APPENDIX 2: Data of EMI test

Conducted emission
With Tag (Antenna Connected)
Reference Data

DATA OF CONDUCTED EMISSION TEST

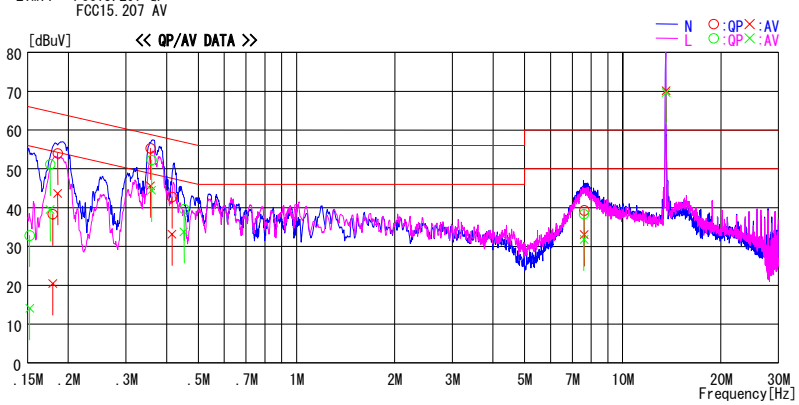
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/29

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-HO1-V2
Serial No. : 6

Report No. : 29AE0100-HO-01
Power : DC 24V (AC120V / 60Hz)
Temp./Humi. : 22deg.C / 53%
Engineer : Hisayoshi Sato

Mode / Remarks : Tx with Tag 13.56MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level QP	Reading Level AV	Corr. Factor	Results QP	Results AV	Limit QP	Limit AV	Margin QP	Margin AV	Phase	Comment
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.17566	50.9	39.2	0.3	51.2	39.5	64.7	54.7	13.5	15.2	L	
0.15212	32.6	13.8	0.2	32.8	14.0	65.9	55.9	33.1	41.9	L	
0.17892	38.0	20.1	0.3	38.3	20.4	64.5	54.5	26.2	34.1	N	
0.18519	53.7	43.3	0.3	54.0	43.6	64.2	54.2	10.2	10.6	N	
0.35676	55.0	45.3	0.3	55.3	45.6	58.8	48.8	3.5	3.2	N	
0.35956	51.9	44.2	0.3	52.2	44.5	58.7	48.7	6.5	4.2	L	
0.41540	42.4	32.8	0.3	42.7	33.1	57.5	47.5	14.8	14.4	N	
0.45184	39.3	33.5	0.3	39.6	33.8	56.8	46.8	17.2	13.1	L	
7.61333	38.4	32.1	0.9	39.3	33.0	60.0	50.0	20.7	17.0	N	
7.60613	37.5	30.9	0.9	38.4	31.8	60.0	50.0	21.7	18.2	L	
13.56000	79.3	68.8	1.3	80.6	70.1	60.0	50.0	-20.6	-20.1	N	
13.56000	78.8	68.3	1.3	80.1	69.6	60.0	50.0	-20.1	-19.6	L	

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

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

UL Japan, Inc.
Head Office EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
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Conducted emission
Without Tag (Antenna Connected)
Reference Data

DATA OF CONDUCTED EMISSION TEST

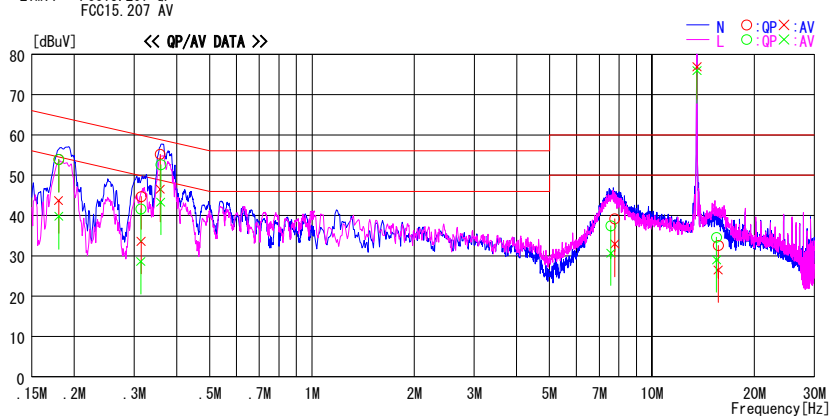
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/29

