

## APPENDIX 2: Data of EMI test

### Conducted Emission Tx, Ch:Low

#### DATA OF CONDUCTED EMISSION TEST

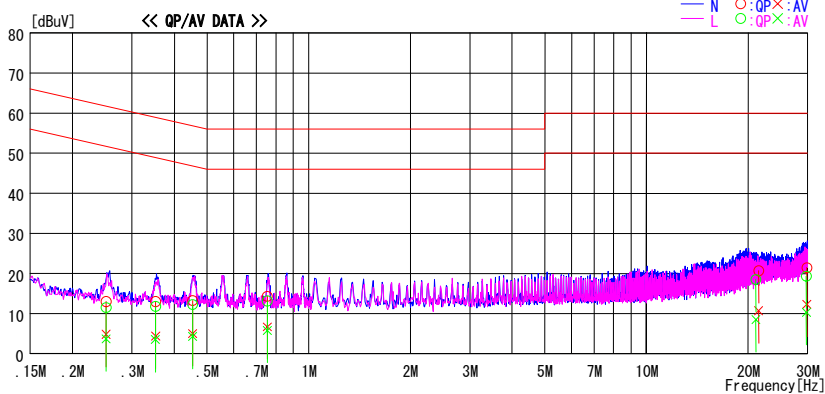
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Tx Lch (2405MHz)

LIMIT : FCC15.207 QP  
FCC15.207 AV



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]	
0.25140	12.6	4.4	0.4	13.0	4.8	61.7	51.7	48.7	46.9	N
0.35254	12.6	4.0	0.4	13.0	4.4	58.9	48.9	45.9	44.5	N
0.45317	12.9	4.6	0.4	13.3	5.0	56.8	46.8	43.5	41.8	N
0.75433	13.9	6.3	0.4	14.3	6.7	56.0	46.0	41.7	39.3	N
21.48300	16.2	6.2	4.5	20.7	10.7	60.0	50.0	39.3	39.3	N
29.83230	15.0	5.9	6.4	21.4	12.3	60.0	50.0	38.6	37.7	N
0.25140	11.1	3.3	0.4	11.5	3.7	61.7	51.7	50.2	48.0	L
0.35214	11.4	3.1	0.4	11.8	3.5	58.9	48.9	47.1	45.4	L
0.45317	11.9	3.9	0.4	12.3	4.3	56.8	46.8	44.5	42.5	L
0.75433	12.8	5.4	0.4	13.2	5.8	56.0	46.0	42.8	40.2	L
21.08200	14.1	4.1	4.4	18.5	8.5	60.0	50.0	41.5	41.5	L
29.73800	12.9	3.9	6.4	19.3	10.3	60.0	50.0	40.7	39.7	L

CHART:WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN LOSS + 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  
Telephone : +81 596 24 8116  
Facsimile : +81 596 24 8124

Conducted Emission  
Tx, Ch: Low

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Tx Lch (2405MHz)

