

APPENDIX 2: Data of EMI test

Peak Output Power (Conducted)

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

COMPANY	SHARP CORPORATION	REPORT NO	29CE0264-HO-01
EQUIPMENT	W-CDMA / GSM Mobile Phone	REGULATION	FCC Part24 Section 24.232(c)
MODEL	PV300	TEST METHOD	FCC Part2 Section 2.1046(a)
S/N	P3-240	TEST DISTANCE	-
POWER	DC5.0V(AC Adapter: AC120V/60Hz)	DATE	12/09/2008
MODE	Power Control Level of "0" (Max Power)	TEMPERATURE	25 deg.C.
		HUMIDITY	40%
		ENGINEER	Takahiro Hatakeda

Mode	Ch	Frequency [MHz]	P/M Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
GSM (GMSK)	Low	1850.2	5.1	20.0	4.0	29.1	33.0	3.9
	Mid	1880.0	5.3	20.0	4.0	29.3	33.0	3.7
	High	1909.8	5.5	20.0	4.0	29.5	33.0	3.5
GPRS (GMSK) (1DL, 1UL)	Low	1850.2	5.1	20.0	4.0	29.1	33.0	3.9
	Mid	1880.0	5.2	20.0	4.0	29.2	33.0	3.8
	High	1909.8	5.5	20.0	4.0	29.5	33.0	3.5
EGPRS (8PSK) (1DL, 4UL)	Low	1850.2	2.3	20.0	4.0	26.3	33.0	6.7
	Mid	1880.0	2.4	20.0	4.0	26.4	33.0	6.6
	High	1909.8	2.6	20.0	4.0	26.6	33.0	6.4

Results = P/M Reading + Atten. + Cable loss

Peak Output Power (Radiated)

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	SHARP CORPORATION	Report Number	29CE0264-HO-01	
Equipment	W-CDMA / GSM Mobile Phone	Regulation	FCC Part 24 Section 24.232(c)	
Model	PV300	Test Method	FCC Part 2 Section 2.1046(a)	
S/N	P3-156	Test Distance	3m	
Power	DC5.0V(AC Adapter: AC120V/60Hz)	Date	12/08/2008	12/10/2008
Mode	GSM Mode / EGPRS Mode (PCS1900)	Temperature	23 deg.C.	21 deg.C.
	Power Control Level of "0" (Max Power)	Humidity	36 %	44 %
EUT-Position	H: Z-axis / V: Z-axis	Engineer	Hironobu Ohnishi	Satofumi Matsuyama
Tx Antenna	0.8m Height			

<GSM Mode>

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
		1	1850.20	124.6	125.8				22.9	23.9		3.8	9.5		
2	1880.00	124.9	126.3	23.2	24.4	3.8	9.7	0.0	29.1	30.3	33.0	3.9	2.7	Operating	No2
3	1909.80	126.0	126.8	24.2	24.8	3.8	9.8	0.0	30.2	30.8	33.0	2.8	2.2	Operating	No2

<EGPRS Mode>

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C	Remarks
		HOR	VER	HOR	VER				HOR	VER		HOR	VER			
		1	1850.20	121.2	119.3				19.5	17.4		3.8	9.5			
2	1880.00	121.4	120.8	19.7	18.9	3.8	9.7	0.0	25.6	24.8	33.0	7.4	8.2	Operating	No2	
3	1909.80	121.9	121.5	20.1	19.5	3.8	9.8	0.0	26.1	25.5	33.0	6.9	7.5	Operating	No2	

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

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

Detector : S/A PK(RBW:3MHz/VBW:8MHz)

Emission Bandwidth

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

COMPANY SHARP CORPORATION
EQUIPMENT W-CDMA / GSM Mobile Phone
MODEL PV300
S/N P3-040
POWER DC5.0V(AC Adapter: AC120V/60Hz)
MODE Tx 1850.2MHz
Tx 1880.0MHz
Tx 1909.8MHz

REPORT NO 29CE0264-HO-01
REGULATION FCC Part24 Section 24.238
TEST METHOD FCC Part2 Section 2.1049(h)
TEST DISTANCE -
DATE 12/16/2008
TEMPERATURE 25 deg.C.
HUMIDITY 41%
ENGINEER Takahiro Hatakeda

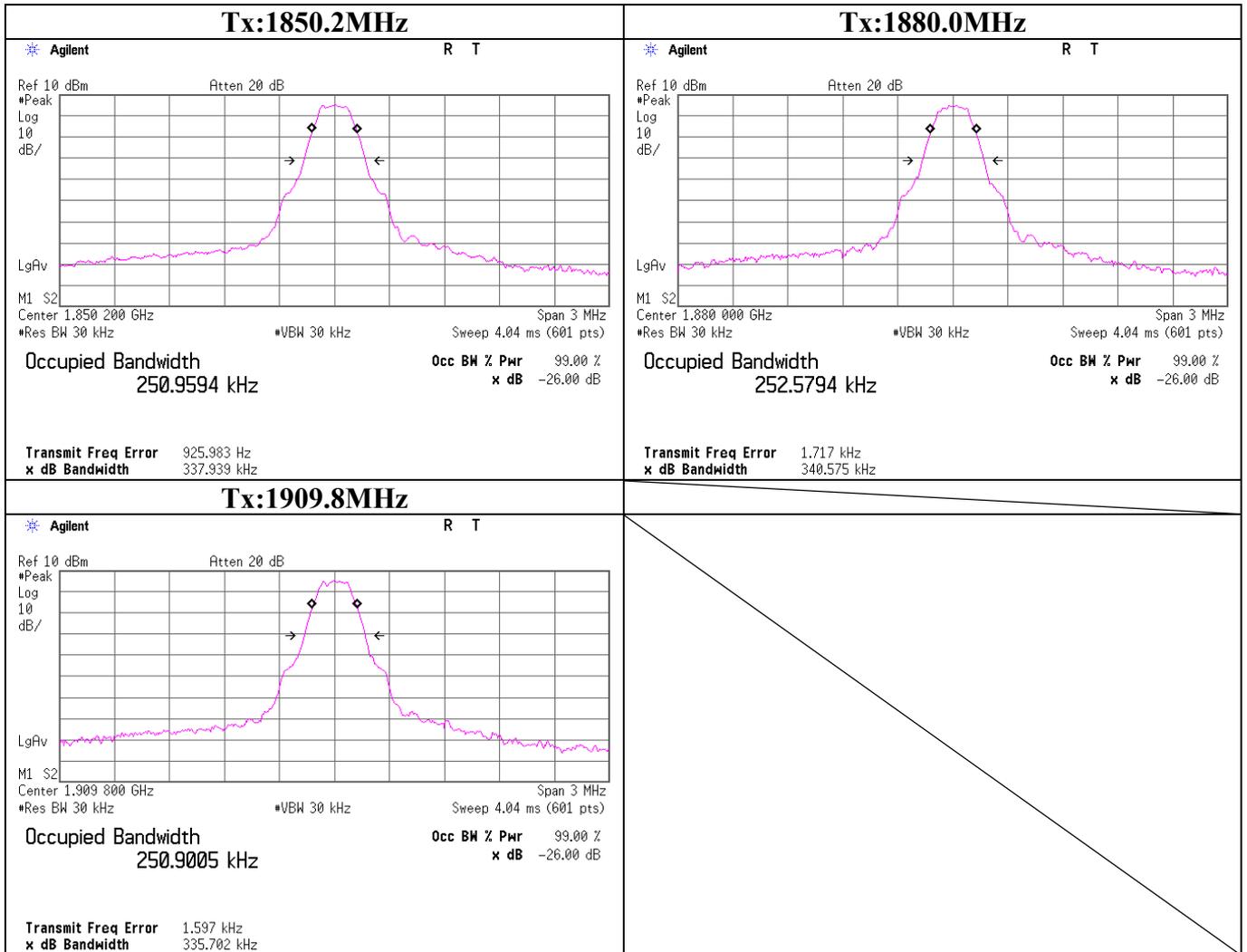
<GSM Mode>

CH	FREQ [MHz]	26dB Bandwidth [kHz]	99% OBW [kHz]	Limit [kHz]
Low	1850.2	337.9	251.0	-
Mid	1880.0	340.6	252.6	-
High	1909.8	335.7	250.9	-