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-H01-V2
Serial No. : 6

Report No. : 29AE0100-HO-01
Power : DC 24V (AC120V / 60Hz)
Temp./Humi. : 22deg.C / 53%
Engineer : Hisayoshi Sato

Mode / Remarks : Tx without Tag 13.56MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.18004	53.6	43.4	0.3	53.9	43.7	64.5	54.5	10.6	10.8	N	
0.18013	53.6	39.5	0.3	53.9	39.8	64.5	54.5	10.6	14.7	L	
0.31386	41.3	28.3	0.3	41.6	28.6	59.9	49.9	18.3	21.3	L	
0.31455	44.4	33.3	0.3	44.7	33.6	59.8	49.8	15.1	16.2	N	
0.35792	54.9	46.2	0.3	55.2	46.5	58.8	48.8	3.6	2.3	N	
0.35900	52.3	43.0	0.3	52.6	43.3	58.8	48.8	6.2	5.5	L	
7.57191	36.5	29.8	0.9	37.4	30.7	60.0	50.0	22.6	19.3	L	
7.77751	38.3	32.0	0.9	39.2	32.9	60.0	50.0	20.8	17.1	N	
13.55980	80.2	74.6	1.3	81.5	75.9	60.0	50.0	-21.5	-25.9	L	
13.56000	80.6	75.6	1.3	81.9	76.9	60.0	50.0	-21.9	-26.9	N	
15.47156	33.2	27.6	1.4	34.6	29.0	60.0	50.0	25.4	21.0	L	
15.67530	31.2	25.1	1.4	32.6	26.5	60.0	50.0	27.4	23.5	N	

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

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

UL Japan, Inc.
Head Office EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
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Conducted emission
Without Tag (Terminated Antenna terminal)

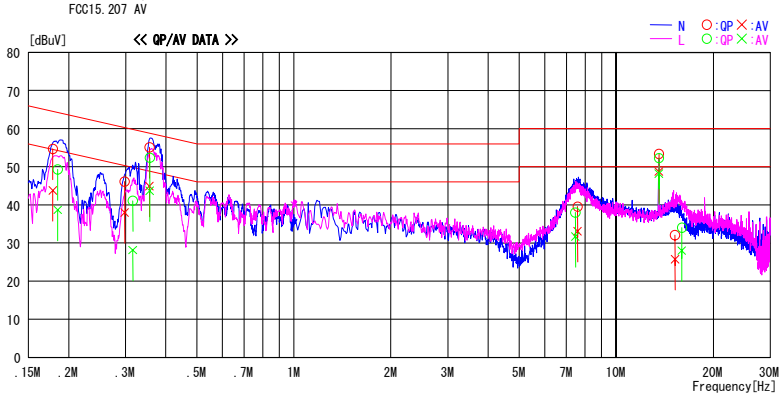
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/09/29

Company	: OMRON Corporation	Report No.	: 29AE0100-HO-01
Kind of EUT	: RFID Antenna	Power	: DC 24V (AC120V / 60Hz)
Model No.	: V680-HO1-V2	Temp./Humi.	: 22deg.C / 53%
Serial No.	: 5	Engineer	: Hisayoshi Sato

Mode / Remarks : Tx without Tag 13.56MHz (Antenna termination)

