

APPENDIX 2: Data of EMI test

Conducted emission (ME-MR21-A-SG, Modulation mode) DATA OF CONDUCTED EMISSION TEST

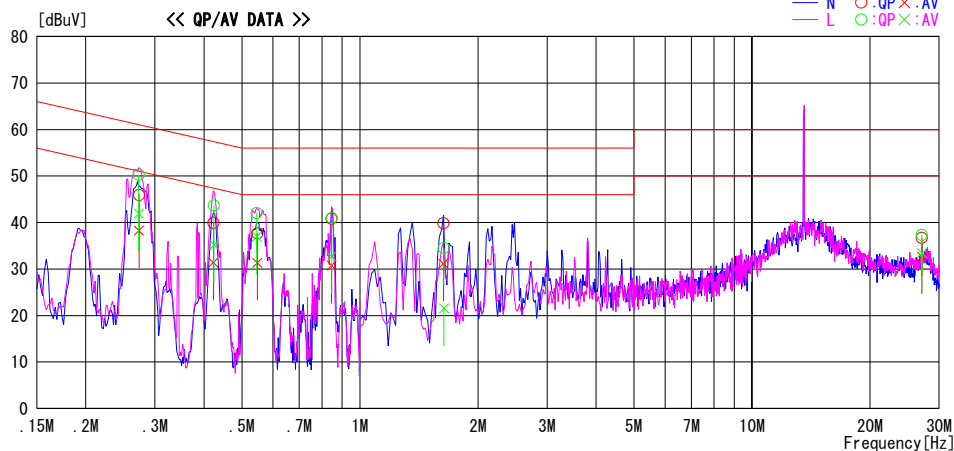
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/11/17 02:22:23

Applicant : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MR21-A-SG
Serial No. : #01

Report No. : 27BE0239-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 23deg. C / 34%
Operator : Takumi Shimada

Mode / Remarks : Modulation Mode (Antenna Attached)

LIMIT : FCC15C § 15.207 (QP) / RSS-Gen / RSS-210
FCC15C § 15.207 (AV) / RSS-Gen / RSS-210



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]	
0.27322	45.7	38.0	0.2	45.9	38.2	61.0	51.0	15.1	12.8	N
0.42287	39.7	31.2	0.2	39.9	31.4	57.4	47.4	17.5	16.0	N
0.54737	37.3	31.0	0.3	37.6	31.3	56.0	46.0	18.4	14.7	N
0.84662	40.5	30.4	0.3	40.8	30.7	56.0	46.0	15.2	15.3	N
1.63209	39.5	30.8	0.4	39.9	31.2	56.0	46.0	16.1	14.8	N
27.12044	34.2	30.2	2.5	36.7	32.7	60.0	50.0	23.3	17.3	N
0.27292	50.0	41.7	0.2	50.2	41.9	61.0	51.0	10.8	9.1	L
0.42426	43.4	35.0	0.2	43.6	35.2	57.4	47.4	13.8	12.2	L
0.54581	41.7	36.7	0.3	42.0	37.0	56.0	46.0	14.0	9.0	L
0.84711	40.7	32.4	0.3	41.0	32.7	56.0	46.0	15.0	13.3	L
1.63795	34.1	21.1	0.4	34.5	21.5	56.0	46.0	21.5	24.5	L
27.12038	34.8	31.0	2.5	37.3	33.5	60.0	50.0	22.7	16.5	L

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

Test report No. : 27BE0239-HO-A-1
Page : 19 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Conducted emission

DATA OF CONDUCTED EMISSION TEST

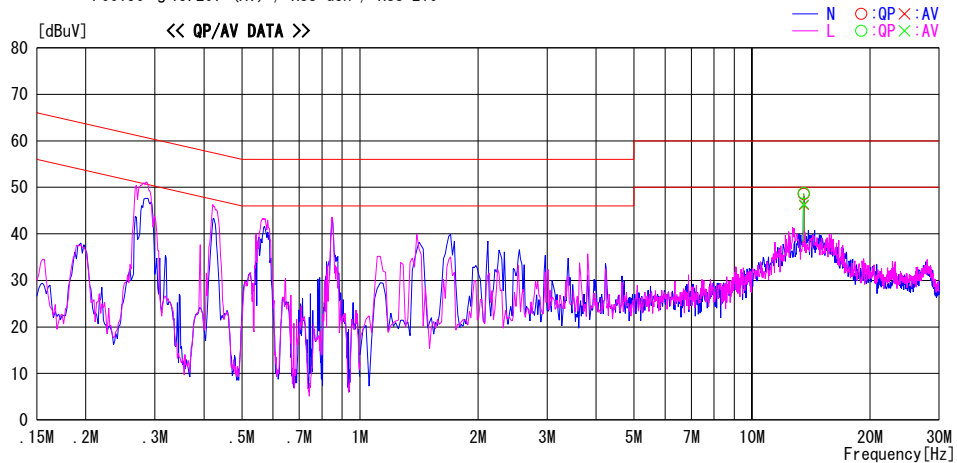
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/11/17 02:13:36

Applicant : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MR21-A-SG
Serial No. : #01

Report No. : 27BE0239-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 23deg. C / 34%
Operator : Takumi Shimada

Mode / Remarks : Modulation Mode (Putting a dummy load instead of the antenna)

LIMIT : FCC15C § 15.207 (QP) / RSS-Gen / RSS-210
FCC15C § 15.207 (AV) / RSS-Gen / RSS-210



Frequency	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP	AV		QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
13.56014	46.7	44.3	1.9	48.6	46.2	60.0	50.0	11.4	3.8	N
13.55950	46.8	44.5	1.9	48.7	46.4	60.0	50.0	11.3	3.6	L

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

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 20 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Conducted emission
(ME-MA21-A-SNT, Modulation mode)
DATA OF CONDUCTED EMISSION TEST

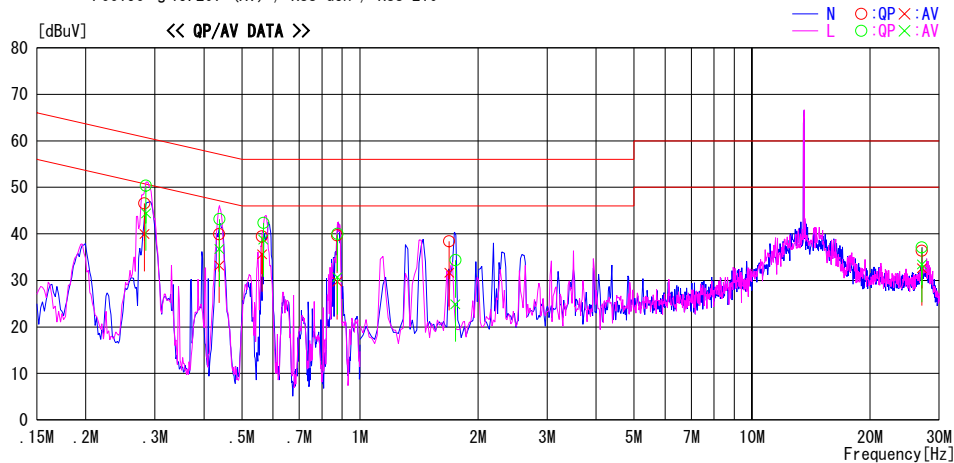
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/11/17 02:46:08

Applicant : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MA21-A-SNT
Serial No. : #01

Report No. : 27BE0239-HO
Power : AC120V / 60Hz
Temp°C/Humi% : 23deg. C / 34%
Operator : Takumi Shimada

Mode / Remarks : Modulation Mode (Antenna Attached)