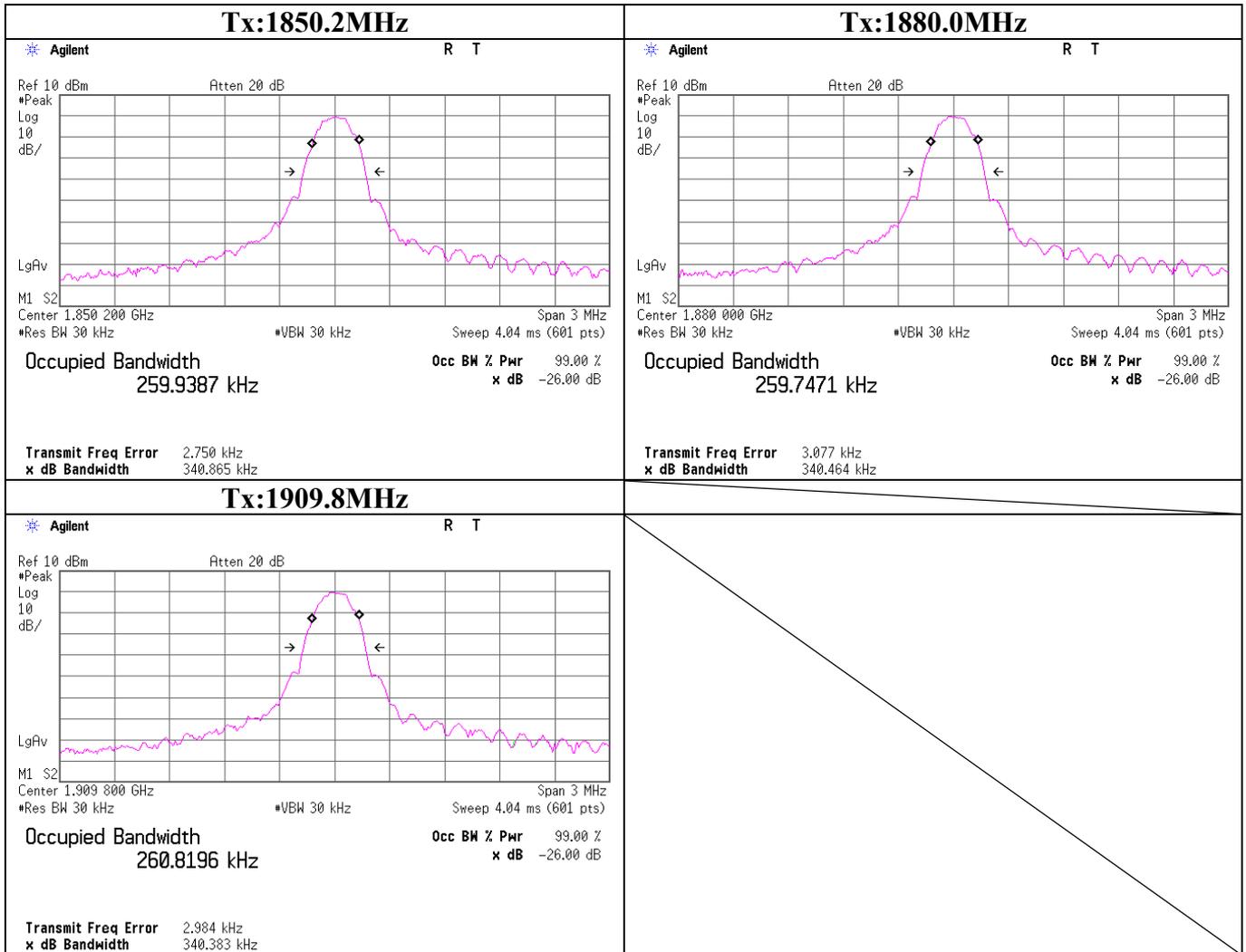
<EGPRS Mode>

CH	FREQ [MHz]	26dB Bandwidth [kHz]	99% OBW [kHz]	Limit [kHz]
Low	1850.2	340.9	259.9	-
Mid	1880.0	340.5	259.7	-
High	1909.8	340.4	260.8	-

Emission Bandwidth
GSM Mode



Emission Bandwidth
EGPRS Mode



Band-Edge(Conducted)

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

COMPANY	SHARP CORPORATION	REPORT NO	29CE0264-HO-01
EQUIPMENT	W-CDMA / GSM Mobile Phone	REGULATION	FCC Part24 Section 24.238(a)
MODEL	PV300	TEST METHOD	FCC Part24 Section 24.238(b)
S/N	P3-040	TEST DISTANCE	-
POWER	DC5.0V(AC Adapter: AC120V/60Hz)	DATE	12/16/2008
MODE	Power Control Level of "0" (Max Power)	TEMPERATURE	25 deg.C.
		HUMIDITY	41%
		ENGINEER	Takahiro Hatakeda

VIDEO AV 30 times

<GSM Mode>

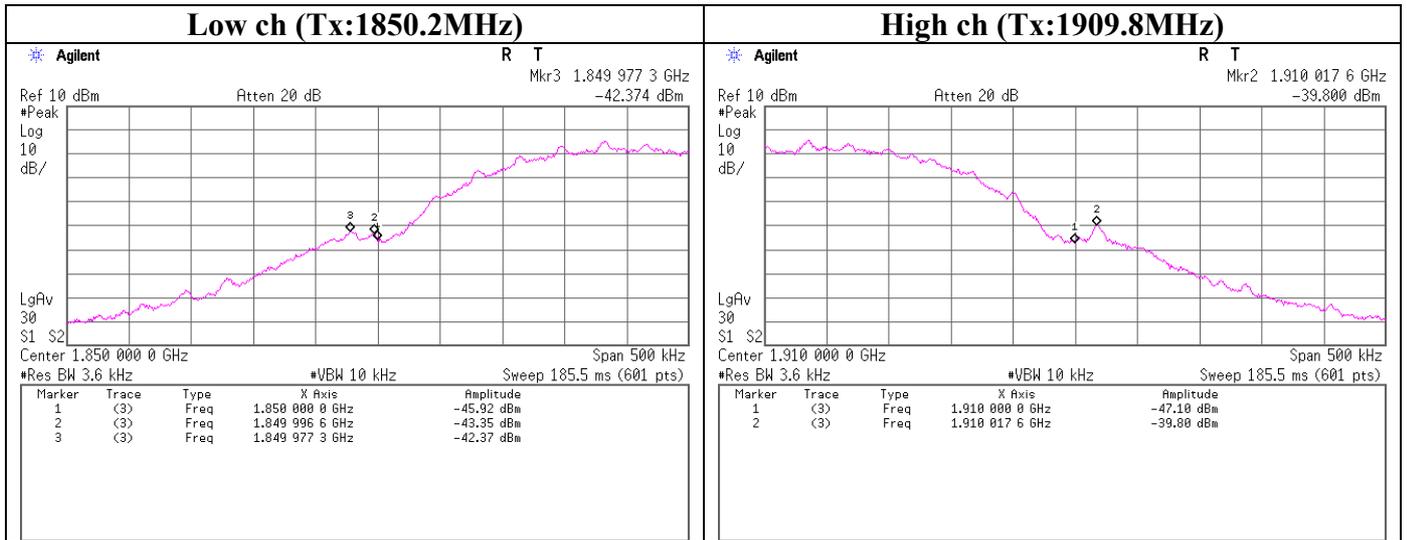
Frequency [MHz]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
1849.977	-42.4	20.0	3.9	-18.5	-13.0	5.5
1849.997	-43.4	20.0	3.9	-19.5	-13.0	6.5
1850.000	-45.9	20.0	3.9	-22.0	-13.0	9.0
1910.000	-47.1	20.0	3.9	-23.2	-13.0	10.2
1910.018	-39.8	20.0	3.9	-15.9	-13.0	2.9