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.17862	54.5	43.5	0.3	54.8	43.8	64.5	54.5	9.8	10.7	N	
0.29810	45.9	37.7	0.3	46.2	38.0	60.3	50.3	14.2	12.3	N	
0.35600	54.8	44.6	0.3	55.1	44.9	58.8	48.8	3.7	3.9	N	
7.58925	38.7	32.2	0.9	39.6	33.1	60.0	50.0	20.4	16.9	N	
13.56000	52.1	47.4	1.3	53.4	48.7	60.0	50.0	6.6	1.3	N	
15.21106	30.7	24.4	1.4	32.1	25.8	60.0	50.0	27.9	24.2	N	
0.18491	49.0	38.4	0.3	49.3	38.7	64.3	54.3	15.0	15.6	L	
0.31586	40.8	27.9	0.3	41.1	28.2	59.8	49.8	18.7	21.7	L	
0.35708	52.1	43.4	0.3	52.4	43.7	58.8	48.8	6.5	5.1	L	
7.46771	37.1	30.8	0.9	38.0	31.7	60.0	50.0	22.0	18.3	L	
13.56000	51.0	46.9	1.3	52.3	48.2	60.0	50.0	7.7	1.8	L	
15.96981	32.7	26.6	1.4	34.1	28.0	60.0	50.0	25.9	22.0	L	

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

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

Radiated emission(Fundamental emission and Spectrum Mask)

-

DATA OF RADIATED EMISSION TEST

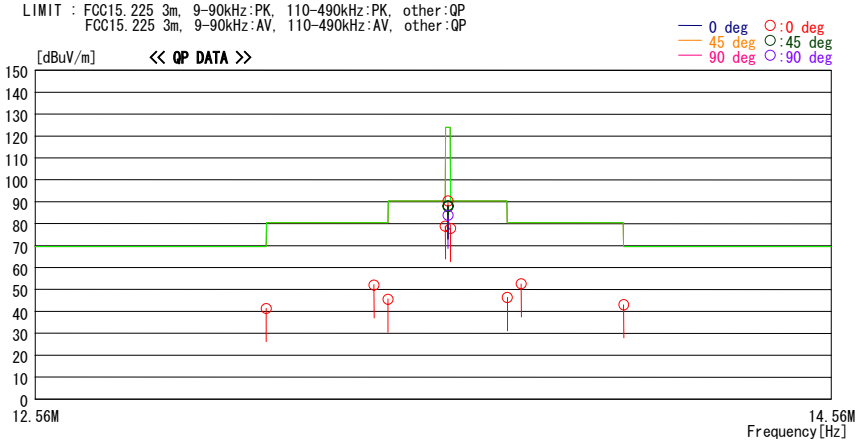
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/02

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-HO1-V2
Serial No. : 6

Report No. : 29AE0100-HO-01
Power : DC 24V (AC120V / 60Hz)
Temp. / Humi. : 24 deg.C. / 51 %
Engineer : Takahiro Hatakeda

Mode / Remarks : Tx with Tag 13.56MHz (EUT:X-axis)

LIMIT : FCC15.225 3m, 9-90kHz:PK, 110-490kHz:PK, other:QP
FCC15.225 3m, 9-90kHz:AV, 110-490kHz:AV, other:QP



Freq. [MHz]	Reading [dBuV]	DET	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Antenna	Table [deg]	Comment
13.11000	48.8	QP	20.2	1.2	28.8	41.4	69.5	28.1	0deg	172	
13.37509	59.5	QP	20.2	1.2	28.8	52.1	80.5	28.4	0deg	173	
13.41000	53.1	QP	20.2	1.2	28.8	45.7	80.5	34.8	0deg	174	
13.55300	86.4	QP	20.2	1.2	28.8	79.0	90.4	11.4	0deg	177	
13.56000	97.9	QP	20.2	1.2	28.8	90.5	123.9	33.4	0deg	177	
13.56000	95.7	QP	20.2	1.2	28.8	88.3	123.9	35.6	45deg	159	
13.56000	91.2	QP	20.2	1.2	28.8	83.8	123.9	40.1	90deg	278	
13.56000	95.3	QP	20.2	1.2	28.8	87.9	123.9	36.0	135deg	183	
13.56700	85.3	QP	20.2	1.2	28.8	77.9	90.4	12.5	0deg	177	
13.71000	53.8	QP	20.2	1.2	28.8	46.4	80.5	34.1	0deg	179	
13.74551	60.0	QP	20.2	1.2	28.8	52.6	80.5	27.9	0deg	180	
14.01000	50.3	QP	20.3	1.2	28.8	43.0	69.5	26.5	0deg	175	

CHART: WITH FACTOR , ANT TYPE: LOOP , Except for the data below : adequate margin data below the limits.
CALCULATION : RESULT[dBuV] = READING[dBuV] + ANT FACTOR[dB] + LOSS[dB](CABLE + ATTEN. - AMP.)