LIMIT : FCC15C § 15.207 (QP) / RSS-Gen / RSS-210
FCC15C § 15.207 (AV) / RSS-Gen / RSS-210



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]	
0.28212	46.4	39.8	0.2	46.6	40.0	60.8	50.8	14.2	10.8	N
0.43763	39.7	33.0	0.2	39.9	33.2	57.1	47.1	17.2	13.9	N
0.56298	39.2	35.3	0.3	39.5	35.6	56.0	46.0	16.6	10.4	N
0.87513	39.4	29.4	0.3	39.7	29.7	56.0	46.0	16.4	16.3	N
1.68913	37.9	31.1	0.5	38.4	31.6	56.0	46.0	17.6	14.4	N
27.12020	33.9	30.1	2.5	36.4	32.6	60.0	50.0	23.6	17.4	N
0.28452	50.2	44.2	0.2	50.4	44.4	60.7	50.7	10.4	6.3	L
0.43805	43.0	36.5	0.2	43.2	36.7	57.1	47.1	13.9	10.4	L
0.56706	42.1	38.5	0.3	42.4	38.8	56.0	46.0	13.6	7.2	L
0.87630	39.7	30.4	0.3	40.0	30.7	56.0	46.0	16.0	15.3	L
1.75147	33.9	24.4	0.5	34.4	24.9	56.0	46.0	21.6	21.1	L
27.12038	34.6	30.9	2.5	37.1	33.4	60.0	50.0	22.9	16.6	L

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

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MF060b(14.06.06)

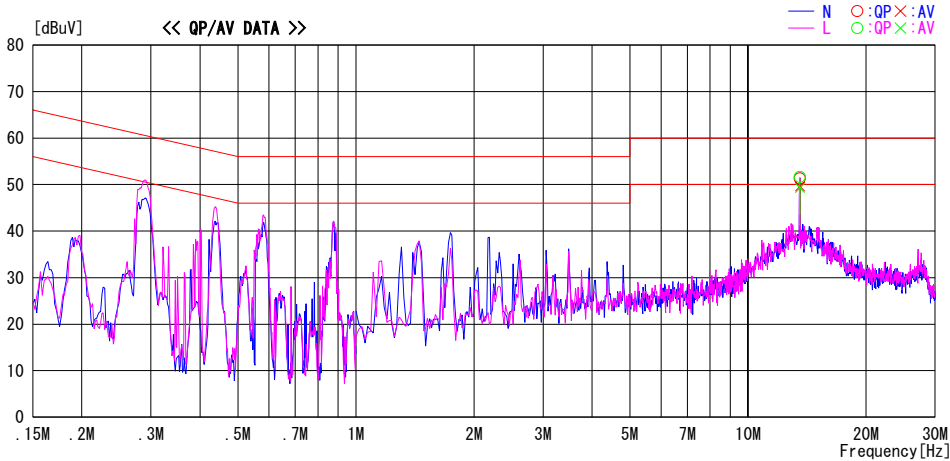
Conducted emission
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/11/17 03:06:18

Applicant : Maxell Seiki, Ltd. Report No. : 27BE0239-HO
Kind of EUT : RFID Reader/Writer Module Power : AC120V / 60Hz
Model No. : ME-MA21-A-SNT Temp°C/Humi% : 23deg. C / 34%
Serial No. : #01 Operator : Takumi Shimada

Mode / Remarks : Modulation Mode (Putting a dummy load instead of the antenna)

LIMIT : FCC15C § 15.207 (QP) / RSS-Gen / RSS-210
FCC15C § 15.207 (AV) / RSS-Gen / RSS-210



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase
	QP	AV		QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
13.56058	49.4	47.7	1.9	51.3	49.6	60.0	50.0	8.7	0.4	N
13.55974	49.7	47.4	1.9	51.6	49.3	60.0	50.0	8.4	0.7	L

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

Test report No. : 27BE0239-HO-A-1
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Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Fundamental emission and Spectrum Mask and Spurious emission below 30MHz)
(ME-MR21-A-SG, Modulation mode)

DATA OF MAGNETIC RADIATED EMISSION TEST

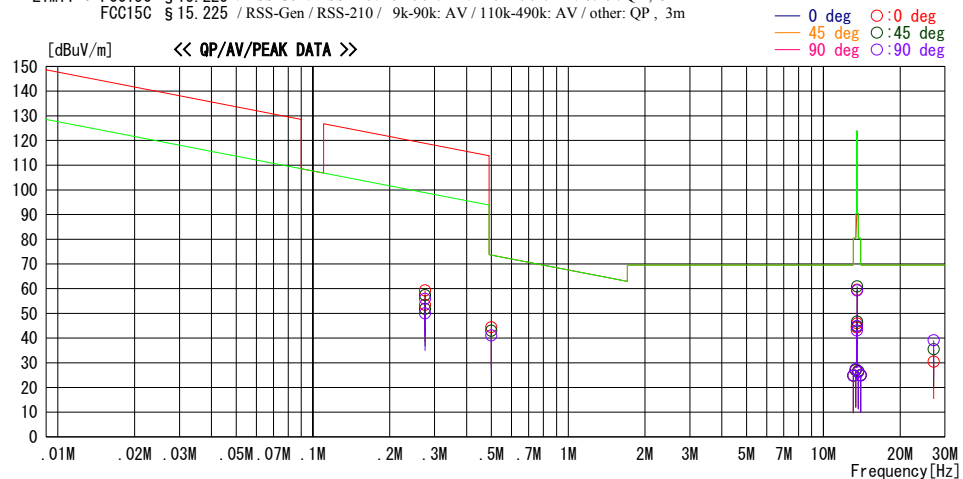
UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 12:17:54

Company : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MR21-A-SG
Serial No. : #01

Report No. : 27BE0239-HO
Power : DC 5V (from I/F Power unit)
Temp./Humi. : 24deg.C / 63%
Operator : Kenichi Adachi

Mode / Remarks : Modulation mode (Communication), EUT max-axis(Z-axis),

LIMIT : FCC15C § 15.225 / RSS-Gen / RSS-210 / 9k-90k: PK / 110k-490k: PK / other: QP, 3m
FCC15C § 15.225 / RSS-Gen / RSS-210 / 9k-90k: AV / 110k-490k: AV / other: QP, 3m



Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]	
0.27444	71.7	PEAK	19.5	0.1	32.0	59.3	118.8	59.5	0deg	360	
0.27444	65.9	AV	19.5	0.1	32.0	53.5	98.8	45.3	0deg	360	
0.27444	69.8	PEAK	19.5	0.1	32.0	57.4	118.8	61.4	45deg	129	
0.27444	64.2	AV	19.5	0.1	32.0	51.8	98.8	47.0	45deg	129	
0.27444	68.3	PEAK	19.5	0.1	32.0	55.9	118.8	62.9	90deg	78	
0.27444	62.4	AV	19.5	0.1	32.0	50.0	98.8	48.8	90deg	78	
0.50023	56.7	QP	19.5	0.2	32.0	44.4	73.6	29.2	0deg	9	
0.50023	55.2	QP	19.5	0.2	32.0	42.9	73.6	30.7	45deg	360	
0.50023	53.3	QP	19.5	0.2	32.0	41.0	73.6	32.6	90deg	99	
13.11000	35.6	QP	20.4	0.8	32.0	24.8	69.5	44.7	0deg	168	
13.11000	35.6	QP	20.4	0.8	32.0	24.8	69.5	44.7	45deg	173	
13.11000	35.6	QP	20.4	0.8	32.0	24.8	69.5	44.7	90deg	82	
13.41000	37.8	QP	20.4	0.8	32.0	27.0	80.5	53.5	0deg	168	
13.41000	37.9	QP	20.4	0.8	32.0	27.1	80.5	53.4	45deg	173	
13.41000	38.3	QP	20.4	0.8	32.0	27.5	80.5	53.0	90deg	82	
13.55300	55.0	QP	20.5	0.8	32.0	44.3	90.5	46.2	0deg	168	
13.55300	55.4	QP	20.5	0.8	32.0	44.7	90.5	45.8	45deg	173	
13.55300	53.7	QP	20.5	0.8	32.0	43.0	90.5	47.5	90deg	82	
13.56000	70.3	QP	20.5	0.8	32.0	59.6	124.0	64.4	0deg	168	Carrier
13.56000	71.6	QP	20.5	0.8	32.0	60.9	124.0	63.1	45deg	173	Carrier (MAX)
13.56000	70.0	QP	20.5	0.8	32.0	59.3	124.0	64.7	90deg	82	Carrier
13.56700	56.6	QP	20.5	0.8	32.0	45.9	90.5	44.6	0deg	168	
13.56700	57.4	QP	20.5	0.8	32.0	46.7	90.5	43.8	45deg	173	
13.56700	55.6	QP	20.5	0.8	32.0	44.9	90.5	45.6	90deg	82	
13.71000	37.2	QP	20.5	0.8	32.0	26.5	80.5	54.0	0deg	168	
13.71000	37.3	QP	20.5	0.8	32.0	26.6	80.5	53.9	45deg	173	
13.71000	36.9	QP	20.5	0.8	32.0	26.2	80.5	54.3	90deg	82	

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTN. -AMP.)

