UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 31KE0311-YW-01

Power : DC5V (PC: AC120V/60Hz) Mode Authenticate Mode

Remarks

2/23/2007 Date : Single Phase : 23 °C : 39 % Phase

Temperature Engineer : Masanori Nishiyama

Humidity

: FCC Part15B CLASS B(CISPR) Regulation

No.	FREQ.	READIN	(N)	READIN				ATTEN	. RES	ULT	LIM	ITS	MAR	GIN
	[MHz]	QP [dΒ μ	AV V]	QP [dΒ μ		FACTOR [dB]	LOSS [dB]	[dB]	QP [dB]	AV [dE	QP βμ V]	AV [dB	QP ι V] 	AV [dB]
1.	0. 1500	48.9	_	49.3	_	0.0	0. 1	0.0	49. 4	_	66.0	56. 0	16.6	
2.	0.2092	46.8	_	46.7	_	0.1	0.1	0.0	47.0	_	63.2	53.2	16. 2	_
3.	0.4881	37.2	_	34.8	_	0.1	0.2	0.0	37.5	_	56. 2	46.2	18.7	_
4.	0.5555	38. 2	_	39. 1	_	0.1	0.2	0.0	39.4	_	56.0	46.0	16.6	_
5.	1.3164	35. 5	_	31.8	_	0.1	0.3	0.0	35.9	_	56.0	46.0	20.1	_
6.	6.0197	29. 1	_	28.0	_	0.4	0.5	0.0	30.0	_	60.0	50.0	30.0	_
7.	20.6783	24. 2	-	23.0	-	1.2	0.9	0.0	26. 3	-	60.0	50.0	33. 7	_

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 31KE0311-YW-01

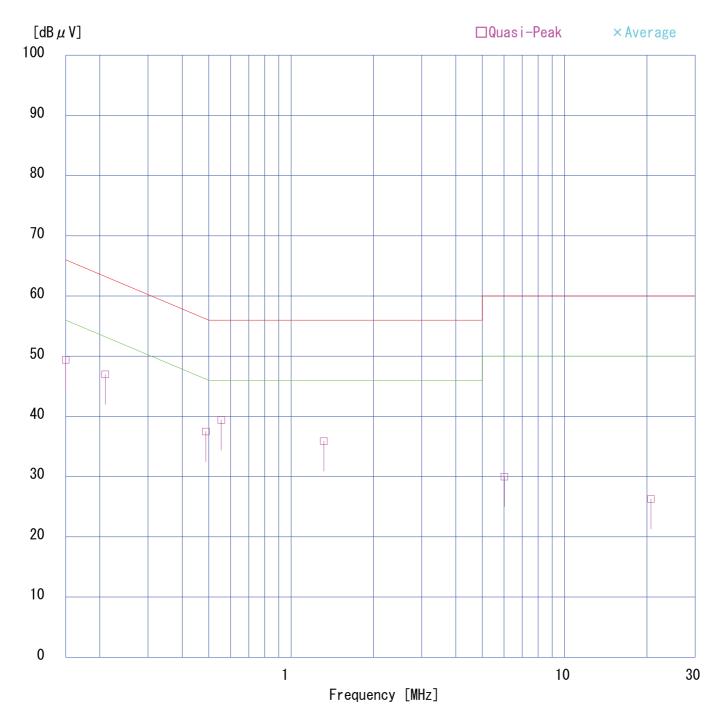
Power : DC5V (PC: AC120V/60Hz) Mode Authenticate Mode

Remarks

2/23/2007 Date : 27 257 2507 : Single Phase : 23 °C : 39 % Phase

Temperature Humidity Engineer : Masanori Nishiyama

: FCC Part15B CLASS B(CISPR) Regulation



# **DATA OF CONDUCTION TEST CHART**

UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM Report No.: 31KE0311-YW-01