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

Radiated emission (Spurious emission: below 30MHz)

DATA OF RADIATED EMISSION TEST

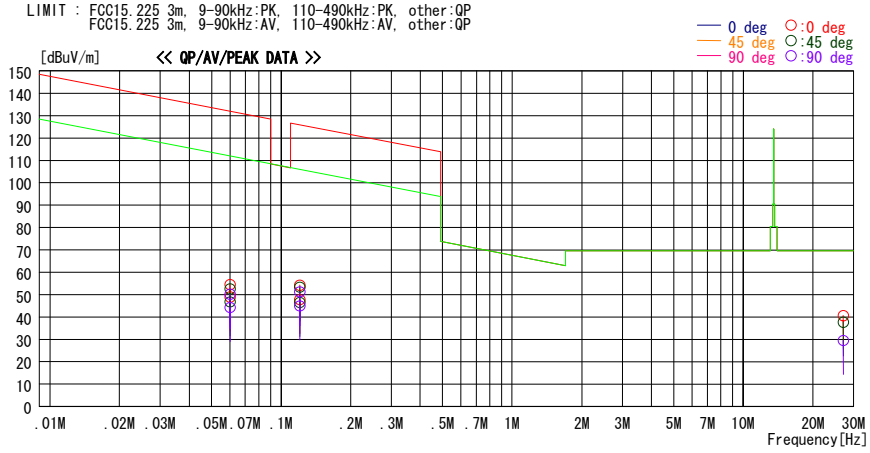
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/02

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-HO1-V2
Serial No. : 6

Report No. : 29AE0100-HO-01
Power : DC 24V (AC120V / 60Hz)
Temp./ Humi. : 24 deg.C. / 51 %
Engineer : Takahiro Hatakeda

Mode / Remarks : Tx with Tag 13.56MHz (EUT:X-axis)

LIMIT : FCC15.225 3m, 9-90kHz:PK, 110-490kHz:PK, other:QP
FCC15.225 3m, 9-90kHz:AV, 110-490kHz:AV, other:QP



Freq. [MHz]	Reading [dBuV]	DET	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Antenna	Table [deg]	Comment
0.06015	73.4	PEAK	19.7	0.1	38.6	54.6	132.0	77.4	0deg	255	
0.06015	67.7	AV	19.7	0.1	38.6	48.9	112.0	63.1	0deg	255	
0.06015	65.6	AV	19.7	0.1	38.6	46.8	112.0	65.2	45deg	224	
0.06015	71.4	PEAK	19.7	0.1	38.6	52.6	132.0	79.4	45deg	224	
0.06015	69.0	PEAK	19.7	0.1	38.6	50.2	132.0	81.8	90deg	192	
0.06015	63.0	AV	19.7	0.1	38.6	44.2	112.0	67.8	90deg	192	
0.12031	61.7	PEAK	19.7	0.1	27.2	54.3	125.9	71.6	0deg	240	
0.12031	55.1	AV	19.7	0.1	27.2	47.7	106.0	58.3	0deg	240	
0.12031	54.0	AV	19.7	0.1	27.2	46.6	106.0	59.4	45deg	225	
0.12031	60.8	PEAK	19.7	0.1	27.2	53.4	125.9	72.5	45deg	225	
0.12031	58.6	PEAK	19.7	0.1	27.2	51.2	125.9	74.7	90deg	198	
0.12031	52.4	AV	19.7	0.1	27.2	45.0	106.0	61.0	90deg	198	
27.12000	46.9	QP	20.6	1.8	28.7	40.6	69.5	28.9	0deg	177	
27.12000	44.1	QP	20.6	1.8	28.7	37.8	69.5	31.7	45deg	159	
27.12000	35.8	QP	20.6	1.8	28.7	29.5	69.5	40.0	90deg	85	

CHART: WITH FACTOR , ANT TYPE: LOOP , Except for the data below : adequate margin data below the limits.
CALCULATION : RESULT[dBuV] = READING[dBuV] + ANT FACTOR[dB] + LOSS[dB](CABLE + ATTEN.- AMP.)

