

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2009/07/24

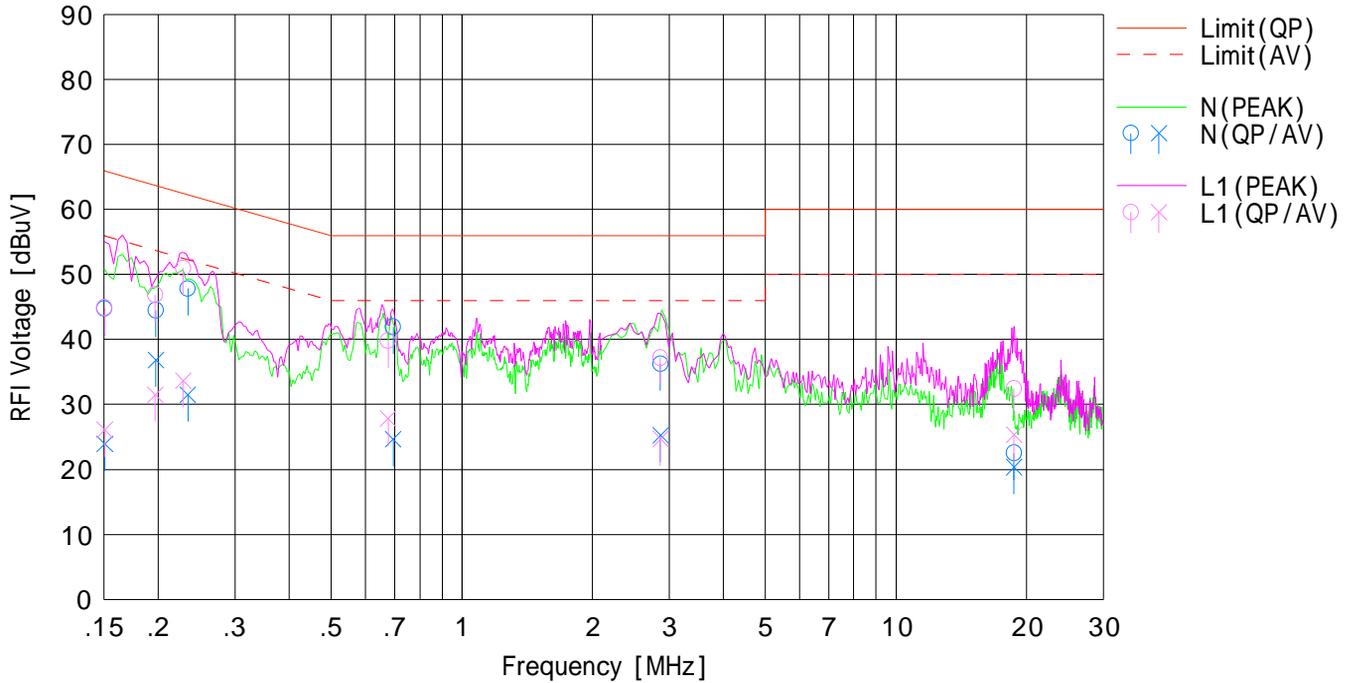
Company : Sony Corporation
Kind of EUT : TransferJet Module
Model No. : CXN5000
Serial No. : 5000-01

Mode : Transmitting
Report No. : 29LE0155-SH-A
Power : AC120V / 60Hz
Temp./Humi. : 25 / 58%