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Test report No. : 27BE0239-HO-A-1
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Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Fundamental emission and Spectrum Mask and Spurious emission below 30MHz)
(ME-MR21-A-SG, Modulation mode)

DATA OF MAGNETIC RADIATED EMISSION TEST

UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 12:17:54

Company : Maxell Seiki, Ltd. Report No. : 27BE0239-HO
Kind of EUT : RFID Reader/Writer Module Power : DC 5V (from I/F Power unit)
Model No. : ME-MR21-A-SG Temp./Humi. : 24deg.C / 63%
Serial No. : #01 Operator : Kenichi Adachi

Mode / Remarks : Modulation mode (Communication), EUT max-axis(Z-axis),

LIMIT : FCC15C § 15. 225 / RSS-Gen / RSS-210 / 9k-90k: PK / 110k-490k: PK / other: QP, 3m
FCC15C § 15. 225 / RSS-Gen / RSS-210 / 9k-90k: AV / 110k-490k: AV / other: QP, 3m

Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]	
14. 01000	35. 7	QP	20. 5	0. 8	32. 0	25. 0	69. 5	44. 5	0deg	168	
14. 01000	35. 6	QP	20. 5	0. 8	32. 0	24. 9	69. 5	44. 6	45deg	173	
14. 01000	35. 7	QP	20. 5	0. 8	32. 0	25. 0	69. 5	44. 5	90deg	82	
27. 12001	40. 0	QP	21. 3	1. 2	32. 0	30. 5	69. 5	39. 0	0deg	141	
27. 12002	45. 0	QP	21. 3	1. 2	32. 0	35. 5	69. 5	34. 0	45deg	360	
27. 12003	48. 6	QP	21. 3	1. 2	32. 0	39. 1	69. 5	30. 4	90deg	84	

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 24 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Fundamental emission and Spectrum Mask and Spurious emission below 30MHz)
(ME-MA21-A-SNT, Modulation mode)

DATA OF MAGNETIC RADIATED EMISSION TEST

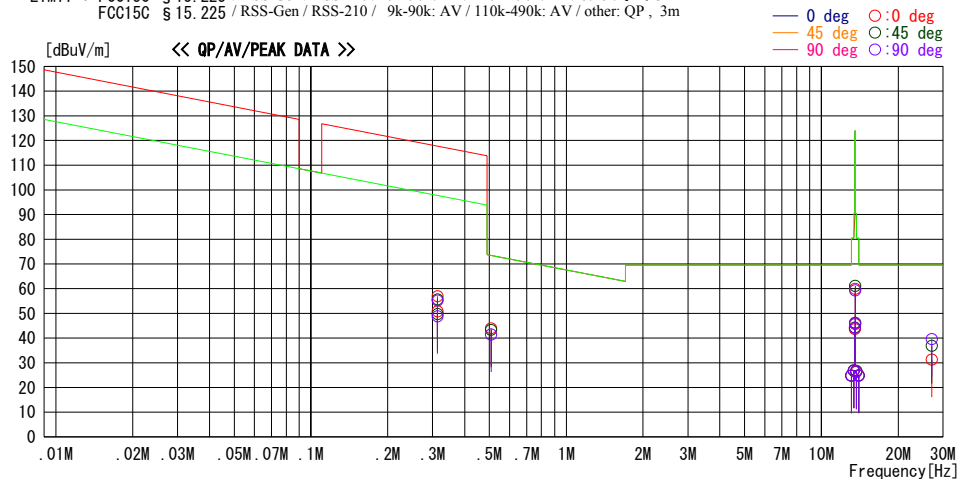
UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 16:13:33

Company : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MA21-A-SNT
Serial No. : #01

Report No. : 27BE0239-HO
Power : DC 5V (from I/F Power unit)
Temp./Humi. : 24deg. C / 63%
Operator : Kenichi Adachi

Mode / Remarks : Modulation mode (Communication), EUT max-axis(Z-axis),

LIMIT : FCC15C § 15.225 / RSS-Gen / RSS-210 / 9k-90k: PK / 110k-490k: PK / other: QP, 3m
FCC15C § 15.225 / RSS-Gen / RSS-210 / 9k-90k: AV / 110k-490k: AV / other: QP, 3m



Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg.]	
0.31354	69.3	PEAK	19.5	0.1	32.0	56.9	117.7	60.8	0deg	167	
0.31354	63.2	AV	19.5	0.1	32.0	50.8	97.7	46.9	0deg	167	
0.31354	68.0	PEAK	19.5	0.1	32.0	55.6	117.7	62.1	45deg	157	
0.31354	62.1	AV	19.5	0.1	32.0	49.7	97.7	48.0	45deg	157	
0.31354	67.6	PEAK	19.5	0.1	32.0	55.2	117.7	62.5	90deg	87	
0.31354	61.2	AV	19.5	0.1	32.0	48.8	97.7	48.9	90deg	87	
0.50788	56.2	QP	19.5	0.2	32.0	43.9	73.5	29.6	0deg	360	
0.50788	55.6	QP	19.5	0.2	32.0	43.3	73.5	30.2	45deg	95	
0.50788	53.7	QP	19.5	0.2	32.0	41.4	73.5	32.1	90deg	172	
13.11000	35.5	QP	20.4	0.8	32.0	24.7	69.5	44.8	0deg	185	
13.11000	35.6	QP	20.4	0.8	32.0	24.8	69.5	44.7	45deg	152	
13.11000	35.6	QP	20.4	0.8	32.0	24.8	69.5	44.7	90deg	114	
13.41000	37.5	QP	20.4	0.8	32.0	26.7	80.5	53.8	0deg	185	
13.41000	37.7	QP	20.4	0.8	32.0	26.9	80.5	53.6	45deg	152	
13.41000	37.6	QP	20.4	0.8	32.0	26.8	80.5	53.7	90deg	114	
13.55300	54.3	QP	20.5	0.8	32.0	43.6	90.5	46.9	0deg	185	
13.55300	55.0	QP	20.5	0.8	32.0	44.3	90.5	46.2	45deg	152	
13.55300	54.8	QP	20.5	0.8	32.0	44.1	90.5	46.4	90deg	114	
13.56000	70.6	QP	20.5	0.8	32.0	59.9	124.0	64.1	0deg	185	Carrier,
13.56000	71.8	QP	20.5	0.8	32.0	61.1	124.0	62.9	45deg	152	Carrier, max-axis
13.56000	70.0	QP	20.5	0.8	32.0	59.3	124.0	64.7	90deg	114	Carrier,
13.56700	56.4	QP	20.5	0.8	32.0	45.7	90.5	44.8	0deg	185	
13.56700	56.9	QP	20.5	0.8	32.0	46.2	90.5	44.3	45deg	152	
13.56700	56.6	QP	20.5	0.8	32.0	45.9	90.5	44.6	90deg	114	
13.71000	37.0	QP	20.5	0.8	32.0	26.3	80.5	54.2	0deg	185	
13.71000	37.4	QP	20.5	0.8	32.0	26.7	80.5	53.8	45deg	152	
13.71000	37.2	QP	20.5	0.8	32.0	26.5	80.5	54.0	90deg	114	

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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Test report No. : 27BE0239-HO-A-1
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Radiated emission(Fundamental emission and Spectrum Mask and Spurious emission below 30MHz)
(ME-MA21-A-SNT, Modulation mode)

DATA OF MAGNETIC RADIATED EMISSION TEST

UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 16:13:33

Company : Maxell Seiki, Ltd. Report No. : 27BE0239-HO
Kind of EUT : RFID Reader/Writer Module Power : DC 5V (from I/F Power unit)
Model No. : ME-MA21-A-SNT Temp./Humi. : 24deg.C / 63%
Serial No. : #01 Operator : Kenichi Adachi