DC5V (PC: AC120V/60Hz) Power Mode Authenticate Mode

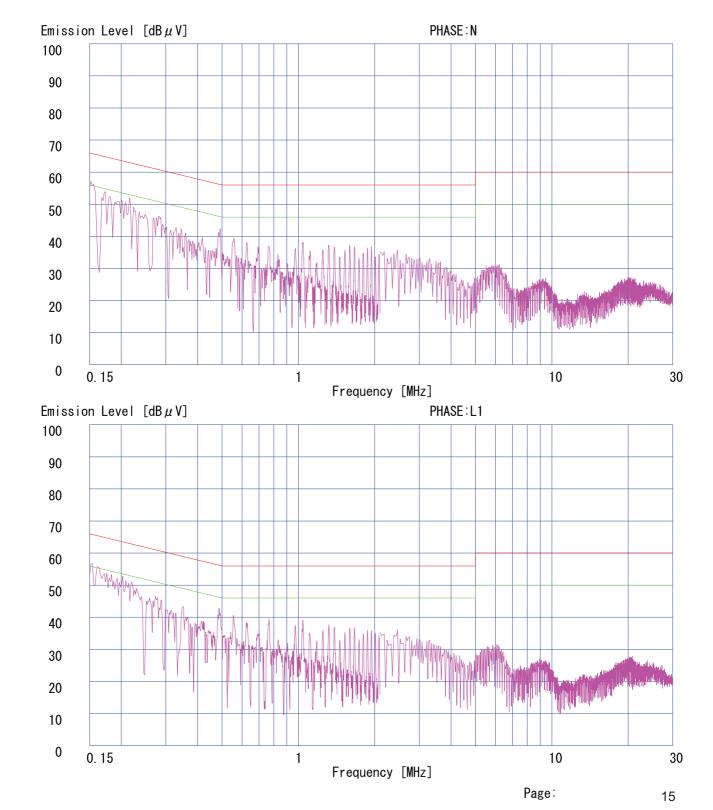
Remarks

2/23/2007 Single Phase Date Phase

: 23 °C Engineer : Masanori Nishiyama

Temperature Humidity : 39 %

Regulation 1 Regulation 2 : FCC Part15B CLASS B(CISPR) : None



UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 31KE0311-YW-01

Power : DC5V (PC: AC120V/60Hz)

Mode : Idle Mode

Remarks

2/23/2007 Date : Single Phase : 23 °C : 39 % Phase

Temperature Humidity Engineer : Masanori Nishiyama

: FCC Part15B CLASS B(CISPR) Regulation

No.	FREQ.	READIN	[G (N)	READIN	IG (L1)	) LISN	CABLE	ATTEN	. RES	ULT	LIM	ITS	MAR	GIN
	[MHz]	QP [dB μ	AV V]	QP [dB μ	AV V]	FACTOR [dB]	LOSS [dB]	[dB]	QP [dB]	AV [dE	QP βμV]	AV [dB $\mu$	QP <sub>L</sub> V]	AV [dB]
1.	0. 1500	48. 5	_	48. 5	_	0.0	0. 1	0.0	48.6	_	66. 0	56. 0	17. 4	
2.	0.2106	45.7	_	45. 2	_	0.1	0.1	0.0	45.9	_	63. 2	53.2	17.3	_
3.	0.4836	42.7	_	42.9	_	0.1	0.2	0.0	43.2	_	56.3	46.3	13. 1	_
4.	0.6895	35. 1	_	34.9	_	0.1	0.2	0.0	35. 4	_	56.0	46.0	20.6	_
5.	1.0371	37.3	_	36.4	_	0.1	0.3	0.0	37.7	_	56.0	46.0	18.3	_
6.	6.0099	30.3	_	29. 2	_	0.4	0.5	0.0	31.2	_	60.0	50.0	28.8	_
7.	20.0683	9.6	_	8. 7	_	1. 1	0.9	0.0	11.6		60.0	50.0	48.4	

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

Except for the above table: adequate margin data below the limits.

UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM

Report No.: 31KE0311-YW-01

: DC5V (PC:AC120V/60Hz) : Idle Mode Power

Mode

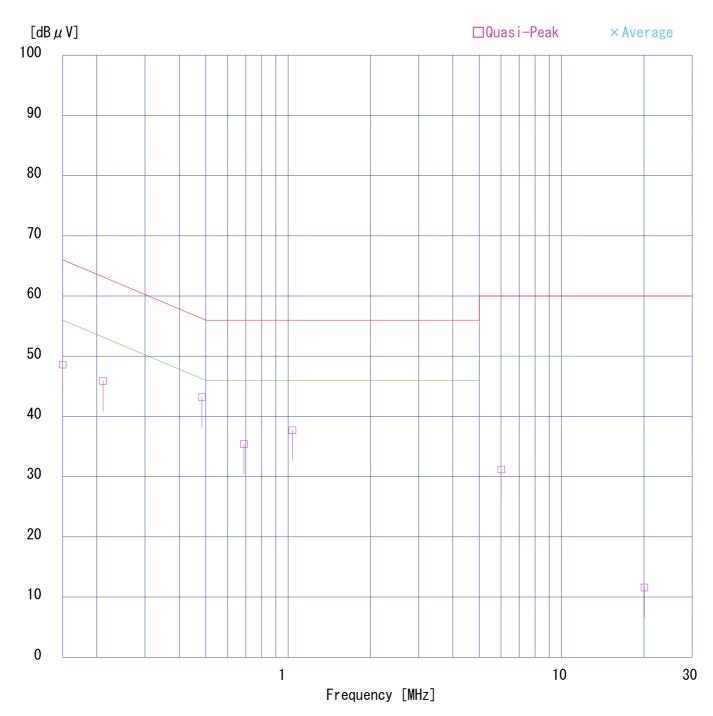
Remarks

2/23/2007 Date : 27 257 2507 : Single Phase : 23 °C : 39 % Phase

Engineer : Masanori Nishiyama

Temperature Humidity

: FCC Part15B CLASS B(CISPR) Regulation



#### **DATA OF CONDUCTION TEST CHART**

UL Japan, Inc.

YOKOWA No.1 SHIELD TEST ROOM Report No.: 31KE0311-YW-01

DC5V (PC: AC120V/60Hz) Power

Idle Mode Mode

Remarks

20

10

0

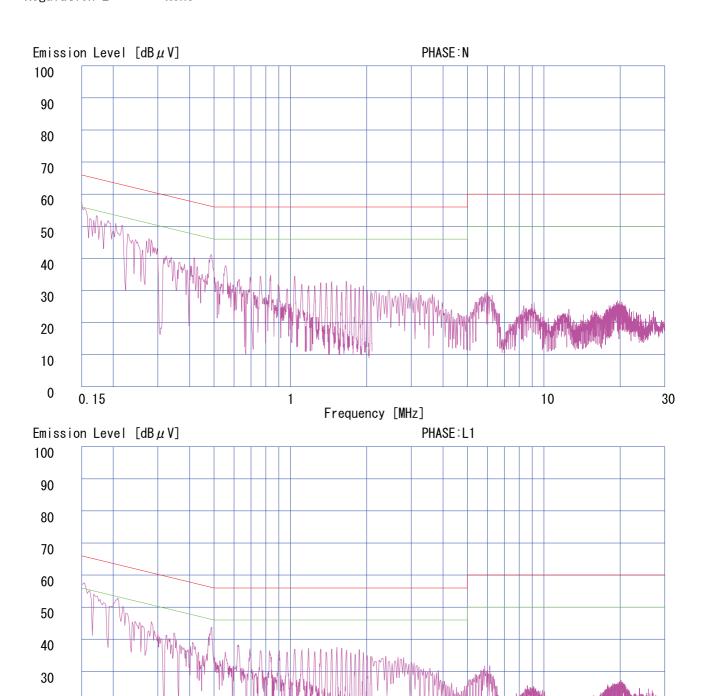
0.15

. 2/23/2007 : Single Phase : 23 °C Date Phase

Temperature Humidity Engineer : Masanori Nishiyama

: 39 % : FCC Part15B CLASS B(CISPR) : None

Regulation 1 Regulation 2



1

Frequency [MHz]

30

18

10

UL Japan, Inc.

YOKOWA No.1 OPEN TEST SITE Report No.: 31KE0311-YW-01

: DC5V(PC:AC120V/60Hz) : Authenticate Mode Power Mode

Remarks

: 2/23/2007 Date Test Distance

: 272372007 : 3 m : 21 °C : 32 % : FCC Part15B CLASS B Temperature Engineer : Masanori Nishiyama

Humidity Regulation

No.	FREQ. AN TY [MHz]	PE HOR	DING VER μV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESI HOR [dB μ \	VER	LIMITS ΒμV/m]	HOR	RGIN VER HB]
1. 2. 3. 4. 5. 6.	96. 01 B 150. 02 B 180. 01 B 192. 00 B 240. 01 B 335. 97 B 431. 98 B	B 29. 1 B 27. 1 B 28. 7 B 33. 7 B 31. 4	31. 9 35. 8 33. 6 34. 6 29. 5 29. 7 31. 3	9. 3 15. 3 17. 2 17. 2 17. 2 16. 3 18. 2	29. 5 29. 5 29. 5 29. 5 29. 6 29. 6 29. 7		5. 9 5. 9 5. 9 5. 9 5. 9 5. 9	14. 8 22. 6 22. 7 24. 4 29. 5 26. 8 30. 0	19. 1 29. 3 29. 2 30. 3 25. 3 25. 1 28. 9	43. 5 43. 5 43. 5 43. 5 46. 0 46. 0	28. 7 20. 9 20. 8 19. 1 16. 5 19. 2 16. 0	24. 4 14. 2 14. 3 13. 2 20. 7 20. 9

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table: adequate margin data below the limits. ANT. TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic

UL Japan, Inc.