<EGPRS Mode>

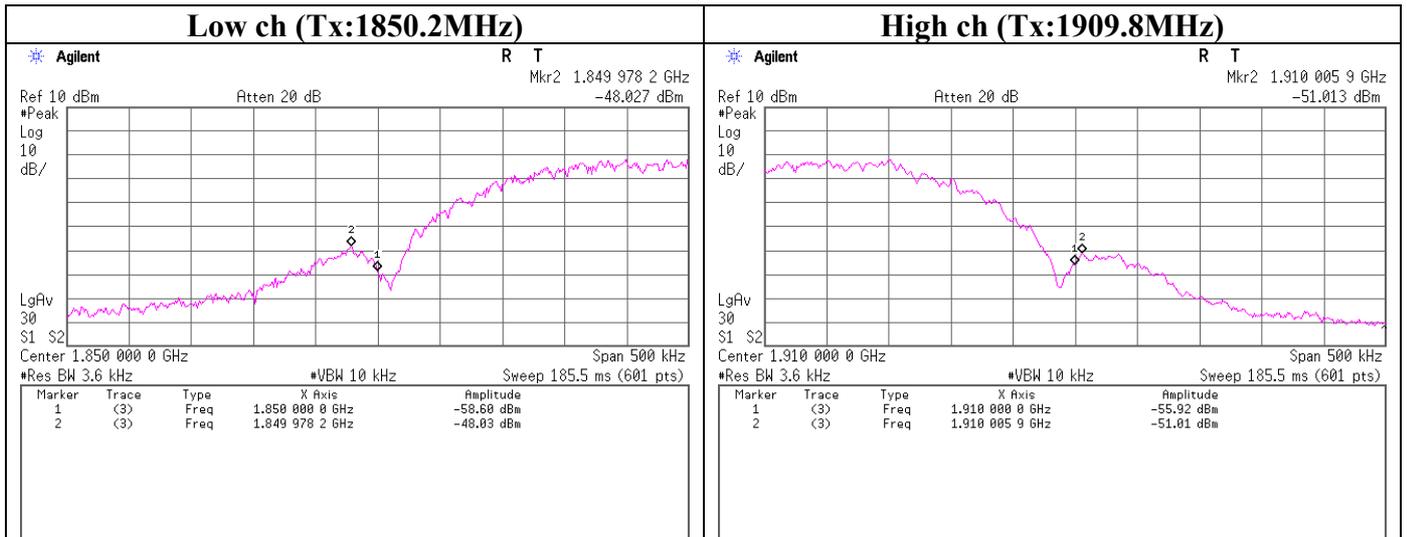
Frequency [MHz]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
1849.978	-48.0	20.0	3.9	-24.1	-13.0	11.1
1850.000	-58.6	20.0	3.9	-34.7	-13.0	21.7
1910.000	-55.9	20.0	3.9	-32.0	-13.0	19.0
1910.006	-51.0	20.0	3.9	-27.1	-13.0	14.1

Sample Calculation : Result = Reading + Atten. + Cable Loss

Band-Edge(Conducted)
GSM Mode



EGPRS Mode



Band-Edge (Radiated)

UL Japan, Inc.
Head Office EMC Lab. No.1 & 2 Semi Anechoic Chamber

Company	SHARP CORPORATION	Report Number	29CE0264-HO-01		
Equipment	W-CDMA / GSM Mobile Phone	Regulation	FCC Part 24 Section 24.238(a)		
Model	PV300	Test Method	FCC Part 24 Section 24.238(b)		
S/N	P3-156	Test Distance	3m		
Power	DC5.0V(AC Adapter: AC120V/60Hz)	Date	12/08/2008	12/09/2008	12/11/2008
Mode	GSM Mode / EGPRS Mode / GSM + BT Mode	Temperature	23 deg.C.	21 deg.C.	23 deg.C.
	Power Control Level of "0" (Max Power)	Humidity	36 %	44 %	37 %
EUT-Position	H: Z-axis / V: Z-axis	Engineer	Hironobu Ohnishi	Satofumi Matsuyama	Takeshi Choda

<GSM Mode>

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
		1	1850.00	72.4	73.6				-29.3	-28.3		3.8	9.5		
2	1910.00	74.4	75.6	-27.4	-26.4	3.8	9.8	0.0	-21.4	-20.4	-13.0	8.4	7.4	Operating	No2

<EGPRS Mode>

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
		1	1850.00	69.2	70.5				-32.5	-31.4		3.8	9.5		
2	1910.00	70.6	71.4	-31.2	-30.6	3.8	9.8	0.0	-25.2	-24.6	-13.0	12.2	11.6	Operating	No2

<GSM + BT Mode>

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
		1	1850.00	75.1	74.8				-26.7	-27.9		3.8	9.4		
2	1910.00	73.5	76.0	-28.4	-26.8	3.8	9.7	0.0	-22.5	-20.9	-13.0	9.5	7.9	Operating	No1

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

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

Detector : S/A PK(RBW:3MHz/VBW:8MHz)

Spurious Emission (Conducted)

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

COMPANY SHARP CORPORATION
EQUIPMENT W-CDMA / GSM Mobile Phone
MODEL PV300
S/N P3-040
POWER DC5.0V(AC Adapter: AC120V/60Hz)
MODE Power Control Level of "0" (Max Power)

REPORT NO 29CE0264-HO-01
REGULATION FCC Part 24 Section 24.238(a)
TEST METHOD FCC Part 2 Section 2.1051
TEST DISTANCE -
DATE 12/16/2008
TEMPERATURE 25 deg.C.
HUMIDITY 41%
ENGINEER Takahiro Hatakeda

Limit Line

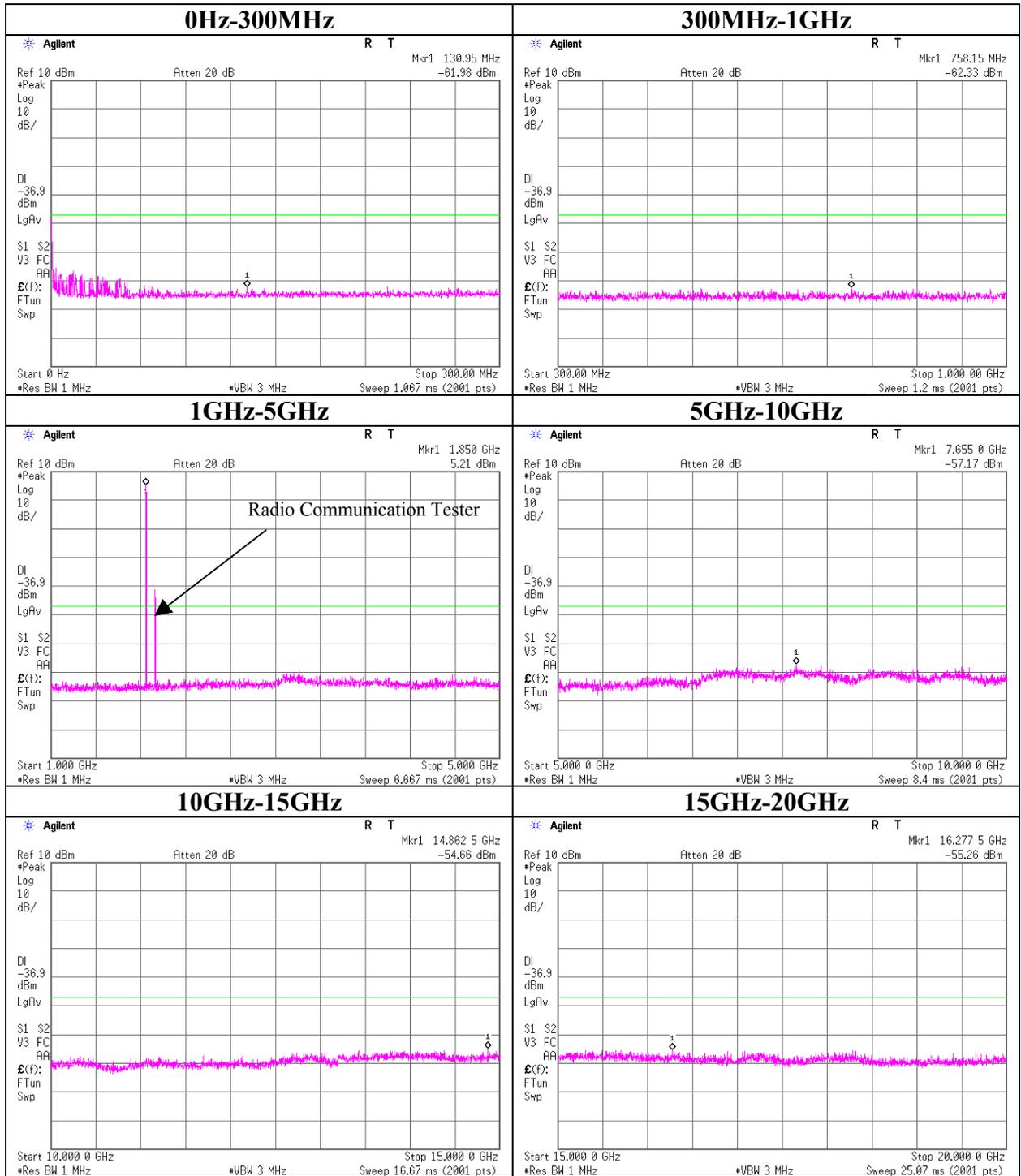
GSM Mode / EGPRS Mode

Tx Frequency [MHz]	Limit [dBm]	Atten. [dB]	Cable Loss [dB]	Limit Line [dBm]
1850.2	-13.0	20.0	3.9	-36.9
1880.0	-13.0	20.0	3.9	-36.9
1909.8	-13.0	20.0	3.9	-36.9