Mode / Remarks : Modulation mode (Communication), EUT max-axis(Z-axis),

LIMIT : FCC15C § 15. 225 / RSS-Gen / RSS-210 / 9k-90k: PK / 110k-490k: PK / other: QP, 3m
FCC15C § 15. 225 / RSS-Gen / RSS-210 / 9k-90k: AV / 110k-490k: AV / other: QP, 3m

Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]	
14. 01000	35. 4	QP	20. 5	0. 8	32. 0	24. 7	69. 5	44. 8	0deg	185	
14. 01000	35. 6	QP	20. 5	0. 8	32. 0	24. 9	69. 5	44. 6	45deg	152	
14. 01000	35. 5	QP	20. 5	0. 8	32. 0	24. 8	69. 5	44. 7	90deg	114	
27. 12000	40. 8	QP	21. 3	1. 2	32. 0	31. 3	69. 5	38. 2	0deg	148	
27. 12000	46. 3	QP	21. 3	1. 2	32. 0	36. 8	69. 5	32. 7	45deg	360	
27. 12000	49. 0	QP	21. 3	1. 2	32. 0	39. 5	69. 5	30. 0	90deg	82	

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 26 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Spurious emission below 30MHz)

(ME-MR21-A-SG, Standby)

DATA OF MAGNETIC RADIATED EMISSION TEST

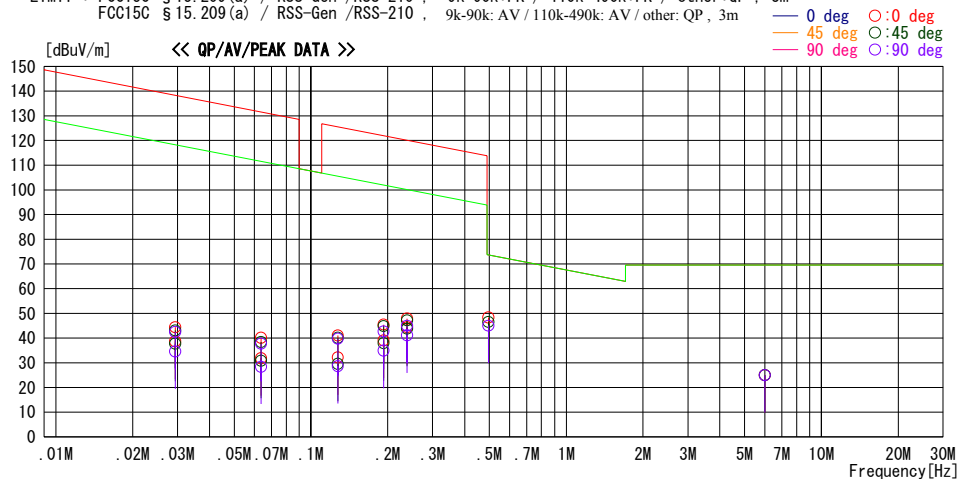
UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 14:11:31

Company : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MR21-A-SG
Serial No. : #01

Report No. : 27BE0239-HO
Power : DC 5V (from I/F Power unit)
Temp./Humi. : 24deg. C / 63%
Operator : Kenichi Adachi

Mode / Remarks : Standby , EUT max-axis(Z-axis),

LIMIT : FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k:PK / 110k-490k:PK / other:QP , 3m
FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k: AV / 110k-490k: AV / other: QP , 3m



Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]
0.02942	56.7	PEAK	19.7	0.1	32.1	44.4	138.2	93.8	0deg	360
0.02942	50.9	AV	19.7	0.1	32.1	38.6	118.2	79.6	0deg	360
0.02942	55.4	PEAK	19.7	0.1	32.1	43.1	138.2	95.1	45deg	145
0.02942	50.0	AV	19.7	0.1	32.1	37.7	118.2	80.5	45deg	145
0.02942	54.8	PEAK	19.7	0.1	32.1	42.5	138.2	95.7	90deg	93
0.02942	46.9	AV	19.7	0.1	32.1	34.6	118.2	83.6	90deg	93
0.06375	52.5	PEAK	19.6	0.1	32.1	40.1	131.5	91.4	0deg	210
0.06375	44.2	AV	19.6	0.1	32.1	31.8	111.5	79.7	0deg	210
0.06375	50.7	PEAK	19.6	0.1	32.1	38.3	131.5	93.2	45deg	339
0.06375	43.2	AV	19.6	0.1	32.1	30.8	111.5	80.7	45deg	339
0.06375	50.1	PEAK	19.6	0.1	32.1	37.7	131.5	93.8	90deg	308
0.06375	40.8	AV	19.6	0.1	32.1	28.4	111.5	83.1	90deg	308
0.12723	53.5	PEAK	19.5	0.1	32.1	41.0	125.5	84.5	0deg	352
0.12723	44.7	AV	19.5	0.1	32.1	32.2	105.5	73.3	0deg	352
0.12723	52.6	PEAK	19.5	0.1	32.1	40.1	125.5	85.4	45deg	213
0.12723	42.0	AV	19.5	0.1	32.1	29.5	105.5	76.0	45deg	213
0.12723	52.2	PEAK	19.5	0.1	32.1	39.7	125.5	85.8	90deg	299
0.12723	41.1	AV	19.5	0.1	32.1	28.6	105.5	76.9	90deg	299
0.19238	57.8	PEAK	19.5	0.1	32.0	45.4	121.9	76.5	0deg	233
0.19238	51.4	AV	19.5	0.1	32.0	39.0	101.9	62.9	0deg	233
0.19238	57.2	PEAK	19.5	0.1	32.0	44.8	121.9	77.1	45deg	214
0.19238	50.3	AV	19.5	0.1	32.0	37.9	101.9	64.0	45deg	214
0.19238	55.0	PEAK	19.5	0.1	32.0	42.6	121.9	79.3	90deg	297
0.19238	47.3	AV	19.5	0.1	32.0	34.9	101.9	67.0	90deg	297
0.23782	60.3	PEAK	19.5	0.1	32.0	47.9	120.1	72.2	0deg	360
0.23782	56.8	AV	19.5	0.1	32.0	44.4	100.1	55.7	0deg	360
0.23782	59.6	PEAK	19.5	0.1	32.0	47.2	120.1	72.9	45deg	341

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 27 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Spurious emission below 30MHz)

(ME-MR21-A-SG, Standby)

DATA OF MAGNETIC RADIATED EMISSION TEST

UL Apex Co., LTD. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2006/10/24 14:11:31

Company : Maxell Seiki, Ltd. Report No. : 27BE0239-HO
Kind of EUT : RFID Reader/Writer Module Power : DC 5V (from I/F Power unit)
Model No. : ME-MR21-A-SG Temp./Humi. : 24deg.C / 63%
Serial No. : #01 Operator : Kenichi Adachi

Mode / Remarks : Standby , EUT max-axis(Z-axis),

LIMIT : FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k:PK / 110k-490k:PK / other:QP , 3m
FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k: AV / 110k-490k: AV / other: QP , 3m

Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]
0.23782	56.2	AV	19.5	0.1	32.0	43.8	100.1	56.3	45deg	341
0.23782	57.4	PEAK	19.5	0.1	32.0	45.0	120.1	75.1	90deg	298
0.23782	53.5	AV	19.5	0.1	32.0	41.1	100.1	59.0	90deg	298
0.49600	60.7	QP	19.5	0.1	32.0	48.3	73.7	25.4	0deg	7
0.49600	59.0	QP	19.5	0.1	32.0	46.6	73.7	27.1	45deg	360
0.49600	57.4	QP	19.5	0.1	32.0	45.0	73.7	28.7	90deg	90
6.00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	0deg	360
6.00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	45deg	360
6.00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	90deg	360

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 28 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Spurious emission below 30MHz)

(ME-MA21-A-SNT, Standby)