YOKOWA No.1 OPEN TEST SITE **Report No.**: 31KE0311-YW-01

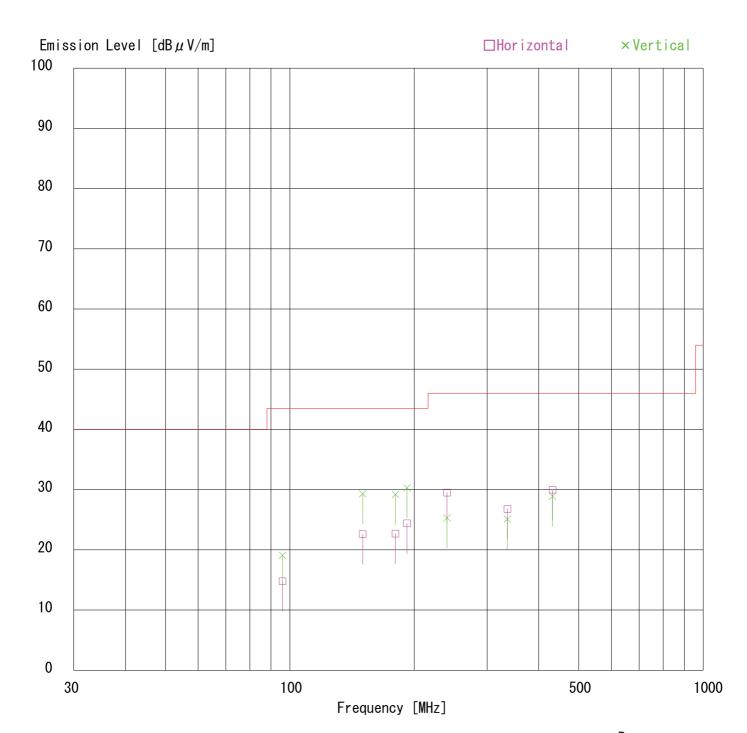
Power : DC5V (PC: AC120V/60Hz) Mode Authenticate Mode

Remarks

2/23/2007 Date Test Distance

Engineer : Masanori Nishiyama Temperature

: 2/20/22 : 3 m : 21 °C : 32 % : FCC Part15B CLASS B Humidity Regulation



UL Japan, Inc.

YOKOWA No.1 OPEN TEST SITE Report No.: 31KE0311-YW-01

: DC5V (PC: AC120V/60Hz) : Idle Mode Power

Mode

Remarks

: 2/23/2007 Date

Test Distance

: 2/23/2007 : 3 m : 21 °C : 32 % : FCC Part15B CLASS B Temperature Engineer : Masanori Nishiyama Humidity

Regulation

No.	FREQ.	ANT TYPE	HOR	DING VER μV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RES HOR [dB μ '	VER	LIMITS BμV/m]	HOR	RGIN VER HB]
1. 2. 3. 4. 5. 6. 7.	72. 01 96. 01 144. 01 168. 01 216. 01 239. 98 336. 01 431. 99	BB BB BB BB BB BB BB	34. 6 32. 5 33. 1 32. 7 36. 0 34. 0 31. 7 32. 7	37. 4 37. 9 39. 0 38. 1 34. 0 32. 0 30. 3 31. 4	6. 6 9. 3 14. 7 16. 7 17. 2 17. 2 16. 3 18. 2	29. 6 29. 5 29. 5 29. 5 29. 5 29. 5 29. 6 29. 7	1. 5 1. 8 1. 9 2. 2 2. 3	5. 9 5. 9 5. 9 5. 9 5. 9 5. 9 5. 9	18. 8 19. 7 26. 0 27. 7 31. 8 29. 9 27. 1 30. 3	21. 6 25. 1 31. 9 33. 1 29. 8 27. 9 25. 7 29. 0	40. 0 43. 5 43. 5 43. 5 46. 0 46. 0 46. 0	21. 2 23. 8 17. 5 15. 8 14. 2 16. 1 18. 9 15. 7	18. 4 18. 4 11. 6 10. 4 16. 2 18. 1 20. 3 17. 0
9. 10.	504. 03 552. 03	BB BB	37. 9 37. 0	43. 9 43. 1	18. 9 19. 3	29. 7 29. 7	3. 5 3. 7	5. 9 5. 9	36. 5 36. 2	42. 5 42. 3	46. 0 46. 0	9. 5 9. 8	3. 5 3. 7