Remarks : -

LIMIT1 : FCC 15C(15.207) ClassB QP
LIMIT2 : FCC 15C(15.207) ClassB AV

Engineer : Tatsuya Arai



No.	Freq. [MHz]	Reading		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		<QP> [dBuV]	<AV> [dBuV]		<QP> [dBuV]	<AV> [dBuV]	<QP> [dBuV]	<AV> [dBuV]	<QP> [dB]	<AV> [dB]		
1	0.15048	35.1	14.2	9.7	44.8	23.9	66.0	56.0	21.2	32.1	N	
2	0.19727	34.8	27.2	9.7	44.5	36.9	63.7	53.7	19.2	16.8	N	
3	0.23400	38.1	21.8	9.7	47.8	31.5	62.3	52.3	14.5	20.8	N	
4	0.69475	32.2	14.9	9.7	41.9	24.6	56.0	46.0	14.1	21.4	N	
5	2.86852	26.4	15.5	9.8	36.2	25.3	56.0	46.0	19.8	20.7	N	
6	18.69345	12.1	9.9	10.5	22.6	20.4	60.0	50.0	37.5	29.7	N	
7	0.15048	35.2	16.4	9.7	44.9	26.1	66.0	56.0	21.1	29.9	L1	
8	0.19657	37.2	21.8	9.7	46.9	31.5	63.8	53.8	16.9	22.3	L1	
9	0.22816	41.3	24.0	9.7	51.0	33.7	62.5	52.5	11.5	18.8	L1	
10	0.67650	30.1	18.1	9.7	39.8	27.8	56.0	46.0	16.2	18.2	L1	
11	2.86712	27.4	14.9	9.8	37.2	24.7	56.0	46.0	18.8	21.3	L1	
12	18.69495	21.9	14.8	10.5	32.4	25.3	60.0	50.0	27.6	24.7	L1	

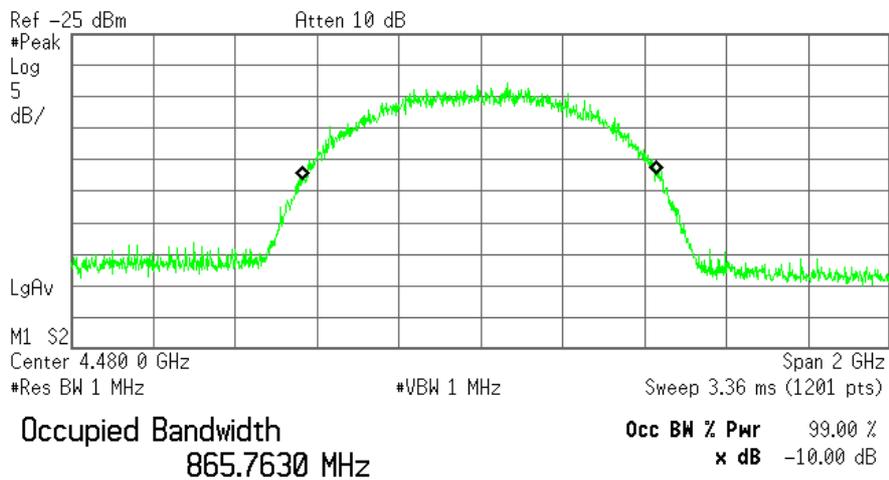
Bandwidth (Regulation: FCC 15.503(d) 519(b))

COMPANY : Sony Corporation
Equipment : TransferJet Module
MODEL NUMBER: CXN5000
SERIAL NUMBER: 5000-01
POWER : DC3.3V
Remarks : -

UL Japan, Inc. SHONAN No.3 Shield Room
REPORT No. : 29LE0155-SH-A
REGULATION : FCC Part15SubpartF 503(d) 519(b)
DATE : 2009/7/23
TEMP./HUMI : 26°C/46%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

10dB Bandwidth: 756.5MHz (LIMIT: >500MHz)
Occupied Bandwidth (99%) : 865.8MHz

※ Agilent



Transmit Freq Error -2.562 MHz
x dB Bandwidth 756.499 MHz

Start Frequency: 3480MHz
Stop Frequency: 5480MHz

DATA OF RADIATION TEST (Regulation: FCC 15.519(c))

UL Japan, Inc.
SHONAN NO.3 ANECHOIC CHAMBER
Report No. : 29LE0155-SH-A

Company : Sony Corporation
Equipment : TransferJet Module
Model : CXN5000
Sample No. : 5000-01
Power : DC3.3
Mode : Transmitting