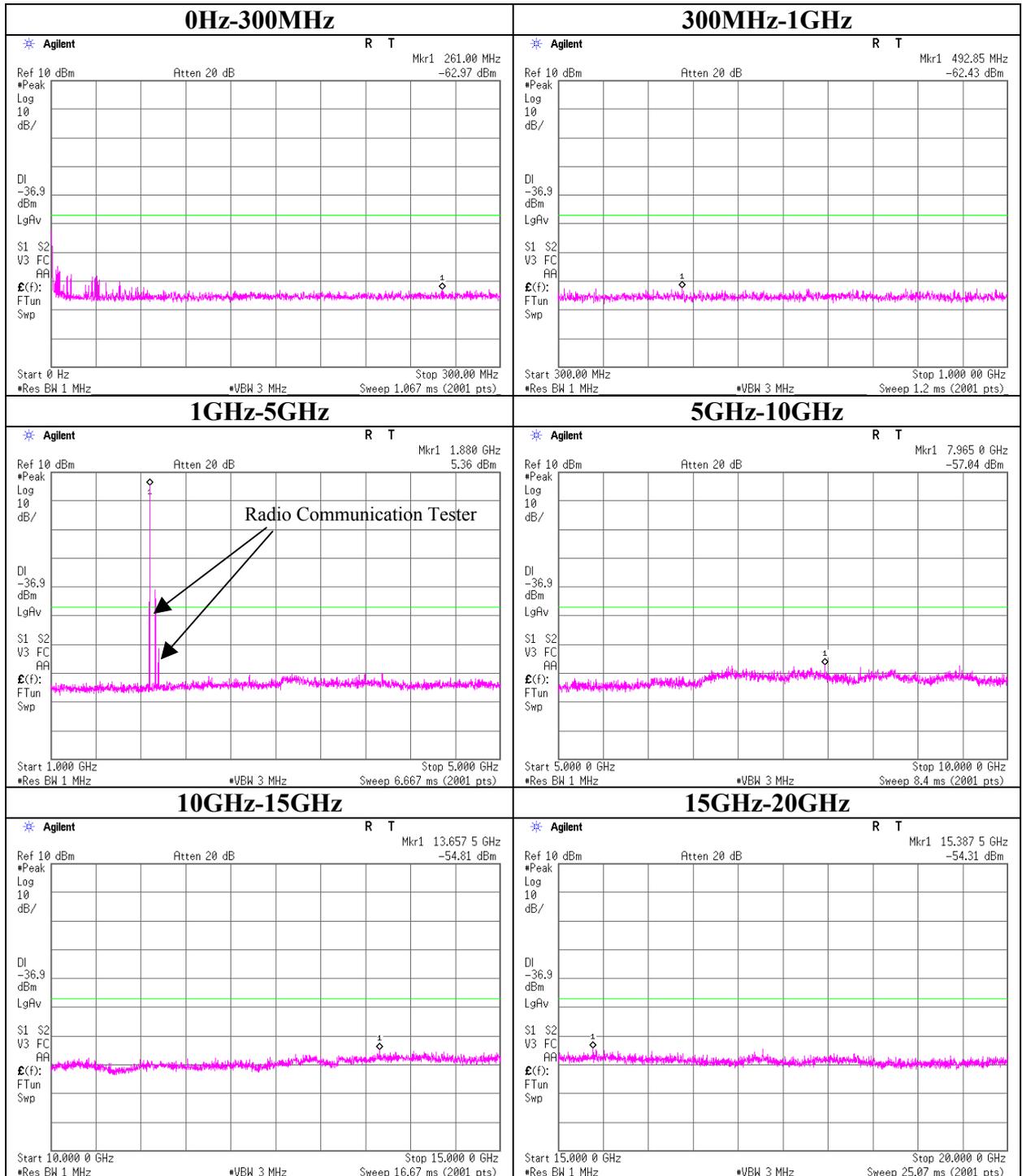
Sample Calculation : Limit Line = Limit - Atten. - Cable Loss

*All the spurious noises were below the above limit line.

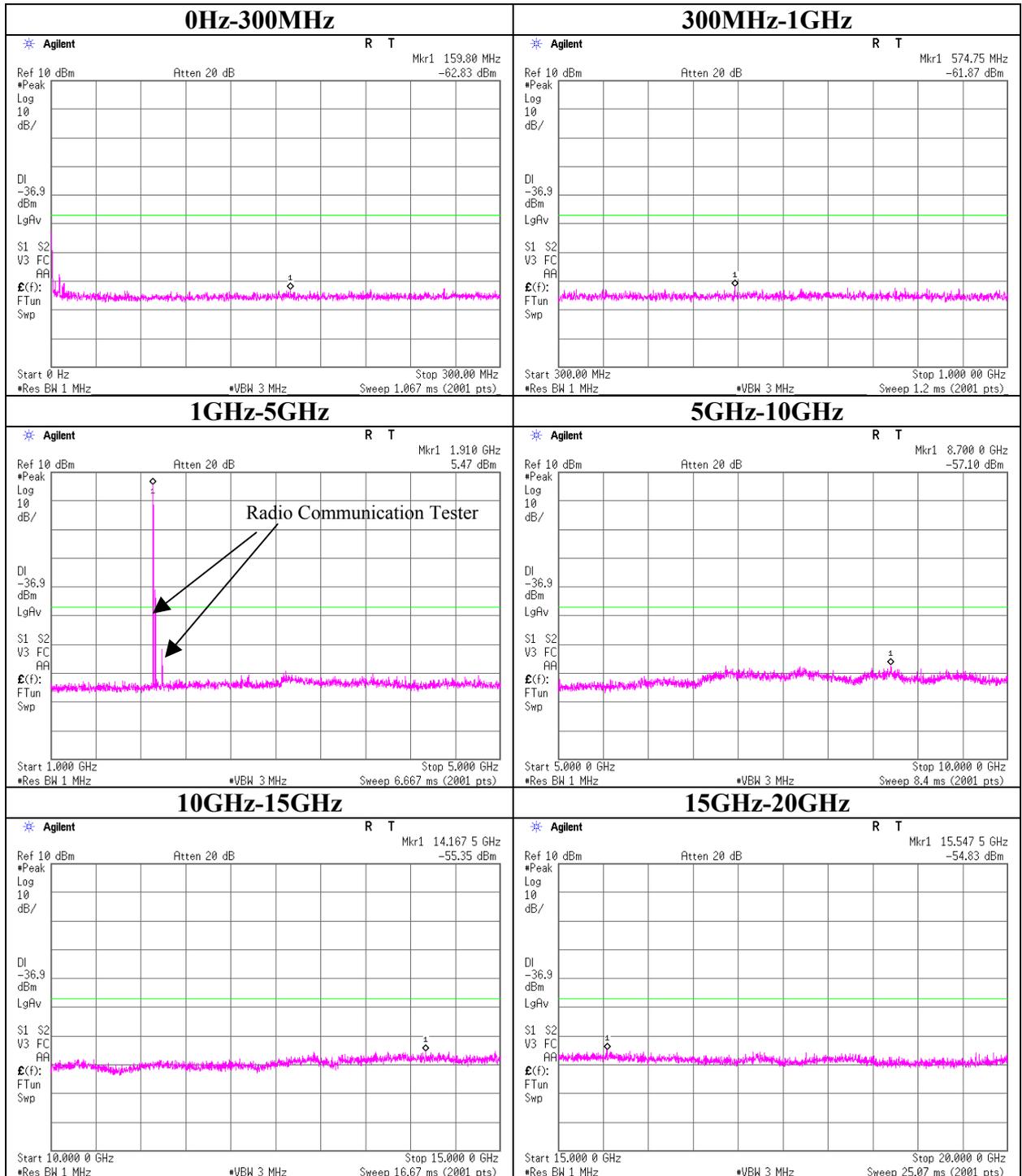
Spurious Emission (Conducted)
GSM Mode/ Tx:1850.2MHz



