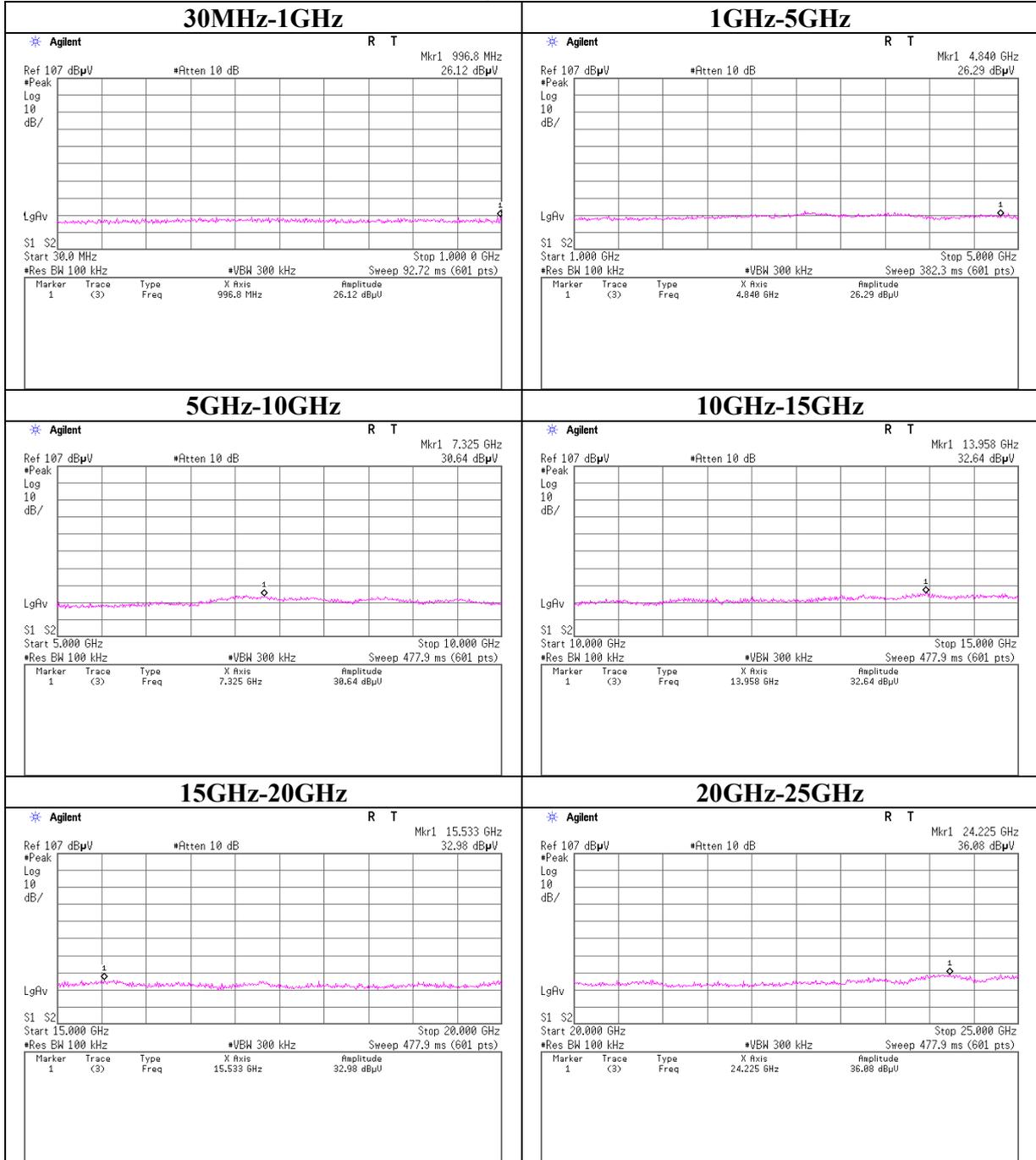
Conducted Spurious Emission
Tx, Ch:Mid (DH5)