Regulation : FCC Part15F Section 15.519(c)
Test Distance : 3m / 0.5m / 0.3m
Date : 2009/7/21 2009/7/23
Temperature : 26deg.C 25deg.C
Humidity : 62% 49%

ENGINEER : Tatsuya Arai

Horizontal (RBW: 1MHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	500.00	30.4	17.4	31.9	9.1	0.0	25.0	46.0	21.0	QP
2	960.00	25.2	22.5	30.5	10.4	0.0	27.6	46.0	18.4	QP
3	1607.00	36.3	25.8	39.6	1.5	15.6	8.4	19.9	11.5	RMS
4	1983.44	37.5	26.5	39.9	1.8	15.6	10.3	31.9	21.6	RMS
5	3084.00	37.1	28.7	40.2	2.2	15.6	12.2	33.9	21.7	RMS
6	4480.00	45.9	31.0	39.8	2.6	15.6	24.1	53.9	29.8	RMS
7	8960.00	36.4	37.5	37.3	3.9	15.6	24.9	53.9	29.0	RMS
8	13440.00	35.6	40.1	36.9	4.6	20.0	23.4	33.9	10.5	RMS

No1-2:3m, 3-7: 0.5m, No.8: 0.3m

Vertical (RBW: 1MHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	500.00	29.8	17.4	31.9	9.1	0.0	24.4	46.0	21.6	QP
2	960.00	24.4	22.5	30.5	10.4	0.0	26.8	46.0	19.2	QP
3	1606.00	36.2	25.8	39.6	1.5	15.6	8.3	19.9	11.6	RMS
4	1988.00	36.4	26.5	39.9	1.8	15.6	9.2	31.9	22.7	RMS
5	3095.00	37.0	28.7	40.2	2.2	15.6	12.1	33.9	21.8	RMS
6	4480.00	45.3	31.0	39.8	2.6	15.6	23.5	53.9	30.4	RMS
7	8960.00	35.4	37.5	37.3	3.9	15.6	23.9	53.9	30.0	RMS
8	13440.00	35.5	40.1	36.9	4.6	20.0	23.3	33.9	10.6	RMS

No1-2:3m, 3-7: 0.5m, No.8: 0.3m

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Loss (Cable + ATT) - Distance Factor

Distance Factor calculation 0.5m: $20 \cdot \log(3.0[m]/0.5[m]) = 15.6[\text{dB}]$

0.3m: $20 \cdot \log(3.0[m]/0.3[m]) = 20.0[\text{dB}]$

LIMIT=EIRP Limit + 95.2 (15.503(k))

DATA OF RADIATION TEST (Regulation: FCC 15.519(d))

UL Japan, Inc.
YAMAKITA NO.3 ANECHOIC CHAMBER
Report No. : 29LE0155-SH-A

Company : Sony Corporation
Equipment : TransferJet Module
Model : CXN5000
Sample No. : 5000-01
Power : DC3.3
Mode : Transmitting

Regulation : FCC Part15F Section 15.519(d)
Test Distance : 0.5m
Date : 2009/7/23
Temperature : 25deg.C
Humidity : 49%

ENGINEER : Tatsuya Arai

Horizontal (RBW: 1kHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	1237.49	15.0	24.9	39.7	1.4	15.6	-14.0	9.9	23.9	RMS
2	1607.96	13.7	25.8	39.6	1.6	15.6	-14.1	9.9	24.0	RMS

Vertical (RBW: 1kHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	1238.01	14.6	24.9	39.7	1.4	15.6	-15.2	9.9	25.1	RMS
2	1607.09	13.8	25.8	39.6	1.5	15.6	-15.2	9.9	25.1	RMS

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Loss (Cable + ATT) - Distance Factor

Distance Factor calculation: $20 \cdot \log(3.0[m]/0.5[m]) = 15.6[\text{dB}]$

LIMIT=EIRP Limit + 95.2 (15.503(k))

DATA OF RADIATION TEST (Regulation: FCC 15.519(e))