DATA OF MAGNETIC RADIATED EMISSION TEST

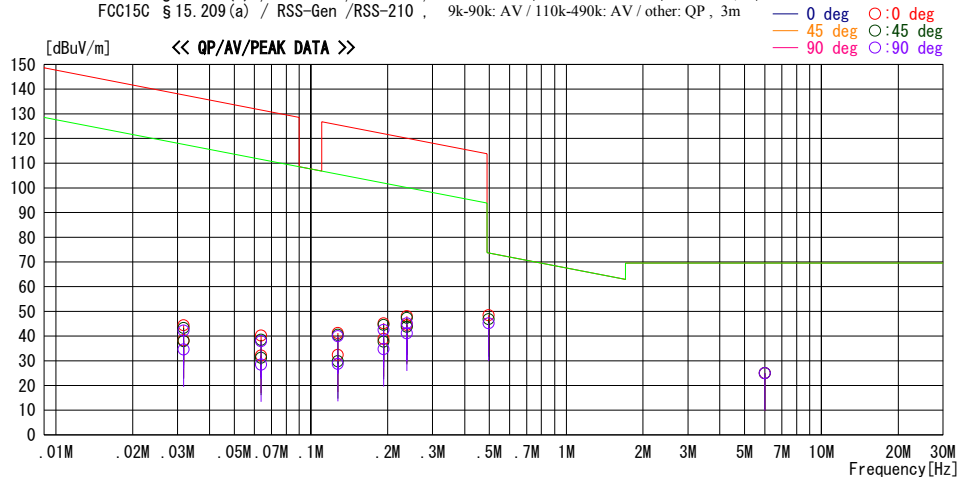
UL Apex Co.,LTD. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2006/10/24 18:15:29

Company : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MA21-A-SNT
Serial No. : #01

Report No. : 27BE0239-HO
Power : DC 5V (from I/F Power unit)
Temp./Humi. : 24deg. C / 63%
Operator : Kenichi Adachi

Mode / Remarks : Standby , EUT max-axis(Z-axis)

LIMIT : FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k:PK / 110k-490k:PK / other:QP , 3m
FCC15C § 15.209(a) / RSS-Gen /RSS-210 , 9k-90k: AV / 110k-490k: AV / other: QP , 3m



Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]
0.03166	56.8	PEAK	19.6	0.1	32.1	44.4	137.6	93.2	0deg	360
0.03166	50.7	AV	19.6	0.1	32.1	38.3	117.6	79.3	0deg	360
0.03166	55.7	PEAK	19.6	0.1	32.1	43.3	137.6	94.3	45deg	134
0.03166	50.3	AV	19.6	0.1	32.1	37.9	117.6	79.7	45deg	134
0.03166	54.6	PEAK	19.6	0.1	32.1	42.2	137.6	95.4	90deg	86
0.03166	47.0	AV	19.6	0.1	32.1	34.6	117.6	83.0	90deg	86
0.06375	52.6	PEAK	19.6	0.1	32.1	40.2	131.5	91.3	0deg	213
0.06375	44.5	AV	19.6	0.1	32.1	32.1	111.5	79.4	0deg	213
0.06375	50.9	PEAK	19.6	0.1	32.1	38.5	131.5	93.0	45deg	336
0.06375	43.6	AV	19.6	0.1	32.1	31.2	111.5	80.3	45deg	336
0.06375	50.3	PEAK	19.6	0.1	32.1	37.9	131.5	93.6	90deg	306
0.06375	40.9	AV	19.6	0.1	32.1	28.5	111.5	83.0	90deg	306
0.12723	53.7	PEAK	19.5	0.1	32.1	41.2	125.5	84.3	0deg	351
0.12723	44.9	AV	19.5	0.1	32.1	32.4	105.5	73.1	0deg	351
0.12723	52.9	PEAK	19.5	0.1	32.1	40.4	125.5	85.1	45deg	212
0.12723	42.3	AV	19.5	0.1	32.1	29.8	105.5	75.7	45deg	212
0.12723	52.4	PEAK	19.5	0.1	32.1	39.9	125.5	85.6	90deg	300
0.12723	41.2	AV	19.5	0.1	32.1	28.7	105.5	76.8	90deg	300
0.19234	57.6	PEAK	19.5	0.1	32.0	45.2	121.9	76.7	0deg	234
0.19234	51.2	AV	19.5	0.1	32.0	38.8	101.9	63.1	0deg	234
0.19234	57.0	PEAK	19.5	0.1	32.0	44.6	121.9	77.3	45deg	210
0.19234	50.1	AV	19.5	0.1	32.0	37.7	101.9	64.2	45deg	210
0.19234	54.9	PEAK	19.5	0.1	32.0	42.5	121.9	79.4	90deg	295
0.19234	47.1	AV	19.5	0.1	32.0	34.7	101.9	67.2	90deg	295
0.23776	60.5	PEAK	19.5	0.1	32.0	48.1	120.1	72.0	0deg	360
0.23776	56.9	AV	19.5	0.1	32.0	44.5	100.1	55.6	0deg	360
0.23776	59.8	PEAK	19.5	0.1	32.0	47.4	120.1	72.7	45deg	342

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

UL Apex Co., Ltd.

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MF060b(14.06.06)

Test report No. : 27BE0239-HO-A-1
Page : 29 of 40
Issued date : November 21, 2006
Revised date : December 5, 2006
FCC ID : UOEME-M21

Radiated emission(Spurious emission below 30MHz)

(ME-MA21-A-SNT, Standby)

DATA OF MAGNETIC RADIATED EMISSION TEST

UL Apex Co., LTD. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2006/10/24 18:15:29

Company : Maxell Seiki, Ltd. Report No. : 27BE0239-HO
Kind of EUT : RFID Reader/Writer Module Power : DC 5V (from I/F Power unit)
Model No. : ME-MA21-A-SNT Temp./Humi. : 24deg. C / 63%
Serial No. : #01 Operator : Kenichi Adachi

Mode / Remarks : Standby , EUT max-axis(Z-axis)

LIMIT : FCC15C § 15. 209(a) / RSS-Gen /RSS-210 , 9k-90k:PK / 110k-490k:PK / other:QP , 3m
FCC15C § 15. 209(a) / RSS-Gen /RSS-210 , 9k-90k: AV / 110k-490k: AV / other: QP , 3m

Freq.	Reading	DET	Ant. Fac	Loss	Gain	Result	Limit	Margin	Antenna	Table
[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		[deg]
0. 23776	56.1	AV	19.5	0.1	32.0	43.7	100.1	56.4	45deg	342
0. 23776	57.6	PEAK	19.5	0.1	32.0	45.2	120.1	74.9	90deg	287
0. 23776	53.5	AV	19.5	0.1	32.0	41.1	100.1	59.0	90deg	287
0. 49660	60.9	QP	19.5	0.1	32.0	48.5	73.7	25.2	0deg	6
0. 49660	59.2	QP	19.5	0.1	32.0	46.8	73.7	26.9	45deg	360
0. 49660	57.6	QP	19.5	0.1	32.0	45.2	73.7	28.5	90deg	94
6. 00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	0deg	360
6. 00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	45deg	360
6. 00000	36.5	QP	20.0	0.5	32.0	25.0	69.5	44.5	90deg	360

CHART : WITH FACTOR ANT TYPE : LOOP
CALCULATION : READING + ANT FACTOR + LOSS(CABLE + ATTEN. -AMP.)

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MF060b(14.06.06)

Radiated emission(Spurious emission above 30MHz)
(ME-MA21-A-SNT, Standby)

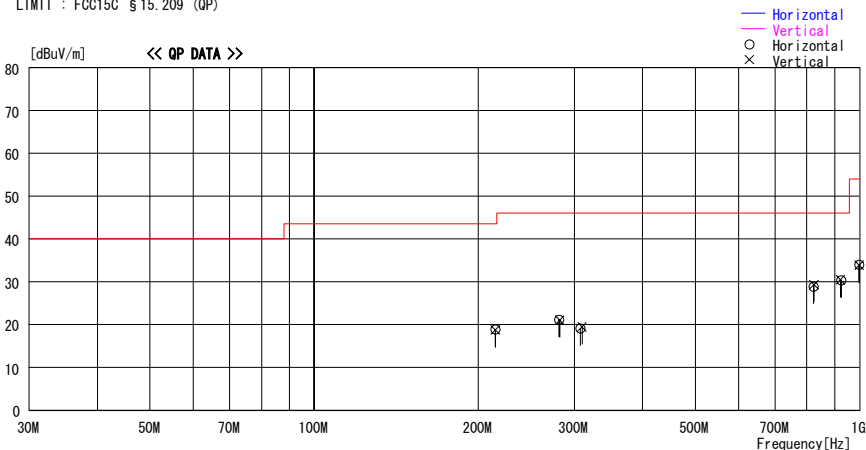
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2006/10/28 13:18:51