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

Radiated emission (Spurious emission: below 30MHz)

DATA OF RADIATED EMISSION TEST

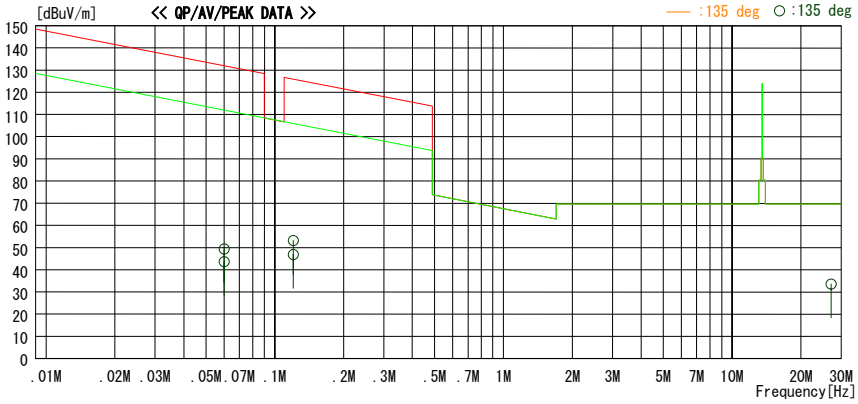
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/10/02

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-HO1-V2
Serial No. : 6

Report No. : 29AE0100-HO-01
Power : DC 24V (AC120V / 60Hz)
Temp. / Humi. : 24 deg.C. / 51 %
Engineer : Takahiro Hatakeda

Mode / Remarks : Tx with Tag 13.56MHz (EUT:X-axis)

LIMIT : FCC15.225 3m, 9-90kHz:PK, 110-490kHz:PK, other:QP
FCC15.225 3m, 9-90kHz:AV, 110-490kHz:AV, other:QP



Freq. [MHz]	Reading [dBuV]	DET	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Antenna	Table [deg]	Comment
0.06015	68.2	PEAK	19.7	0.1	38.6	49.4	132.0	82.6	135 deg	180	
0.06015	62.5	AV	19.7	0.1	38.6	43.7	112.0	68.3	135 deg	180	
0.12031	60.6	PEAK	19.7	0.1	27.2	53.2	125.9	72.7	135 deg	265	
0.12031	54.2	AV	19.7	0.1	27.2	46.8	106.0	59.2	135 deg	265	
27.12000	39.8	QP	20.6	1.8	28.7	33.5	69.5	36.0	135 deg	267	

CHART: WITH FACTOR , ANT TYPE: LOOP , Except for the data below : adequate margin data below the limits.
CALCULATION : RESULT[dBuV] = READING[dBuV] + ANT FACTOR[dB] + LOSS[dB](CABLE + ATTEN.- AMP.)

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

Radiated emission (Spurious emission: above 30MHz)

DATA OF RADIATED EMISSION TEST

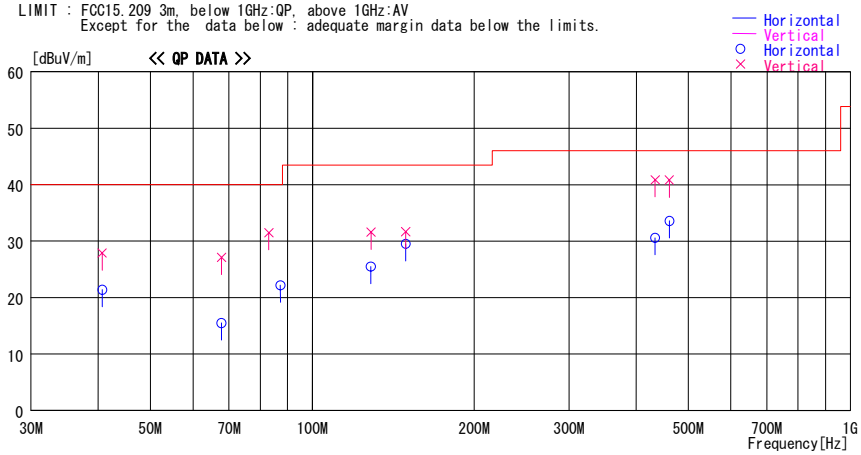
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2008/09/30