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

Except for the above table: adequate margin data below the limits. ANT.TYPE: 30-300MHz Biconical, 300-1000MHz Logperiodic

Page:

UL Japan, Inc. YOKOWA No.1 OPEN TEST SITE Report No.: 31KE0311-YW-01

: DC5V (PC:AC120V/60Hz) : Idle Mode Power

Mode

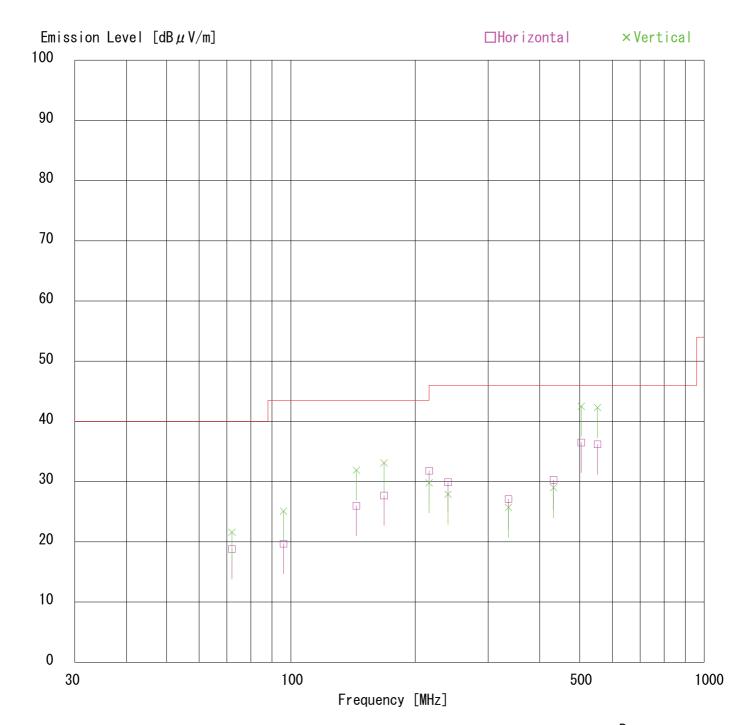
Remarks

: 2/23/2007 Date

Test Distance

: 2/20/22 : 3 m : 21 °C : 32 % : FCC Part15B CLASS B Engineer : Masanori Nishiyama Temperature

Humidity Regulation



# APPENDIX 3 Test Instruments

#### EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
SA-05	Spectrum Analyzer	Advantest	R3271	CE	2006/12/22 * 12
APRCV05	Test Receiver	Rohde & Schwarz	ESS	CE	2006/09/02 * 12
CC-7S	Yokowa No7 Shielded room(CE)	UL Apex	CC-71,CC-72,CC-73,C C-75,SW-71,SW-72	CE	2006/08/28 * 12
TS-09	Tester	MASTECH	M9807A	CE	2006/09/04 * 12
OS-09	Digital Humidity Indicator	SATO	PC-5000TRH	CE	2006/04/25 * 24
YOICE-07	Software for Conducted emission(No.7S/R)	UL Apex	-	CE	_
YJM-01	Measure	Rubber KOMBE	GW-5H99E	CE	-
LS-04	LISN(AMN)	Rohde & Schwarz	ESH3-Z5	CE(EUT)	2006/11/14 * 12
LS-10	LISN(AMN)	Schwarzbeck	NSLK8127	CE	2006/04/11 * 12
AF-02	Pre Amplifier	Anritsu	MH648A	RE	2006/03/23 * 12
AT-01	Attenuator	Anritsu	MP721A	RE	2006/11/07 * 12
BA-10	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/12/05 * 12
APANT12	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2006/08/05 * 12
TR-08	Test Receiver	Rohde & Schwarz	ESCI	RE	2006/03/04 * 12
CC-1ORC	Yokowa No.1 open coaxial(0.01-1000MHz)	UL Apex	CC-11,CC-12,CC-14,C C-15,CC-16,,SW-11,SW -12	RE	2006/09/01 * 12
YOATS-01	Open Test Site	JSE	3m、10m	RE	2006/04/29 * 12
OS-03	Digital Humidity Indicator	SATO	PC-5000TRH-II	RE	2006/01/19 * 24
YOIRE-01	Software for Radiated emission(No.1 site)	UL Apex	Software for Radiated emission(No.1 site)	RE	-
YJM-03	Measure	KOMERI	-		-
AT-10	Attenuator	Anritsu	MP721B	RE	2006/07/03 * 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 .

Test Item:

CE: Conducted emission, RE: Radiated emission