UL Japan, Inc.
 YAMAKITA NO.1 ANECHOIC CHAMBER
 Report No. : 29LE0155-SH-A

Company : Sony Corporation
 Equipment : TransferJet Module
 Model : CXN5000
 Sample No. : 5000-01
 Power : DC3.3
 Mode : Transmitting

Regulation : FCC Part15F Section 15.519(e)
 Test Distance : 0.5m
 Date : 2009/7/21
 Temperature : 26deg.C
 Humidity : 62%

ENGINEER : Tatsuya Arai

Horizontal (RBW: 3MHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	4494.00	58.5	31.0	39.8	2.6	15.6	36.7	70.8	34.0	Peak

Vertical (RBW: 3MHz)

No.	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	4500.00	57.8	31.0	39.8	2.6	15.6	36.0	70.8	34.7	Peak

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Loss (Cable + ATT) - Distance Factor

Distance Factor calculation: $20 \cdot \log(3.0[m]/0.5[m]) = 15.6[dB]$

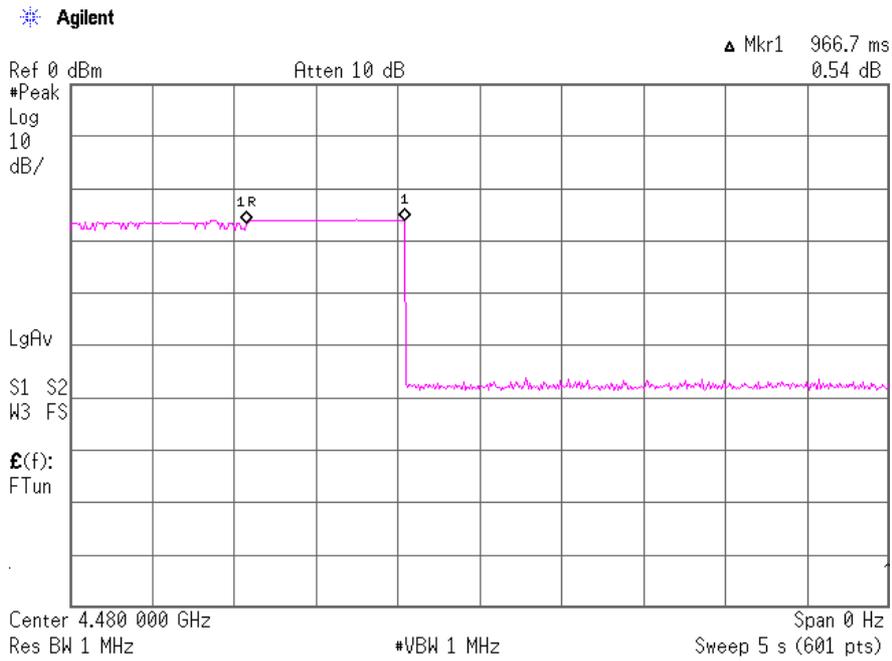
LIMIT=EIRP + $20 \log(RBW/50) + 95.2$ (15.521(g))

Transmitter Timeout (Regulation: FCC 15.519(a)(1))

COMPANY : Sony Corporation
Equipment : TransferJet Module
MODEL NUMBER: CXN5000
SERIAL NUMBER: 5000-04
POWER : DC3.3V
Remarks : -

UL Japan, Inc. SHONAN No.3 Shield Room
REPORT No. : 29LE0155-SH-A
REGULATION : FCC Part15SubpartF 519(a)(1)
DATE : 2009/7/23
TEMP./HUMI : 26°C/46%
TEST MODE : Transmitting
ENGINEER : Tatsuya Arai

Transmitter Timeout: 996.7ms (LIMIT: <10s)



DATA OF RADIATION TEST (Precheck Worst Case)

UL Japan, Inc.
SHONAN NO.3 ANECHOIC CHAMBER
Report No. : 29LE0155-SH-A

Company : Sony Corporation
Equipment : TransferJet Module
Model : CXN5000
Sample No. : 5000-01
Power : DC3.3
Mode : Transmitting