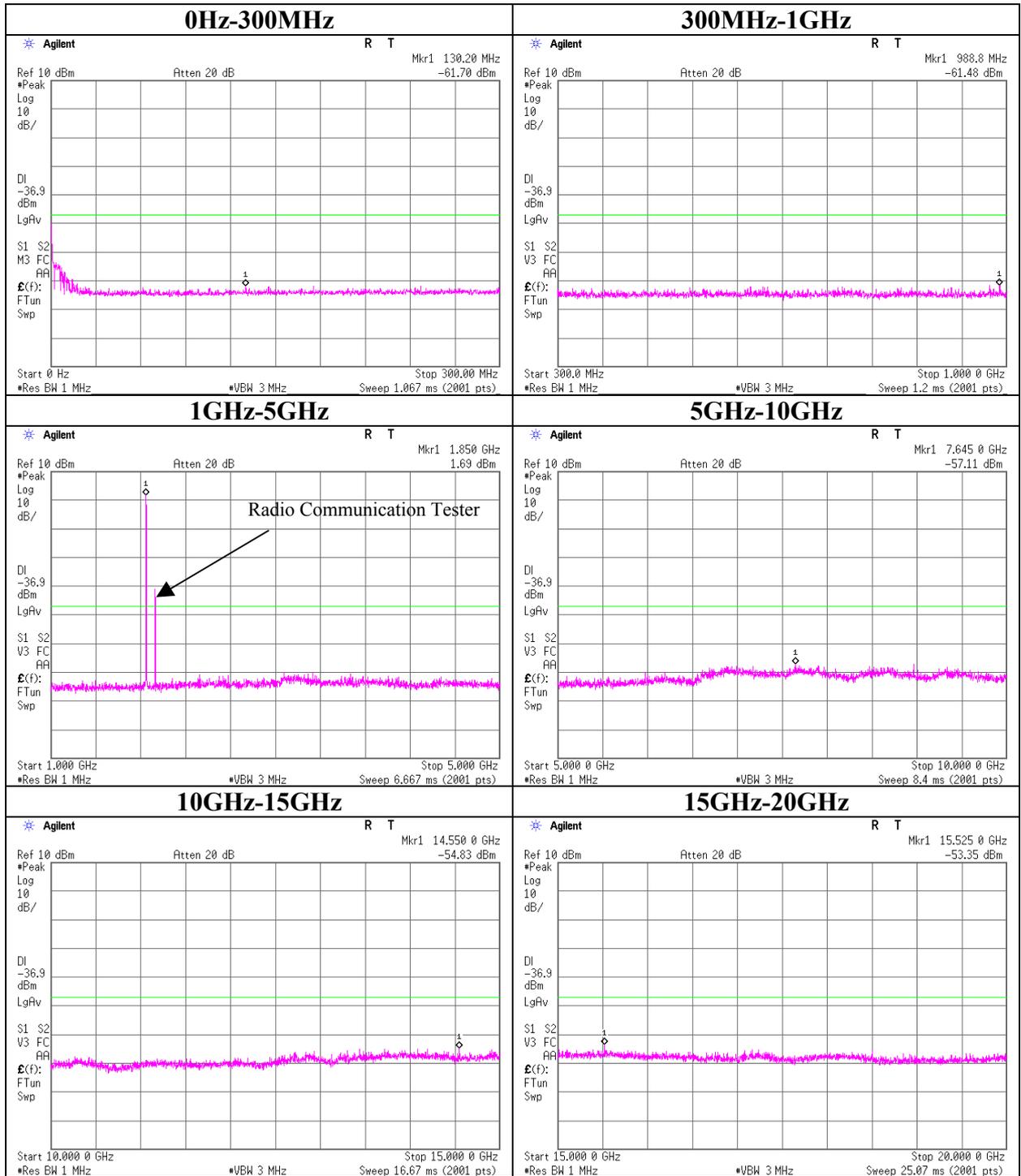
Spurious Emission (Conducted)
GSM Mode/ Tx:1880.0MHz



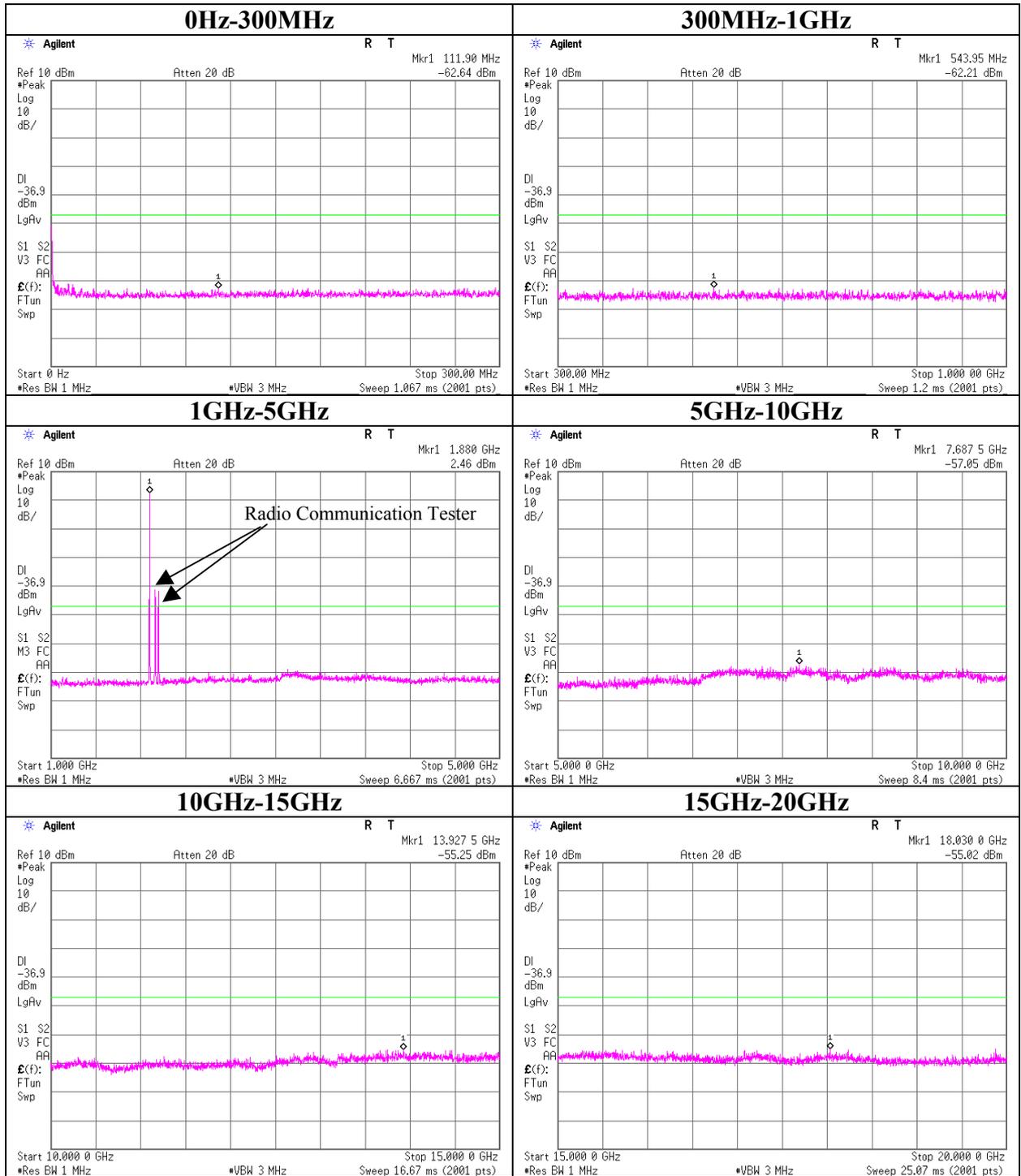
Spurious Emission (Conducted)
GSM Mode/ Tx:1909.8MHz