Company : Maxell Seiki, Ltd.
Kind of EUT : RFID Reader/Writer Module
Model No. : ME-MA21-A-SNT
Serial No. : #01
Report No. : 27BE0239-HO
Power : DC 5.0V
Temp./Humi. : 25deg.C. / 50%
Operator : Takumi Shimada

Mode / Remarks : Standby Mode Max-axis (Hor:Y, Ver:Y)

LIMIT : FCC15C §15.209 (QP)



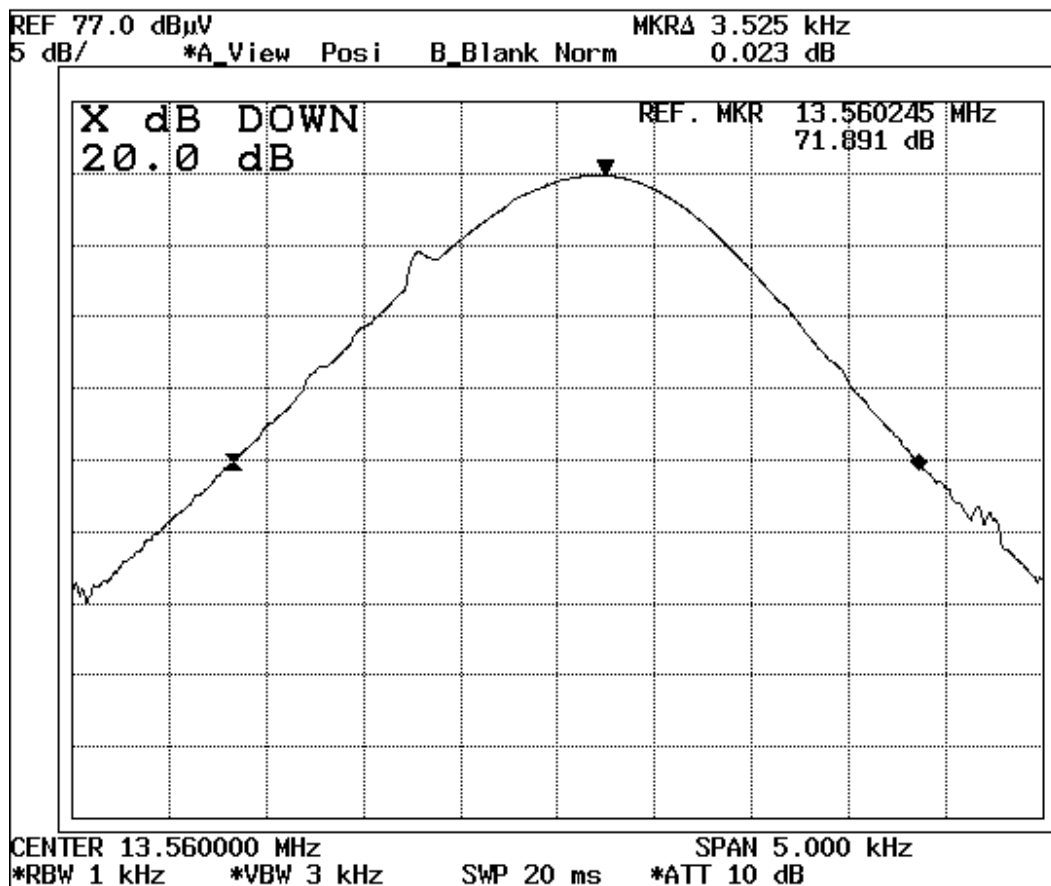
Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
214.951	24.0	QP	17.3	-22.5	18.8	14	300	Hori.	43.5	24.7
214.951	23.9	QP	17.3	-22.5	18.7	258	100	Vert.	43.5	24.8
281.370	23.8	QP	19.4	-22.1	21.1	359	300	Hori.	46.0	24.9
282.180	23.7	QP	19.4	-22.1	21.0	359	100	Vert.	46.0	25.0
307.700	24.2	QP	16.8	-21.9	19.1	59	100	Hori.	46.0	26.9
309.800	24.5	QP	16.8	-21.9	19.4	18	100	Vert.	46.0	26.6
822.909	24.3	QP	23.3	-18.7	28.9	67	100	Hori.	46.0	17.1
825.009	24.6	QP	23.3	-18.6	29.3	353	100	Vert.	46.0	16.7
923.711	23.9	QP	24.3	-17.8	30.4	319	100	Vert.	46.0	15.6
925.811	23.7	QP	24.4	-17.8	30.3	89	100	Hori.	46.0	15.7
997.912	23.9	QP	27.3	-17.3	33.9	0	100	Hori.	53.9	20.0
999.312	23.7	QP	27.4	-17.3	33.8	351	100	Vert.	53.9	20.1

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)

-20dB Bandwidth
(ME-MR21-A-SG)

Company	: Maxell Seiki, Ltd.	UL-Apex Co.,Ltd.	
Equipment	: RFID Reader / Writer Module	Head Office EMC Lab. No4 Semi Anechoic Chamber	
Model	: ME-MR21-A-SG	Regulation	: FCC 15.215
S/N	: #01	Test Distance	: 3m
Power	: DC 5V (from I/F Power unit)	Date	: 10/24/2006
Mode	: Modulation mode	Temperature	: 24 deg.C.
		Humidity	: 63 %
		Engineer	: Kenichi Adachi

Freq.[MHz]	20dB Bandwidth [kHz]
13.56	3.525



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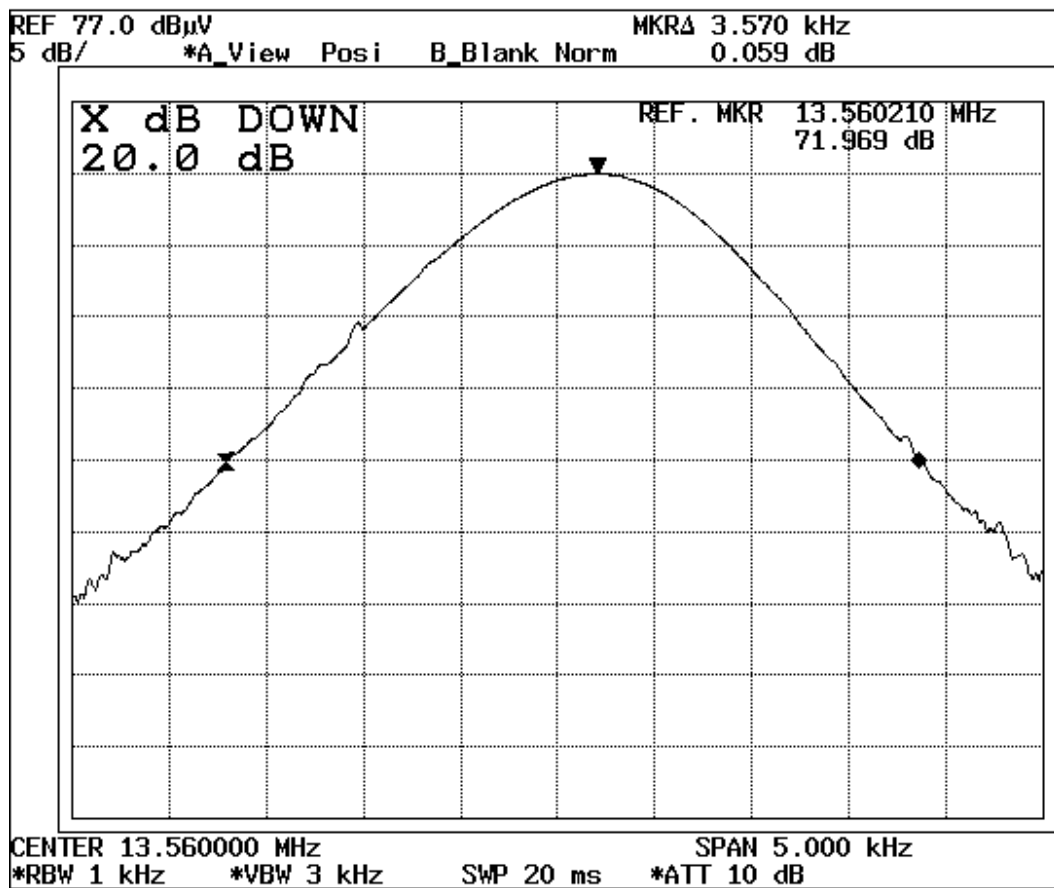
MF060b(14.06.06)