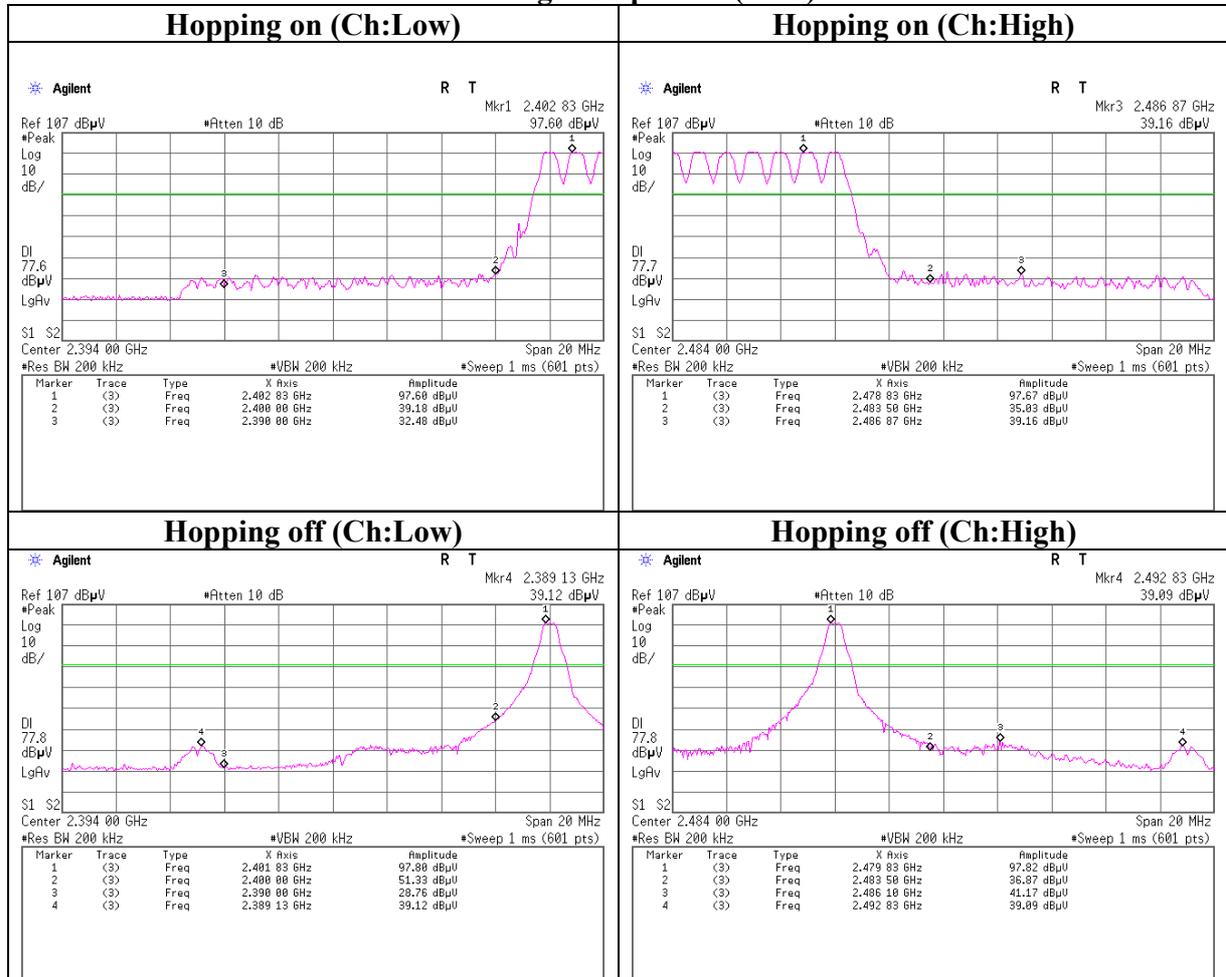
Conducted Spurious Emission
Tx, Ch:High (DH5)