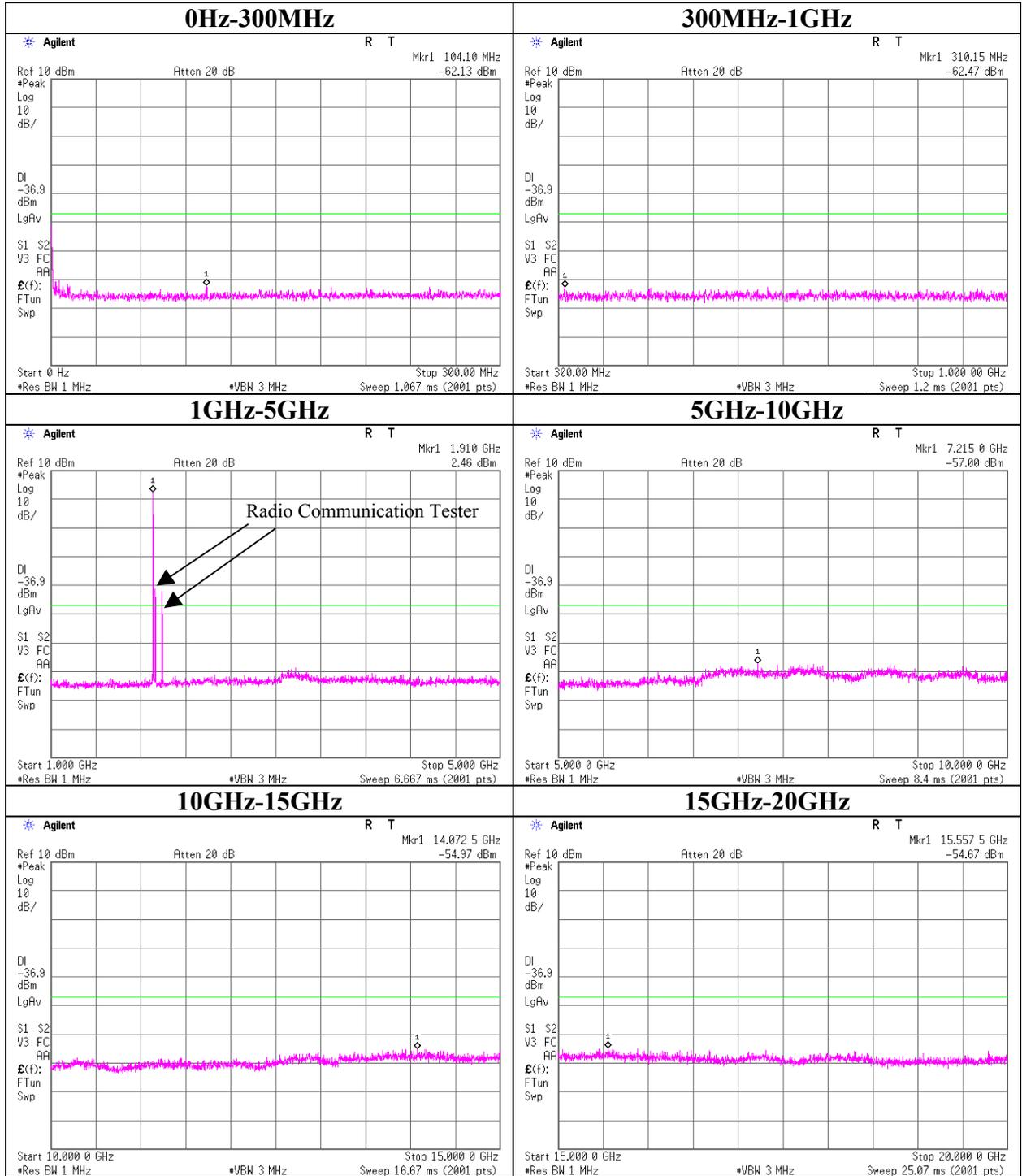
Spurious Emission (Conducted)
EGPRS Mode / Tx:1850.2MHz



Spurious Emission (Conducted)
EGPRS Mode / Tx:1880.0MHz



Spurious Emission (Conducted)
EGPRS Mode / Tx:1909.8MHz



Spurious Radiation

		UL Japan, Inc.
Company	SHARP CORPORATION	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Equipment	W-CDMA / GSM Mobile Phone	Regulation FCC Part 24 Section 24.238(a)
Model	PV300	Test Method FCC Part2 Section 2.1053
S/N	P3-156	Test Distance 3m / 1m
Power	DC5.0V(AC Adapter: AC120V/60Hz)	Date 12/08/2008 12/08/2008
Mode	GSM Mode	Temperature 23 deg.C. 23 deg.C.
	Tx 1850.2MHz,	Humidity 36 % 36 %
	Power Control Level of "0" (Max Power)	Engineer Hironobu Ohnishi Kazufumi Nakai
EUT-Position	H: Z-axis / V: Z-axis	(Above 1GHz) (Above 10GHz and Below 1GHz)
Tx Antenna	0.8m Height	

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx	Tx	Tx Ant.	RESULT (EIRP) [dBm]		LIMIT	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER	Cable Loss [dB]	Ant. Gain [dBi]	ATT. Loss [dB]	HOR	VER	[dBm] (EIRP)	HOR	VER		
1	112.65	38.6	36.4	-50.2	-53.5	0.5	1.0	9.9	-59.6	-62.8	-13.0	46.6	49.8	Operating	No2
2	3700.40	48.3	51.0	-54.4	-51.3	5.3	12.5	0.0	-47.2	-44.1	-13.0	34.2	31.1	Operating	No2
3	5550.60	49.3	54.9	-52.0	-47.3	6.7	13.2	0.0	-45.5	-40.8	-13.0	32.5	27.8	Operating	No2
4	7400.80	62.3	59.6	-37.8	-41.5	7.9	11.5	0.0	-34.1	-37.9	-13.0	21.1	24.9	Operating	No2
5	9251.00	54.7	55.5	-44.0	-45.7	8.7	11.5	0.0	-41.2	-42.9	-13.0	28.2	29.9	Operating	No2
6	11101.20	58.1	59.0	-50.4	-48.6	9.5	11.2	0.0	-48.7	-46.9	-13.0	35.7	33.9	Operating	No2
7	12951.40	61.8	67.3	-40.9	-38.5	10.1	13.4	0.0	-37.6	-35.2	-13.0	24.6	22.2	Operating	No2
8	14801.60	59.9	60.4	-46.0	-42.4	11.0	13.3	0.0	-43.7	-40.1	-13.0	30.7	27.1	Operating	No2
9	16651.80	58.8	58.6	-38.8	-33.9	12.1	15.5	0.0	-35.4	-30.5	-13.0	22.4	17.5	Operating	No2
10	18502.00	58.4	58.8	-43.1	-42.7	12.8	14.7	0.0	-41.2	-40.8	-13.0	28.2	27.8	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

Spurious Radiation

		UL Japan, Inc.
Company	SHARP CORPORATION	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Equipment	W-CDMA / GSM Mobile Phone	Regulation FCC Part 24 Section 24.238(a)
Model	PV300	Test Method FCC Part2 Section 2.1053
S/N	P3-156	Test Distance 3m / 1m
Power	DC5.0V(AC Adapter: AC120V/60Hz)	Date 12/08/2008 12/08/2008
Mode	GSM Mode	Temperature 23 deg.C. 23 deg.C.
	Tx 1880MHz,	Humidity 36 % 36 %
	Power Control Level of "0" (Max Power)	Engineer Hironobu Ohnishi Kazufumi Nakai
		(Above 1GHz) (Above 10GHz and Below 1GHz)
EUT-Position	H: Z-axis / V: Z-axis	
Tx Antenna	0.8m Height	

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
		1	113.58	37.9	35.3				-50.9	-54.7		0.5	1.2		
2	3760.00	48.0	49.4	-54.7	-52.8	5.4	12.6	0.0	-47.4	-45.6	-13.0	34.4	32.6	Operating	No2
3	5640.00	52.4	56.0	-48.9	-46.0	6.8	13.3	0.0	-42.3	-39.5	-13.0	29.3	26.5	Operating	No2
4	7520.00	63.0	59.7	-37.0	-41.4	7.9	11.5	0.0	-33.4	-37.8	-13.0	20.4	24.8	Operating	No2
5	9400.00	55.2	54.9	-43.3	-46.2	8.8	11.5	0.0	-40.6	-43.6	-13.0	27.6	30.6	Operating	No2
6	11280.00	57.5	58.7	-50.4	-48.6	9.5	11.5	0.0	-48.4	-46.7	-13.0	35.4	33.7	Operating	No2
7	13160.00	59.8	66.9	-43.5	-39.0	10.2	13.1	0.0	-40.6	-36.1	-13.0	27.6	23.1	Operating	No2
8	15040.00	61.4	61.6	-43.9	-39.9	11.1	13.9	0.0	-41.1	-37.1	-13.0	28.1	24.1	Operating	No2
9	16920.00	60.0	59.6	-38.0	-32.9	12.3	14.8	0.0	-35.5	-30.4	-13.0	22.5	17.4	Operating	No2
10	18800.00	57.2	57.5	-44.3	-44.0	13.0	14.7	0.0	-42.6	-42.3	-13.0	29.6	29.3	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