Company : OMRON Corporation
Kind of EUT : RFID Antenna
Model No. : V680-HO1-V2
Serial No. : 6

Report No. : 29AE0100-HO
Power : DC 24.0V (AC120V/60Hz)
Temp./Humi. : 24deg.C. / 61%
Engineer : Takahiro Hatakeda

Mode / Remarks : Tx with Tag 13.56MHz / EUT:X-axis

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.



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
40.680	29.3	QP	13.2	-21.1	21.4	184	281	Hori.	40.0	18.6	
40.680	35.8	QP	13.2	-21.1	27.9	85	100	Vert.	40.0	12.1	
67.800	29.1	QP	7.0	-20.6	15.5	355	284	Hori.	40.0	24.5	
67.800	40.7	QP	7.0	-20.6	27.1	243	100	Vert.	40.0	12.9	
83.055	44.9	QP	6.9	-20.3	31.5	105	100	Vert.	40.0	8.5	
87.297	34.7	QP	7.7	-20.2	22.2	170	232	Hori.	40.0	17.8	
128.536	32.1	QP	12.9	-19.5	25.5	158	142	Hori.	43.5	18.0	
128.592	38.2	QP	12.9	-19.5	31.6	218	100	Vert.	43.5	11.9	
149.156	34.1	QP	14.7	-19.3	29.5	193	297	Hori.	43.5	14.0	
149.156	36.3	QP	14.7	-19.3	31.7	321	100	Vert.	43.5	11.8	
433.912	30.4	QP	17.2	-17.0	30.6	188	100	Hori.	46.0	15.4	
433.912	40.7	QP	17.2	-17.0	40.9	196	100	Vert.	46.0	5.1	
461.028	33.0	QP	17.6	-17.0	33.6	29	100	Hori.	46.0	12.4	
461.028	40.2	QP	17.6	-17.0	40.8	176	100	Vert.	46.0	5.2	

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.

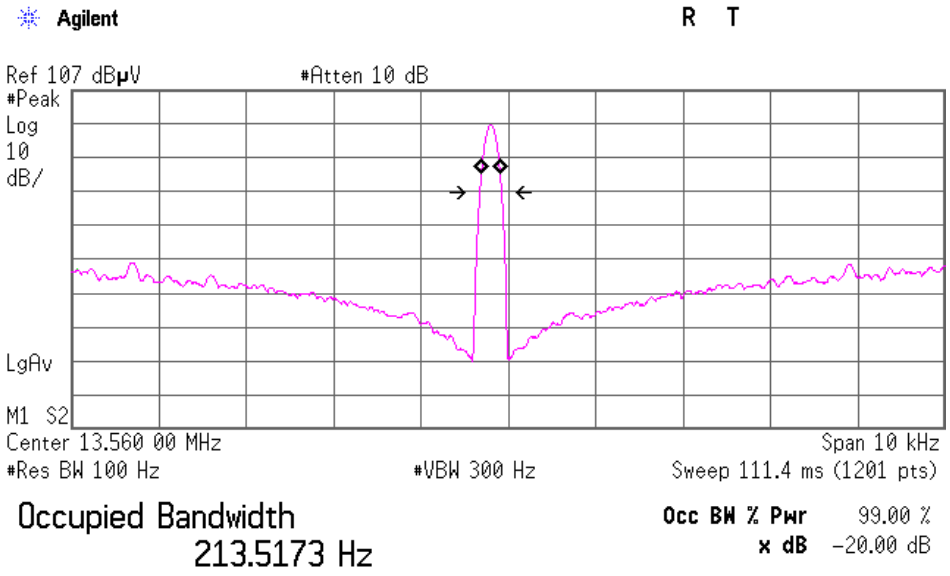
99% Occupied Bandwidth and 20dB Bandwidth