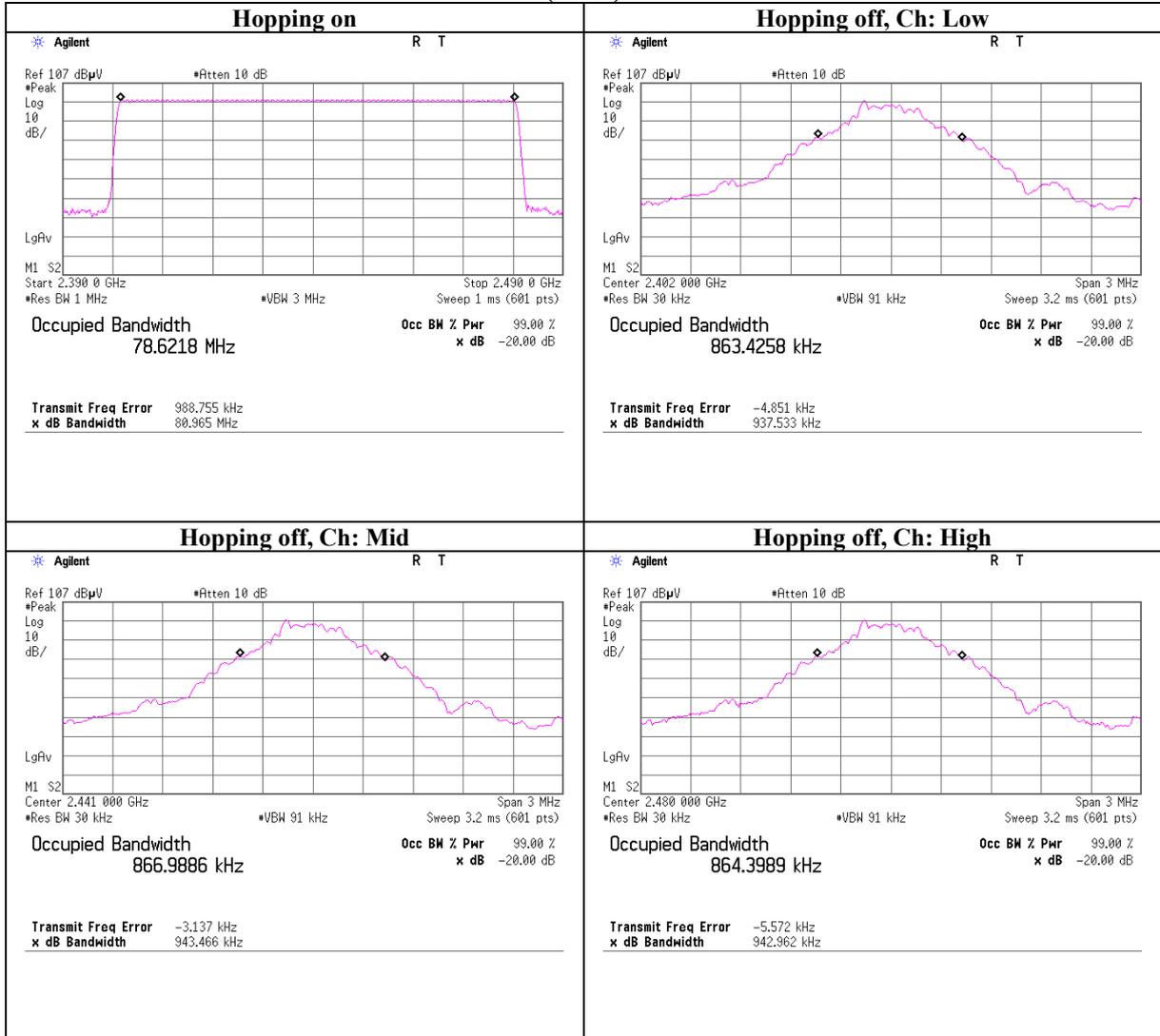
Conducted Spurious Emission
Rx, Ch:Mid



Conducted Spurious Emission
Band Edge compliance (DH5)



**99% Occupied Bandwidth
(DH5)**



*Refer to 20dB Bandwidth for 99% Occupied Bandwidth, inquiry mode

APPENDIX 3:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-03	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE/CE/AT	2008/03/25 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	RE/CE/AT	2008/01/10 * 12
MJM-06	Measure	PROMART	SEN1955	RE/CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE/CE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2007/06/20 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	RE	2008/04/30 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2008/04/23 * 12
MCC-56	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2008/03/12 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	RE	2008/03/13 * 12
MCC-78	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/12/26 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	RE	2007/12/10 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2008/01/12 * 12
MCC-51	Coaxial cable	UL Japan	-	RE/CE	2007/07/26 * 12
MAT-30	Attenuator(6dB)	TME	UFA-01	RE	2008/03/10 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	RE	2008/03/06 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2008/01/12 * 12
MSA-09	Spectrum Analyzer	Advantest	R3273	CE	2007/12/21 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE/CE	2008/02/20 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE	2008/02/19 * 12
MAT-23	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2008/03/05 * 12
MPM-08	Power Meter	Anritsu	ML2495A	AT	2007/09/12 * 12
MRENT-62	Spectrum Analyzer	Agilent	E4448A	AT	2007/11/27 * 12
MCC-06	Microwave Cable 1G-26.5GHz 1m	Suhner	SUCOFLEX 104	AT	2008/02/05 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	AT	2007/09/12 * 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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