LIMIT : FCC15. 207 QP  
FCC15. 207 AV

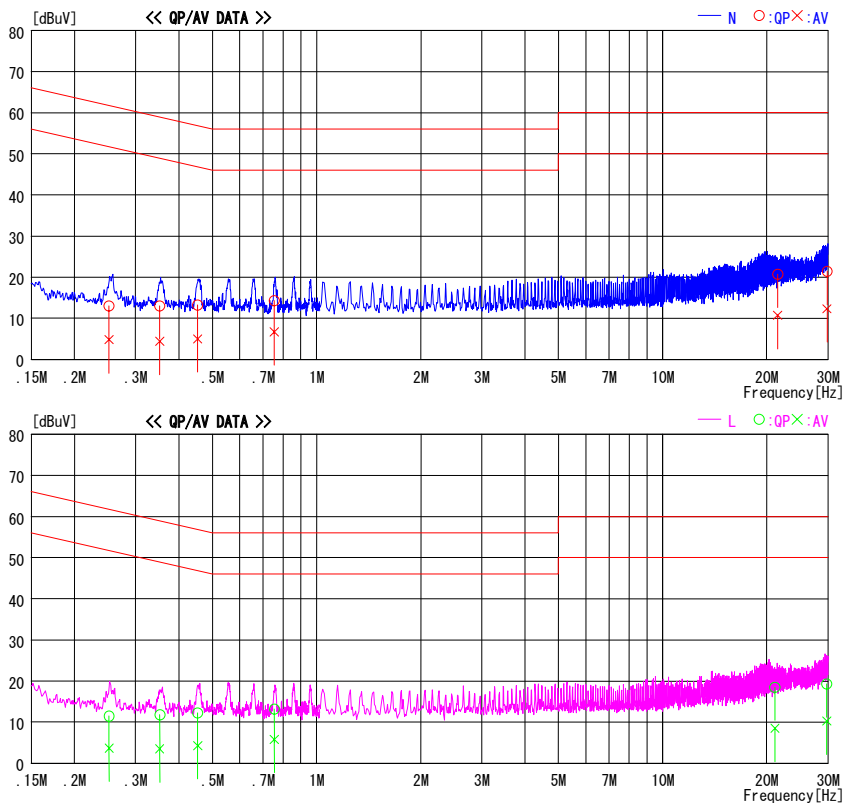


CHART: WITH FACTOR, Peak hold data. CALCURATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)  
Except for the above table : adequate margin data below the limits.

## Conducted Emission Tx, Ch: Mid

### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Tx Mch (2440MHz)

LIMIT : FCC15.207 QP  
FCC15.207 AV

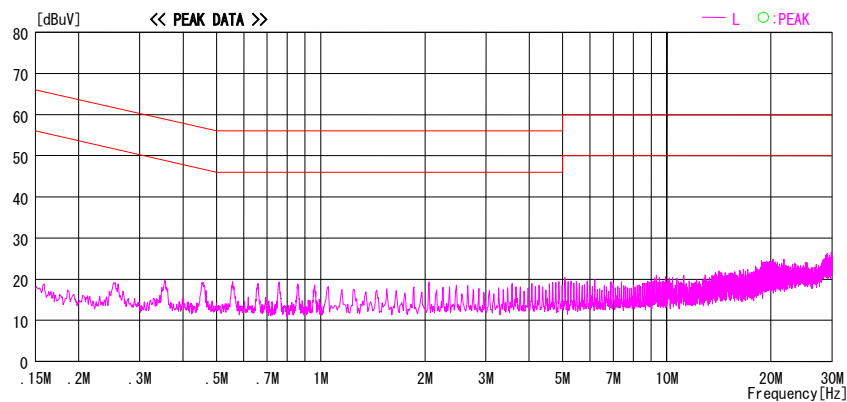
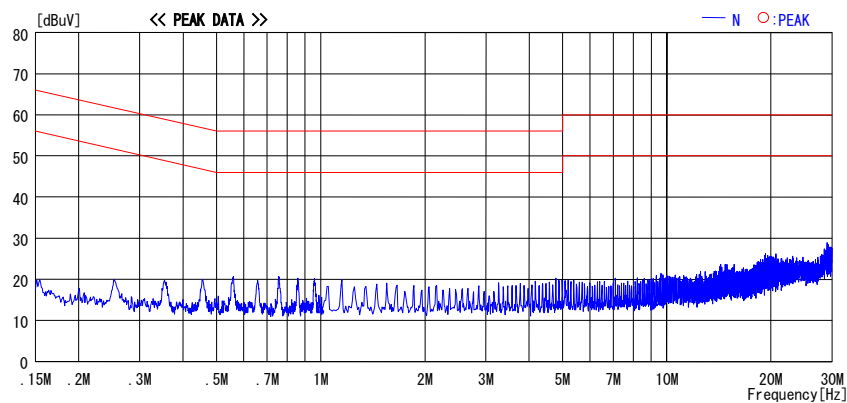


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN LOSS + CABLE LOSS)  
Except for the above table : adequate margin data below the limits.

## Conducted Emission Tx, Ch: High

### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Tx Hoh (2479MHz)