Spurious Radiation

		UL Japan, Inc.
Company	SHARP CORPORATION	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Equipment	W-CDMA / GSM Mobile Phone	Regulation FCC Part 24 Section 24.238(a)
Model	PV300	Test Method FCC Part2 Section 2.1053
S/N	P3-156	Test Distance 3m / 1m
Power	DC5.0V(AC Adapter: AC120V/60Hz)	Date 12/08/2008 12/08/2008
Mode	GSM Mode	Temperature 23 deg.C. 23 deg.C.
	Tx 1909.8MHz,	Humidity 36 % 36 %
	Power Control Level of "0" (Max Power)	Engineer Hironobu Ohnishi Kazufumi Nakai
		(Above 1GHz) (Above 10GHz and Below 1GHz)
EUT-Position	H: Z-axis / V: Z-axis	
Tx Antenna	0.8m Height	

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
1	112.87	38.7	36.9	-50.1	-53.0	0.5	1.1	9.9	-59.4	-62.3	-13.0	46.4	49.3	Operating	No2
2	3819.60	50.3	49.8	-52.5	-52.4	5.4	12.7	0.0	-45.1	-45.1	-13.0	32.1	32.1	Operating	No2
3	5729.40	54.5	58.6	-46.8	-43.2	6.8	13.4	0.0	-40.2	-36.7	-13.0	27.2	23.7	Operating	No2
4	7639.20	63.2	59.8	-36.7	-41.3	8.0	11.5	0.0	-33.2	-37.7	-13.0	20.2	24.7	Operating	No2
5	9549.00	56.3	55.4	-42.0	-45.7	8.9	11.4	0.0	-39.5	-43.2	-13.0	26.5	30.2	Operating	No2
6	11458.80	56.1	58.1	-51.1	-49.0	9.6	11.8	0.0	-48.9	-46.8	-13.0	35.9	33.8	Operating	No2
7	13368.60	59.2	68.5	-44.9	-37.5	10.4	12.7	0.0	-42.6	-35.2	-13.0	29.6	22.2	Operating	No2
8	15278.40	59.8	60.4	-43.4	-38.9	11.2	14.7	0.0	-39.9	-35.4	-13.0	26.9	22.4	Operating	No2
9	17188.20	63.2	63.9	-37.6	-30.4	12.4	13.2	0.0	-36.8	-29.5	-13.0	23.8	16.5	Operating	No2
10	19098.00	58.9	58.8	-42.6	-42.7	13.1	14.7	0.0	-41.0	-41.1	-13.0	28.0	28.1	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

Spurious Radiation

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company SHARP CORPORATION
Equipment W-CDMA / GSM Mobile Phone
Model PV300
S/N P3-156
Power DC5.0V(AC Adapter: AC120V/60Hz)
Mode EGPRS Mode
Tx 1850.2MHz,
Power Control Level of "0" (Max Power)
EUT-Position H: Z-axis / V: Z-axis
Tx Antenna 0.8m Height

Regulation FCC Part 24 Section 24.238(a)
Test Method FCC Part2 Section 2.1053
Test Distance 3m / 1m
Date 12/08/2008 12/9/2008
Temperature 23 deg.C. 19 deg.C.
Humidity 36 % 41 %
Engineer Kazufumi Nakai Hironobu Ohnishi
(Above 10GHz and (1GHz to 10GHz)
Below 1GHz)

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER		HOR	VER		
1	112.63	36.3	34.4	-52.5	-55.5	0.5	1.0	9.9	-61.9	-64.8	-13.0	48.9	51.8	Operating	No2
2	3700.40	47.3	48.4	-55.4	-53.9	5.3	12.5	0.0	-48.2	-46.7	-13.0	35.2	33.7	Operating	No2
3	5550.60	52.1	54.5	-49.2	-47.7	6.7	13.2	0.0	-42.7	-41.2	-13.0	29.7	28.2	Operating	No2
4	7400.80	63.1	59.3	-37.0	-41.8	7.9	11.5	0.0	-33.3	-38.2	-13.0	20.3	25.2	Operating	No2
5	9251.00	56.2	56.7	-42.5	-44.5	8.7	11.5	0.0	-39.7	-41.7	-13.0	26.7	28.7	Operating	No2
6	11101.20	57.5	60.2	-51.0	-47.4	9.5	11.2	0.0	-49.3	-45.7	-13.0	36.3	32.7	Operating	No2
7	12951.40	60.4	66.8	-42.3	-39.0	10.1	13.4	0.0	-39.0	-35.7	-13.0	26.0	22.7	Operating	No2
8	14801.60	61.1	61.4	-44.8	-41.4	11.0	13.3	0.0	-42.5	-39.1	-13.0	29.5	26.1	Operating	No2
9	16651.80	59.2	59.0	-38.4	-33.5	12.1	15.5	0.0	-35.0	-30.1	-13.0	22.0	17.1	Operating	No2
10	18502.00	58.6	58.3	-42.9	-43.2	12.8	14.7	0.0	-41.0	-41.3	-13.0	28.0	28.3	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

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

Spurious Radiation

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company SHARP CORPORATION
Equipment W-CDMA / GSM Mobile Phone
Model PV300
S/N P3-156
Power DC5.0V(AC Adapter: AC120V/60Hz)
Mode EGPRS Mode
Tx 1880MHz,
Power Control Level of "0" (Max Power)
EUT-Position H: Z-axis / V: Z-axis
Tx Antenna 0.8m Height

Regulation FCC Part 24 Section 24.238(a)
Test Method FCC Part2 Section 2.1053
Test Distance 3m / 1m
Date 12/08/2008
Temperature 23 deg.C.
Humidity 36 %
Engineer Kazufumi Nakai
(Above 10GHz and Below 1GHz)
12/9/2008
19 deg.C.
41 %
Hironobu Ohnishi
(1GHz to 10GHz)

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx Cable Loss [dB]	Tx Ant. Gain [dBi]	Tx Ant. ATT. Loss [dB]	RESULT (EIRP) [dBm]		LIMIT [dBm] (EIRP)	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER				HOR	VER					
1	113.87	39.5	37.0	-49.3	-53.0	0.5	1.2	9.9	-58.5	-62.2	-13.0	45.5	49.2	Operating	No2
2	3760.00	45.8	48.4	-56.9	-53.8	5.4	12.6	0.0	-49.6	-46.6	-13.0	36.6	33.6	Operating	No2
3	5640.00	51.8	56.4	-49.5	-45.6	6.8	13.3	0.0	-42.9	-39.1	-13.0	29.9	26.1	Operating	No2
4	7520.00	61.4	57.1	-38.6	-44.0	7.9	11.5	0.0	-35.0	-40.4	-13.0	22.0	27.4	Operating	No2
5	9400.00	55.5	55.7	-43.0	-45.4	8.8	11.5	0.0	-40.3	-42.8	-13.0	27.3	29.8	Operating	No2
6	11280.00	57.2	58.9	-50.7	-48.4	9.5	11.5	0.0	-48.7	-46.5	-13.0	35.7	33.5	Operating	No2
7	13160.00	59.7	66.0	-43.6	-39.9	10.2	13.1	0.0	-40.7	-37.0	-13.0	27.7	24.0	Operating	No2
8	15040.00	61.0	61.6	-44.3	-39.9	11.1	13.9	0.0	-41.5	-37.1	-13.0	28.5	24.1	Operating	No2
9	16920.00	59.7	60.1	-38.3	-32.4	12.3	14.8	0.0	-35.8	-29.9	-13.0	22.8	16.9	Operating	No2
10	18800.00	57.8	57.3	-43.7	-44.2	13.0	14.7	0.0	-42.0	-42.5	-13.0	29.0	29.5	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

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

Spurious Radiation

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company SHARP CORPORATION
Equipment W-CDMA / GSM Mobile Phone
Model PV300
S/N P3-156
Power DC5.0V(AC Adapter: AC120V/60Hz)
Mode EGPRS Mode
Tx 1909.8MHz,
Power Control Level of "0" (Max Power)
EUT-Position H: Z-axis / V: Z-axis
Tx Antenna 0.8m Height

Regulation FCC Part 24 Section 24.238(a)
Test Method FCC Part2 Section 2.1053
Test Distance 3m / 1m
Date 12/08/2008
Temperature 23 deg.C.
Humidity 36 %
Engineer Kazufumi Nakai
(Above 10GHz and Below 1GHz)