Company	OMRON Corporation
Equipment	RFID Antenna
Model	V680-H01-V2
S/N	5
Power	DC 24V (DC power supply: AC120V / 60Hz)
Mode	Transmitting 13.56MHz Without Tag (Modulation)

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

Regulation	RSS-Gen 4.6.1 / FCC15.225(c)
Test Distance	-
Date	09/12/2008
Temperature	25 deg.C.
Humidity	58 %
Engineer	Norihisa Hashimoto

FREQ [MHz]	20dB Bandwidth [Hz]	99% Occupied Bandwidth [Hz]
13.56	247.638	213.5173



Transmit Freq Error -202.986 Hz
x dB Bandwidth 247.638 Hz

Frequency Tolerance

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

Company	OMRON Corporation	Regulation	FCC15.225 (e) / RSS-210 A2.6
Equipment	RFID Antenna	Test Distance	-
Model	V680-H01-V2	Date	09/12/2008
S/N	5	Temperature	25 deg.C.
Power	DC 24V (DC power supply: AC120V / 60Hz)	Humidity	58 %
Mode	Transmitting 13.56MHz Without Tag (No Modulation)	Engineer	Norihisa Hashimoto

Test Condition	Test Timing	Measured freq [MHz]	Freq error [MHz]	Result [ppm]	Limit (+/- 0.01%) [+/- ppm]	Margin [ppm]
T nom 20deg.C	Power on	13.55984310	-0.00015690	-11.57	100.00	88.43
Vmax AC138V	on 2min.	13.55982941	-0.00017059	-12.58	100.00	87.42
(115%)	on 5min.	13.55981862	-0.00018138	-13.38	100.00	86.62
	on 10min.	13.55981639	-0.00018361	-13.54	100.00	86.46
T nom 20deg.C	Power on	13.55982073	-0.00017927	-13.22	100.00	86.78
Vnom AC120V	on 2min.	13.55981712	-0.00018288	-13.49	100.00	86.51
(100%)	on 5min.	13.55981468	-0.00018532	-13.67	100.00	86.33
	on 10min.	13.55981392	-0.00018608	-13.72	100.00	86.28
T nom 20deg.C	Power on	13.55983083	-0.00016917	-12.48	100.00	87.52
Vmin AC102V	on 2min.	13.55982232	-0.00017768	-13.10	100.00	86.90
(85%)	on 5min.	13.55981733	-0.00018267	-13.47	100.00	86.53
	on 10min.	13.55981596	-0.00018404	-13.57	100.00	86.43
T max 50deg.C.	Power on	13.55976364	-0.00023636	-17.43	100.00	82.57
Vnom AC120V	on 2min.	13.55974635	-0.00025365	-18.71	100.00	81.29
(100%)	on 5min.	13.55974291	-0.00025709	-18.96	100.00	81.04
	on 10min.	13.55973085	-0.00026915	-19.85	100.00	80.15
40deg.C.	Power on	13.55981247	-0.00018753	-13.83	100.00	86.17
Vnom AC120V	on 2min.	13.55978534	-0.00021466	-15.83	100.00	84.17
(100%)	on 5min.	13.55977109	-0.00022891	-16.88	100.00	83.12
	on 10min.	13.55975864	-0.00024136	-17.80	100.00	82.20
30deg.C.	Power on	13.55993029	-0.00006971	-5.14	100.00	94.86
Vnom AC120V	on 2min.	13.55989214	-0.00010786	-7.95	100.00	92.05
(100%)	on 5min.	13.55986822	-0.00013178	-9.72	100.00	90.28
	on 10min.	13.55982825	-0.00017175	-12.67	100.00	87.33
20deg.C.	Power on	13.55982073	-0.00017927	-13.22	100.00	86.78
Vnom AC120V	on 2min.	13.55981712	-0.00018288	-13.49	100.00	86.51
(100%)	on 5min.	13.55981468	-0.00018532	-13.67	100.00	86.33
	on 10min.	13.55981392	-0.00018608	-13.72	100.00	86.28
10deg.C.	Power on	13.55988630	-0.00011370	-8.38	100.00	91.62
Vnom AC120V	on 2min.	13.55987553	-0.00012447	-9.18	100.00	90.82
(100%)	on 5min.	13.55987106	-0.00012894	-9.51	100.00	90.49
	on 10min.	13.55986877	-0.00013123	-9.68	100.00	90.32
0deg.C.	Power on	13.55993254	-0.00006746	-4.97	100.00	95.03
Vnom AC120V	on 2min.	13.55991755	-0.00008245	-6.08	100.00	93.92
(100%)	on 5min.	13.55991551	-0.00008449	-6.23	100.00	93.77
	on 10min.	13.55991550	-0.00008450	-6.23	100.00	93.77
-10deg.C.	Power on	13.55995004	-0.00004996	-3.68	100.00	96.32
Vnom AC120V	on 2min.	13.55994512	-0.00005488	-4.05	100.00	95.95
(100%)	on 5min.	13.55994662	-0.00005338	-3.94	100.00	96.06
	on 10min.	13.55994827	-0.00005173	-3.81	100.00	96.19
-20deg.C	Power on	13.55997128	-0.00002872	-2.12	100.00	97.88
Vnom AC120V	on 2min.	13.55996832	-0.00003168	-2.34	100.00	97.66
(100%)	on 5min.	13.55996952	-0.00003048	-2.25	100.00	97.75
	on 10min.	13.55997278	-0.00002722	-2.01	100.00	97.99
-30deg.C	Power on	13.55997881	-0.00002119	-1.56	100.00	98.44
Vnom AC120V	on 2min.	13.55997192	-0.00002808	-2.07	100.00	97.93
(100%)	on 5min.	13.55997561	-0.00002439	-1.80	100.00	98.20
	on 10min.	13.55997713	-0.00002287	-1.69	100.00	98.31