-20dB Bandwidth
(ME-MA21-A-SNT)

Company : Maxell Seiki, Ltd.
 Equipment : RFID Reader / Writer Module
 Model : ME-MA21-A-SNT
 S/N : #01
 Power : DC 5V (from I/F Power unit)
 Mode : Modulation mode

UL-Apex Co.,Ltd.
 Head Office EMC Lab. No4 Semi Anechoic Chamber
 Regulation : FCC 15.215
 Test Distance : 3m
 Date : 10/24/2006
 Temperature : 24 deg.C.
 Humidity : 63 %
 Engineer : Kenichi Adachi

Freq.[MHz]	20dB Bandwidth [kHz]
13.56	3.570



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MF060b(14.06.06)

99% Occupied Bandwidth

(ME-MR21-A-SG)

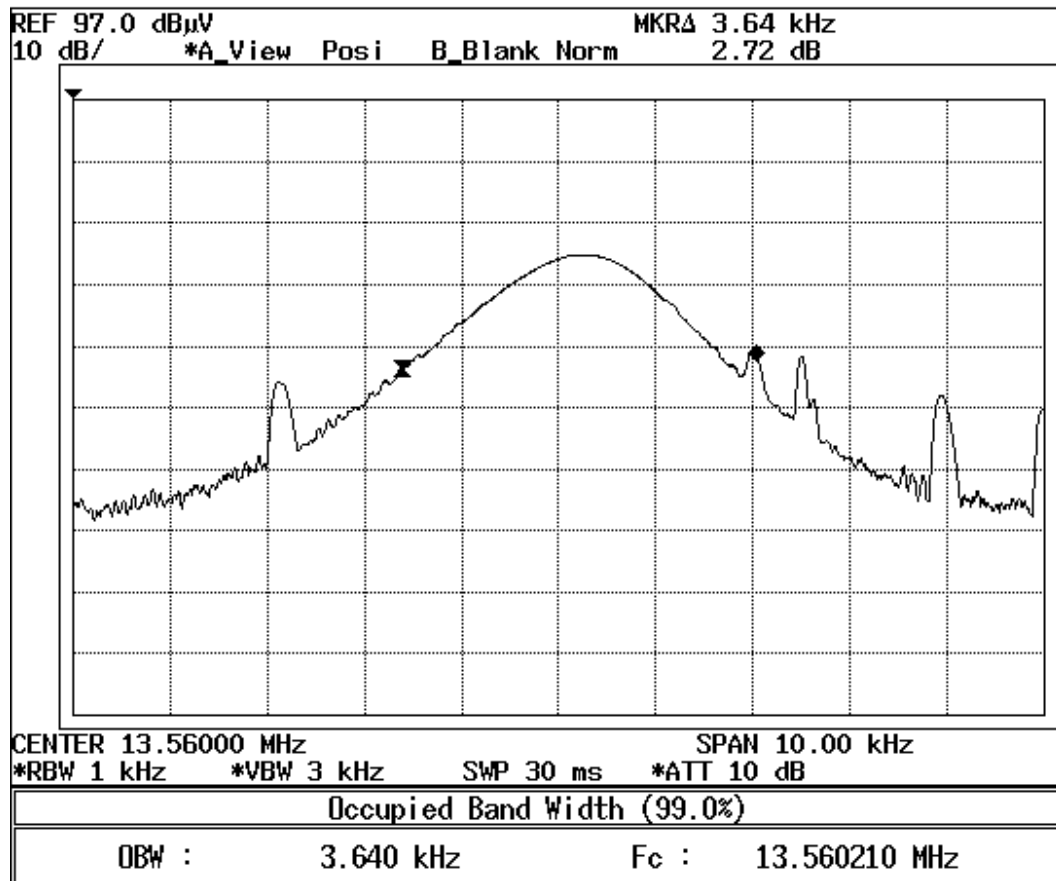
UL-Apex Co.,Ltd.

Head Office EMC Lab. No4 Semi Anechoic Chamber

Company : Maxell Seiki, Ltd.
 Equipment : RFID Reader / Writer Module
 Model : ME-MR21-A-SG
 S/N : #01
 Power : DC 5V (from I/F Power unit)
 Mode : Modulation mode

Regulation : RSS-Gen 4.4.1
 Test Distance : 3m
 Date : 10/24/2006
 Temperature : 24 deg.C.
 Humidity : 63 %
 Engineer : Kenichi Adachi

Freq.[MHz]	99% Occupied Bandwidth [kHz]
13.56	3.640



UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(14.06.06)

99% Occupied Bandwidth

(ME-MA21-A-SNT)

UL-Apex Co.,Ltd.

Head Office EMC Lab. No4 Semi Anechoic Chamber

Company : Maxell Seiki, Ltd.
 Equipment : RFID Reader / Writer Module
 Model : ME-MA21-A-SNT
 S/N : #01
 Power : DC 5V (from I/F Power unit)
 Mode : Modulation mode

Regulation : RSS-Gen 4.4.1

Test Distance : 3m

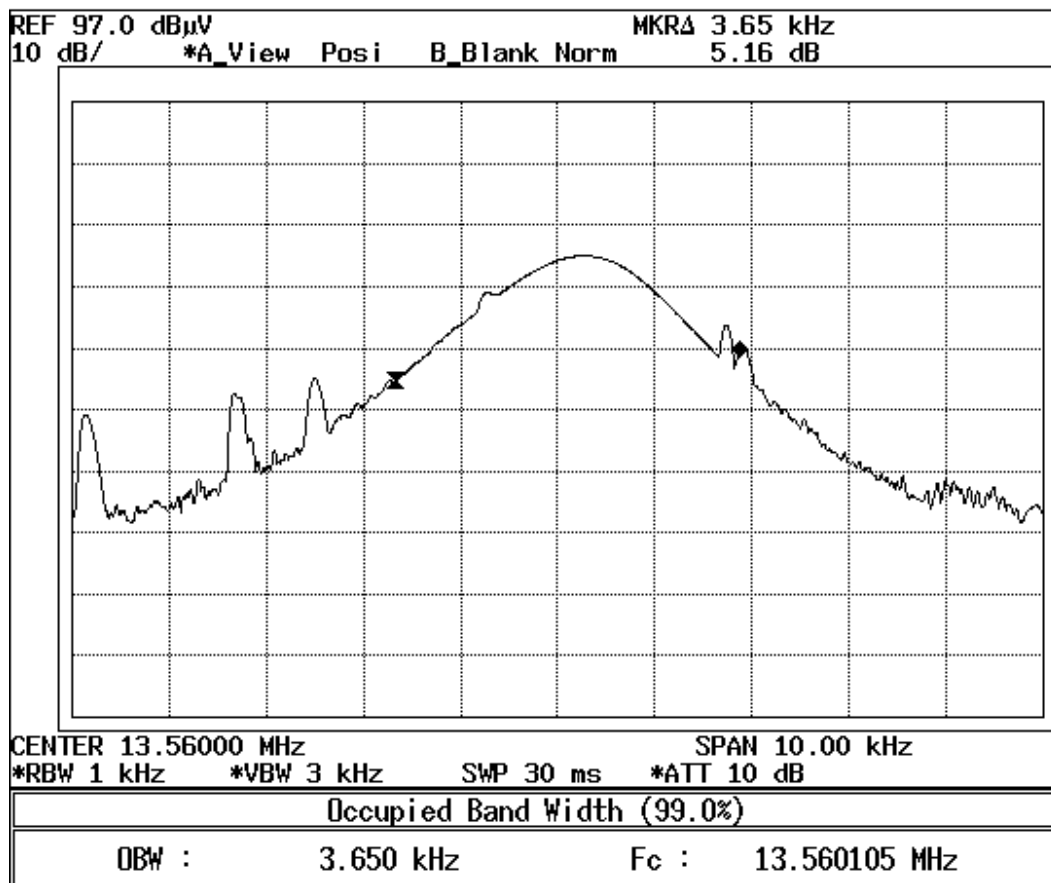
Date : 10/24/2006

Temperature : 24 deg.C.