Regulation : FCC Part15F Section 15.519(c)
Test Distance : 0.5m
Date : 2009/7/21
Temperature : 26deg.C
Humidity : 62%

ENGINEER : Tatsuya Arai

Horizontal (RBW: 1MHz)

No.	Antenna Type	Cable Type	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	1	1	4480.00	45.9	31.0	39.8	2.6	15.6	24.1	53.9	29.8	RMS
2	1	2	4480.00	45.0	31.0	39.8	2.6	15.6	23.2	53.9	30.7	RMS
3	2	1	4480.00	45.3	31.0	39.8	2.6	15.6	23.5	53.9	30.4	RMS
4	3	1	4480.00	45.3	31.0	39.8	2.6	15.6	23.5	53.9	30.4	RMS

Vertical (RBW: 1MHz)

No.	Antenna Type	Cable Type	FREQ [MHz]	READING [dBuV]	ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Distance Factor [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	Detector
1	1	1	4480.00	45.3	31.0	39.8	2.6	15.6	23.5	53.9	30.4	RMS
2	1	2	4480.00	44.9	31.0	39.8	2.6	15.6	23.1	53.9	30.8	RMS
3	2	1	4480.00	44.9	31.0	39.8	2.6	15.6	23.1	53.9	30.8	RMS
4	3	1	4480.00	45.4	31.0	39.8	2.6	15.6	23.6	53.9	30.3	RMS

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Loss (Cable + ATT) - Distance Factor

Distance Factor calculation 0.5m: $20 \cdot \log(3.0[m]/0.5[m]) = 15.6[\text{dB}]$

LIMIT=EIRP Limit + 95.2 (15.503(k))

APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV	1	RE/CE	-
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE 1-18GHz	2009/03/26 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE 1-18GHz	2009/03/14 * 12
SCC-G12	Coaxial Cable	Suhner	SUCOFLEX 102	30790/2	RE 1-26.5GHz	2009/03/11 * 12
SCC-G13	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	RE 1-40GHz	2009/03/11 * 12
SJM-03	Measure	KOMELON	KMC-36	-	RE/CE	-
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2009/02/04 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE 1-40GHz BW, TO	2009/02/12 * 12
SHA-05	Horn Antenna	ETS LINDGREN	3160-09	LM4210	RE 18-26.5GHz	2009/04/09 * 12
SAF-09	Pre Amplifier	TOYO Corporation	HAP18-26W	00000018	RE 18-26.5GHz	2009/03/27 * 12
SHA-06	Horn Antenna	ETS LINDGREN	3160-10	LM3459	RE 26.5-40GHz	2009/04/30 * 12
KAF-10	Pre Amplifier	TSJ	MLA-1840B02-35	-	RE 26.5-40GHz	2009/02/17 * 12
SCC-G11	Coaxial Cable	Suhner	SUCOFLEX 102	31595/2	RE 26.5-40GHz	2009/03/11 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE 30-1000MHz, BW, TO	2009/02/13 * 12
SAT6-05	Attenuator	JFW	50HF-006N	-	RE 30-1000MHz	2009/02/13 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE 30-300MHz	2009/03/20 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE 30-1000MHz	2009/04/06 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE 300-1000MHz	2009/03/20 * 12
STR-03	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE 30-1000MHz	2009/04/08 * 12
SAEC-03	Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2009/03/19 * 12
SCC-C6/C7/C8/C10/SRSE-03	Coaxial Cable&RF Selector	Suhner/Fujikura/Suhner/Suhner/TOYO	RG223U/12DSFA/141PE/NS4906	-/0901-270(RF Selector)	CE	2009/04/06 * 12
SLS-05	LISN	Rohde & Schwarz	ENV216	100516	CE	2009/02/25 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4063343	CE	2009/02/04 * 12
STR-03	Test Receiver	Rohde & Schwarz	ESCI	100575	CE	2008/07/22 * 12

The expiration date of the calibration is the end of the expired month .

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

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

Test Item :

CE: Conducted emission,

RE: Radiated emission,

BW: Band Width

TO: Transmitter Timeout