Limit : 13.56 MHz +/-0.01 % (+/- 100ppm) = +/- 0.001356 MHz

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APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	CE	2008/03/27 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	CE	2008/01/10 * 12
MJM-07	Measure	PROMART	SEN1955	CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	CE / RE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	CE	2008/06/25 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	CE	2007/09/14 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE(AE)	2008/02/19 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2008/02/20 * 12
MTA-07	Terminator	MCL	BTRM-50	CE	2008/02/04 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	-	CE	2008/07/03 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE	2007/11/23 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-09	Logperiodic Antenna	Schwarzbeck	USLP9143B	RE	2008/01/12 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2007/11/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	RE	2008/02/29 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2008/07/23 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE	2007/10/19 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	RE	2007/11/12 * 12
MJM-01	Measure	KDS	ES19-55	RE	-
MLPA-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	RE	2007/12/12 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	RE	2007/12/27 * 12
MCC-31	Coaxial cable	UL Japan	-	RE	2008/06/20 * 12
MPA-19	Pre Amplifier	MITEQ	MLA-10K01-B01-35	RE	2008/02/13 * 12
MUC-01	Universal Counter	Agilent	53132A	FT	2008/06/09 * 12
MSA-11	Spectrum Analyzer	Agilent	E4448A	FT	2008/06/24 * 12
MCC-64	Coaxial Cable	TOYO Technica Corporation	-	FT	2008/03/11 * 12
MCH-04	Temperature and Humidity Chamber	Espec	PL-2KP	FT	2008/08/27 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	FT	2008/01/10 * 12
MMM-11	Digital HiTESTER	Hioki	3805	FT	2008/04/09 * 12
MSW-07	Stopwatch	RS	694	FT	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: CE: Conducted Emission
RE: Radiated Emission
FT: Frequency Tolerance

APPENDIX 4:Transmission Data Specification