12/9/2008
19 deg.C.
41 %
Hironobu Ohnishi
(1GHz to 10GHz)

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		SG Reading [dBm]		Tx	Tx	Tx Ant.	RESULT (EIRP) [dBm]		LIMIT	MARGIN [dB]		Mode	A/C
		HOR	VER	HOR	VER	Cable Loss [dB]	Ant. Gain [dBi]	ATT. Loss [dB]	HOR	VER	[dBm] (EIRP)	HOR	VER		
1	112.43	38.8	32.8	-50.0	-57.1	0.5	1.0	9.9	-59.4	-66.5	-13.0	46.4	53.5	Operating	No2
2	188.55	35.2	38.7	-56.8	-49.3	0.7	2.2	10.0	-65.3	-57.9	-13.0	52.3	44.9	Operating	No2
3	3819.60	50.6	52.5	-52.2	-49.7	5.4	12.7	0.0	-44.8	-42.4	-13.0	31.8	29.4	Operating	No2
4	5729.40	53.9	58.0	-47.4	-43.8	6.8	13.4	0.0	-40.8	-37.3	-13.0	27.8	24.3	Operating	No2
5	7639.20	61.9	58.3	-38.0	-42.8	8.0	11.5	0.0	-34.5	-39.2	-13.0	21.5	26.2	Operating	No2
6	9549.00	56.6	56.6	-41.7	-44.5	8.9	11.4	0.0	-39.2	-42.0	-13.0	26.2	29.0	Operating	No2
7	11458.80	57.3	58.6	-49.9	-48.5	9.6	11.8	0.0	-47.7	-46.3	-13.0	34.7	33.3	Operating	No2
8	13368.60	60.5	68.4	-43.6	-37.6	10.4	12.7	0.0	-41.3	-35.3	-13.0	28.3	22.3	Operating	No2
9	15278.40	60.0	59.6	-43.2	-39.7	11.2	14.7	0.0	-39.7	-36.2	-13.0	26.7	23.2	Operating	No2
10	17188.20	61.8	61.8	-39.0	-32.5	12.4	13.2	0.0	-38.2	-31.6	-13.0	25.2	18.6	Operating	No2
11	19098.00	58.1	57.7	-43.4	-43.8	13.1	14.7	0.0	-41.8	-42.2	-13.0	28.8	29.2	Operating	No2

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperiodic Antenna(300M-1000MHz), Horn Antenna(1G-20GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-20GHz)

All other emissions were at least 20dB below the specification limit.

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

Detector: S/A PK(RBW:1MHz/VBW:3MHz)

Frequency Stability(Temperature/Voltage Variation)

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

COMPANY	SHARP CORPORATION	REPORT NO	29CE0264-HO-01
EQUIPMENT	W-CDMA / GSM Mobile Phone	REGULATION	FCC Part24 Section 24.235
MODEL	PV300	TEST METHOD	FCC Part2 Section 2.1055(a)(1) and(b)
S/N	P3-040		FCC Part2 Section 2.1055(d)(1) and(2)
POWER	DC5.0V(AC Adapter: AC120V/60Hz)	TEST DISTANCE	-
MODE	Tx 1880.0MHz, Power Control Level of "0" (Max Power)	DATE	12/19/2008
		TEMPERATURE	25 deg.C.
		HUMIDITY	40%
		ENGINEER	Takahiro Hatakeda

<PCS1900: GSM Mode>

Temp. [deg.C]	Volt. [V]	Frequency Reading [MHz]	Frequency Error [Hz]	Frequency Error [ppm]	Remark
-30.0	3.9	1879.999921	5	0.003	
-20.0	3.9	1879.999943	27	0.014	
-10.0	3.9	1879.999958	42	0.022	
0.0	3.9	1879.999968	52	0.028	
10.0	3.9	1879.999945	29	0.015	
20.0	3.9	1879.999916	0	0.000	Reference
30.0	3.9	1879.999912	4	0.002	
40.0	3.9	1879.999910	6	0.003	
50.0	3.9	1879.999937	21	0.011	

Temp. [deg.C]	Volt. [V]	Frequency Reading [MHz]	Frequency Error [Hz]	Frequency Error [ppm]	Remark
20.0	3.7	1879.999921	5	0.003	
20.0	3.9	1879.999916	0	0.000	Reference
20.0	4.2	1879.999923	7	0.004	

Frequency Stability(Temperature/Voltage Variation)

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

COMPANY	SHARP CORPORATION	REPORT NO	29CE0264-HO-01
EQUIPMENT	W-CDMA / GSM Mobile Phone	REGULATION	FCC Part24 Section 24.235
MODEL	PV300	TEST METHOD	FCC Part2 Section 2.1055(a)(1) and(b)
S/N	P3-040		FCC Part2 Section 2.1055(d)(1) and(2)
POWER	DC5.0V(AC Adapter: AC120V/60Hz)	TEST DISTANCE	-
MODE	Tx 1880.0MHz, Power Control Level of "0" (Max Power)	DATE	12/19/2008
		TEMPERATURE	25 deg.C.
		HUMIDITY	40%
		ENGINEER	Takahiro Hatakeda

<EGPRS Mode>

Temp. [deg.C]	Volt. [V]	Frequency Reading [MHz]	Frequency Error [Hz]	Frequency Error [ppm]	Remark
-30.0	3.9	1879.999948	28	0.015	
-20.0	3.9	1879.999935	15	0.008	
-10.0	3.9	1879.999973	53	0.028	
0.0	3.9	1879.999968	48	0.026	
10.0	3.9	1879.999962	42	0.022	
20.0	3.9	1879.999920	0	0.000	Reference
30.0	3.9	1879.999918	2	0.001	
40.0	3.9	1879.999978	58	0.031	
50.0	3.9	1879.999953	33	0.018	

Temp. [deg.C]	Volt. [V]	Frequency Reading [MHz]	Frequency Error [Hz]	Frequency Error [ppm]	Remark
20.0	3.7	1879.999922	2	0.001	
20.0	3.9	1879.999920	0	0.000	Reference
20.0	4.2	1879.999915	5	0.003	

APPENDIX 3: Test instruments

EMI test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2008/12/08 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	RE	2008/11/25 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2008/01/19 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	295123(5m) / 287573(1m)	RE	2008/11/27 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2008/09/17 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278942/4	RE	2008/12/17 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	7002	RE	2008/12/16 * 12
MHF-16	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	RE	2008/12/15 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	RE	2008/01/19 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2008/10/18 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2008/10/18 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2008/11/14 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2008/02/15 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2008/09/04 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	-	AT	2008/01/10 * 12
MAT-20	Attenuator(10dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	-	AT	2008/01/09 * 12
MAT-25	Attenuator(10dB) (above1GHz)	Agilent	8493C	71642	AT	2008/06/25 * 12
MPSC-01	Power splitters/Combiners	Mini-Circuit	ZFSC-2-2500	0124	AT	2008/09/22 * 12
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2008/08/13 * 12
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2008/08/13 * 12
MAT-21	Attenuator(20dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	AT	2008/01/09 * 12
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	AT	2008/11/25 * 12
MCH-04	Temperature and Humidity Chamber	Espec	PL-2KP	14015723	AT	2008/08/27 * 12

EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	RE	2008/10/29 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032007	RE	2008/11/12 * 12
MLA-09	Logperiodic Antenna	Schwarzbeck	USLP9143B	9143B006	RE	2008/11/12 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	BL1069	RE	2008/11/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	-	RE	2008/10/02 * 12
MPA-04	Pre Amplifier	Agilent	8447D	2944A09965	RE	2008/07/23 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	100084	RE	2008/12/01 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MOS-01	Digital Humidity Indicator	N.T	NT-1800	MOS01	RE	2008/11/27 * 12
MJM-01	Measure	KDS	ES19-55	-	RE	-
MHA-05	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	253	RE	2008/01/19 * 12
MHA-01	Horn Antenna 18-26.5GHz	EMCO	3160-09	1266	RE	2008/01/19 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	233010(1m) / 292410(5m)	RE	2008/09/09 * 12
MPA-01	Pre Amplifier	Agilent	8449B	3008A01671	RE	2008/02/12 * 12
MHF-21	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	601	RE	2008/01/07 * 12
MCC-76	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278967/4	RE	2007/12/26 * 12
MRENT-75	Radio Communication Tester	Rohde & Schwarz	CMU200	104031	RE/AT	Pre Check

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:

- RE: Radiated Emission**
- AT: Antenna Terminal Conducted**