Humidity : 63 %

Engineer : Kenichi Adachi

Freq.[MHz]	99% Occupied Bandwidth [kHz]
13.56	3.650



UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(14.06.06)

Frequency Tolerance

UL Apex Co., Ltd.
Head Office EMC Lab. No.7 Measurement Room

COMPANY : Maxell Seiki, Ltd.
EQUIPMENT : RFID Reader/Writer Module
MODEL : ME-MR21-A-SG
S/ N : #01
POWER : DC 5.0V (Power Supply)
MODE : Tx 13.56MHz
: Non modulation

REPORT NO : 27BE0239-HO
REGULATION : FCC15.225 (e)/RSS-210A2.6
TEST DISTANCE : -
DATE : 10/17/2006
TEMPERATURE : 26 deg.C.
HUMIDITY : 60 %
ENGINEER : Takumi Shimada

Test Condition	Test Timing	Measured freq [MHz]	Freq error [MHz]	Result [ppm]	Limit (+/- 0.01%) [+/- ppm]	Margin [ppm]
T nom 20deg.C Vmax DC 5.75V (115%)	Power on	13.56005600	0.00005600	4.13	100.00	95.87
	on 2min.	13.56005000	0.00005000	3.69	100.00	96.31
	on 5min.	13.56005000	0.00005000	3.69	100.00	96.31
	on 10min.	13.56004900	0.00004900	3.61	100.00	96.39
T nom 20deg.C Vnom DC 5.00V (100%)	Power on	13.56005000	0.00005000	3.69	100.00	96.31
	on 2min.	13.56004900	0.00004900	3.61	100.00	96.39
	on 5min.	13.56004900	0.00004900	3.61	100.00	96.39
	on 10min.	13.56004900	0.00004900	3.61	100.00	96.39
T nom 20deg.C Vmin DC 4.25V (85%)	Power on	13.56005300	0.00005300	3.91	100.00	96.09
	on 2min.	13.56005100	0.00005100	3.76	100.00	96.24
	on 5min.	13.56005000	0.00005000	3.69	100.00	96.31
	on 10min.	13.56004900	0.00004900	3.61	100.00	96.39
T : 50°C Vnom DC 5.00V (100%)	Power on	13.56002000	0.00002000	1.47	100.00	98.53
	on 2min.	13.56002200	0.00002200	1.62	100.00	98.38
	on 5min.	13.56002300	0.00002300	1.70	100.00	98.30
	on 10min.	13.56002100	0.00002100	1.55	100.00	98.45
T : 40°C Vnom DC 5.00V (100%) (IC only)	Power on	13.56002900	0.00002900	2.14	100.00	97.86
	on 2min.	13.56002400	0.00002400	1.77	100.00	98.23
	on 5min.	13.56002400	0.00002400	1.77	100.00	98.23
	on 10min.	13.56002400	0.00002400	1.77	100.00	98.23
T : 30°C Vnom DC 5.00V (100%)	Power on	13.56004000	0.00004000	2.95	100.00	97.05
	on 2min.	13.56004100	0.00004100	3.02	100.00	96.98
	on 5min.	13.56004000	0.00004000	2.95	100.00	97.05
	on 10min.	13.56004000	0.00004000	2.95	100.00	97.05

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

Frequency Tolerance

UL Apex Co., Ltd.
Head Office EMC Lab. No.7 Measurement Room

COMPANY : Maxell Seiki, Ltd.
EQUIPMENT : RFID Reader/Writer Module
MODEL : ME-MR21-A-SG
S/ N : #01
POWER : DC5.0V (Power Supply)
MODE : Tx 13.56MHz
: Non Modulation

REPORT NO : 27BE0239-HO
REGULATION : FCC15.225 (e)/RSS-210A2.6
TEST DISTANCE : -
DATE : 10/17/2006
TEMPERATURE : 26 deg.C.
HUMIDITY : 60 %
ENGINEER : Takumi Shimada

Test Condition	Test Timing	Measured freq [MHz]	Freq error [MHz]	Result [ppm]	Limit (+/- 0.01%) [+/- ppm]	Margin [ppm]
T : 10deg.C Vnom DC 5.00V (100%)	Power on	13.56005900	0.00005900	4.35	100.00	95.65
	on 2min.	13.56006200	0.00006200	4.57	100.00	95.43
	on 5min.	13.56006300	0.00006300	4.65	100.00	95.35
	on 10min.	13.56006200	0.00006200	4.57	100.00	95.43
T : 0deg.C Vnom DC 5.00V (100%)	Power on	13.56004500	0.00004500	3.32	100.00	96.68
	on 2min.	13.56005600	0.00005600	4.13	100.00	95.87
	on 5min.	13.56006000	0.00006000	4.42	100.00	95.58
	on 10min.	13.56006000	0.00006000	4.42	100.00	95.58
T : -10deg.C Vnom DC 5.00V (100%)	Power on	13.56001900	0.00001900	1.40	100.00	98.60
	on 2min.	13.56003900	0.00003900	2.88	100.00	97.12
	on 5min.	13.56003900	0.00003900	2.88	100.00	97.12
	on 10min.	13.56004200	0.00004200	3.10	100.00	96.90
T : -20deg.C Vnom DC 5.00V (100%)	Power on	13.55998200	-0.00001800	-1.33	100.00	98.67
	on 2min.	13.56000100	0.00000100	0.07	100.00	99.93
	on 5min.	13.56000500	0.00000500	0.37	100.00	99.63
	on 10min.	13.56001000	0.00001000	0.74	100.00	99.26
T : -30deg.C Vnom DC 5.00V (100%) *(IC only)	Power on	13.55992200	-0.00007800	-5.75	100.00	94.25
	on 2min.	13.55992400	-0.00007600	-5.60	100.00	94.40
	on 5min.	13.55992600	-0.00007400	-5.46	100.00	94.54
	on 10min.	13.55992600	-0.00007400	-5.46	100.00	94.54

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

* For IC application (RSS-Gen 4.5 requirement)

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	2006/03/03 * 12
MOS-12	Thermo-Hygrometer	Custom	CTH-180	RE	2006/01/19 * 24
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2006/06/02 * 12
MCC-51	Coaxial cable	UL Apex	-	RE	2006/03/11 * 12
MAT-30	Attenuator(6dB)	TME	UFA-01	RE	2006/03/11 * 12
MPA-13	Pre Amplifier	SONOA INSTRUMENT	310	RE	2006/03/25 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/01/29 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/01/29 * 12
TR-07	Test Receiver	Rohde & Schwarz	ESCS30	RE	2006/09/12 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE / ME / CE	
MDPS-04	DC Power Supply	KENWOOD TMI	PW18-1.3AT	ME	Pre Check
MCH-01	Temperature and Humidity Chamber	Tabai Espec	PL-2KP	ME	2005/12/19 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	RE / ME	2006/05/20 * 12
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	ME	2006/03/06 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	ME	2006/02/02 * 12
MCC-50	Coaxial cable	UL Apex	-	ME	2006/03/09 * 12
MPA-14	Pre Amplifier	SONOA INSTRUMENT	310	ME	2006/03/25 * 12
MCC-31	coaxial cable	UL Apex	-	ME	2006/05/29 * 12
MLPA-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	ME	2005/12/06 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	ME	2006/01/19 * 24
MJM-07	Measure	PROMART	SEN1955	ME	-
MJM-06	Measure	PROMART	SEN1955	RE	-
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	CE	2006/11/01 * 12
MJM-01	Measure	KDS	ES19-55	CE	-
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE (EUT)	2006/06/01 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	CE(AE)	2006/06/01 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	CE	2004/11/25 * 24
MBM-06	Barometer	SATO	Aneroid	CE	2006/06/19 * 60
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	CE	2005/12/18 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ES140	CE	2006/10/14 * 12
MTA-06	Terminator	MCL	BTRM-50	CE	2006/02/06 * 12

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

Test Item:

CE: Conducted emission, ME: Radiated emission (below 30MHz)

RE: Radiated emission (Above 30MHz)

FT: Frequency Tolerance

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MF060b(14.06.06)