LIMIT : FCC15.207 QP  
FCC15.207 AV

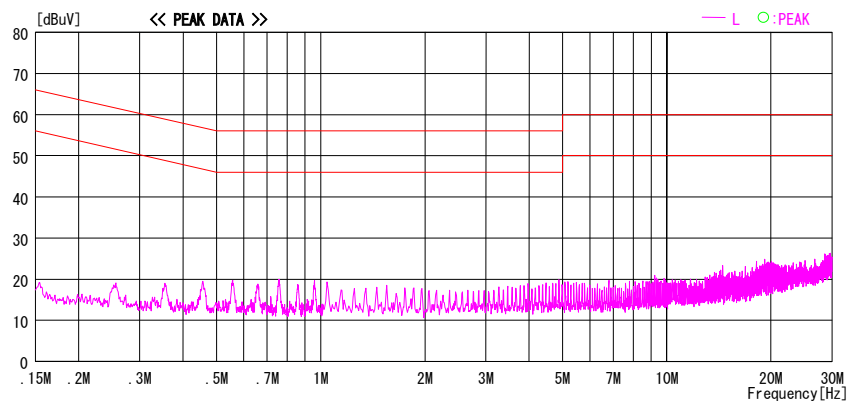
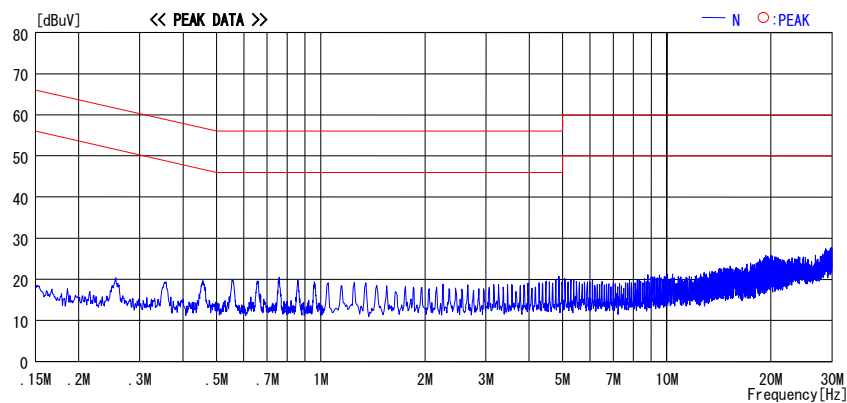


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN LOSS + CABLE LOSS)  
Except for the above table : adequate margin data below the limits.

Test report No. : 29GE0111-HO-01-A-R1  
Page : 20 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXBC5849501

## Conducted Emission Rx, Ch: Mid

### DATA OF CONDUCTED EMISSION TEST

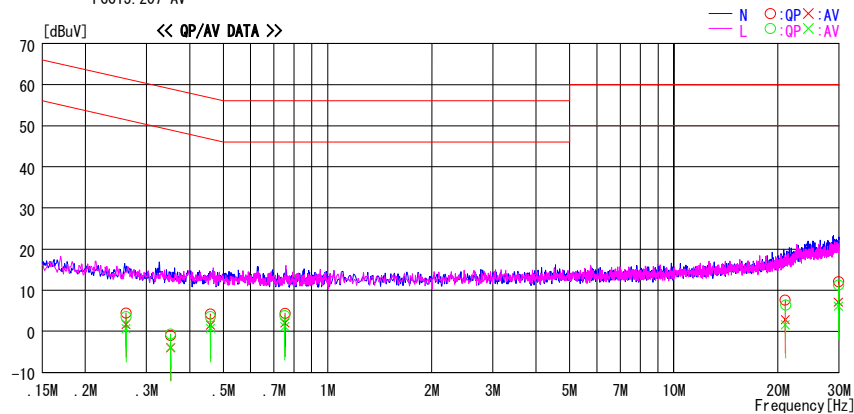
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Rx Mch(2440MHz)

LIMIT : FCC15. 207 QP  
FCC15. 207 AV



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.26180	4.1	1.3	0.4	4.5	1.7	61.4	51.4	56.9	49.7	N
0.35254	-1.4	-4.4	0.4	-1.0	-4.0	58.9	48.9	59.9	52.9	N
0.45917	3.8	1.1	0.4	4.2	1.5	56.7	46.7	52.5	45.2	N
0.75343	4.0	1.6	0.4	4.4	2.0	56.0	46.0	51.6	44.0	N
20.99150	3.2	-1.6	4.4	7.6	2.8	60.0	50.0	52.4	47.2	N
29.92520	5.7	0.7	6.4	12.1	7.1	60.0	50.0	47.9	42.9	N
0.26190	3.2	0.2	0.4	3.6	0.6	61.4	51.4	57.8	50.8	L
0.35254	-1.0	-4.3	0.4	-0.6	-3.9	58.9	48.9	59.5	52.8	L
0.45907	3.2	0.3	0.4	3.6	0.7	56.7	46.7	53.1	46.0	L
0.75303	3.4	0.7	0.4	3.8	1.1	56.0	46.0	52.2	44.9	L
21.00160	2.0	-2.8	4.4	6.4	1.6	60.0	50.0	53.6	48.4	L
29.92520	4.9	-0.3	6.4	11.3	6.1	60.0	50.0	48.7	43.9	L

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (LISN LOSS + 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  
Telephone : +81 596 24 8116  
Facsimile : +81 596 24 8124

Test report No. : 29GE0111-HO-01-A-R1  
Page : 21 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXBC5849501

---

## **20dB Bandwidth**

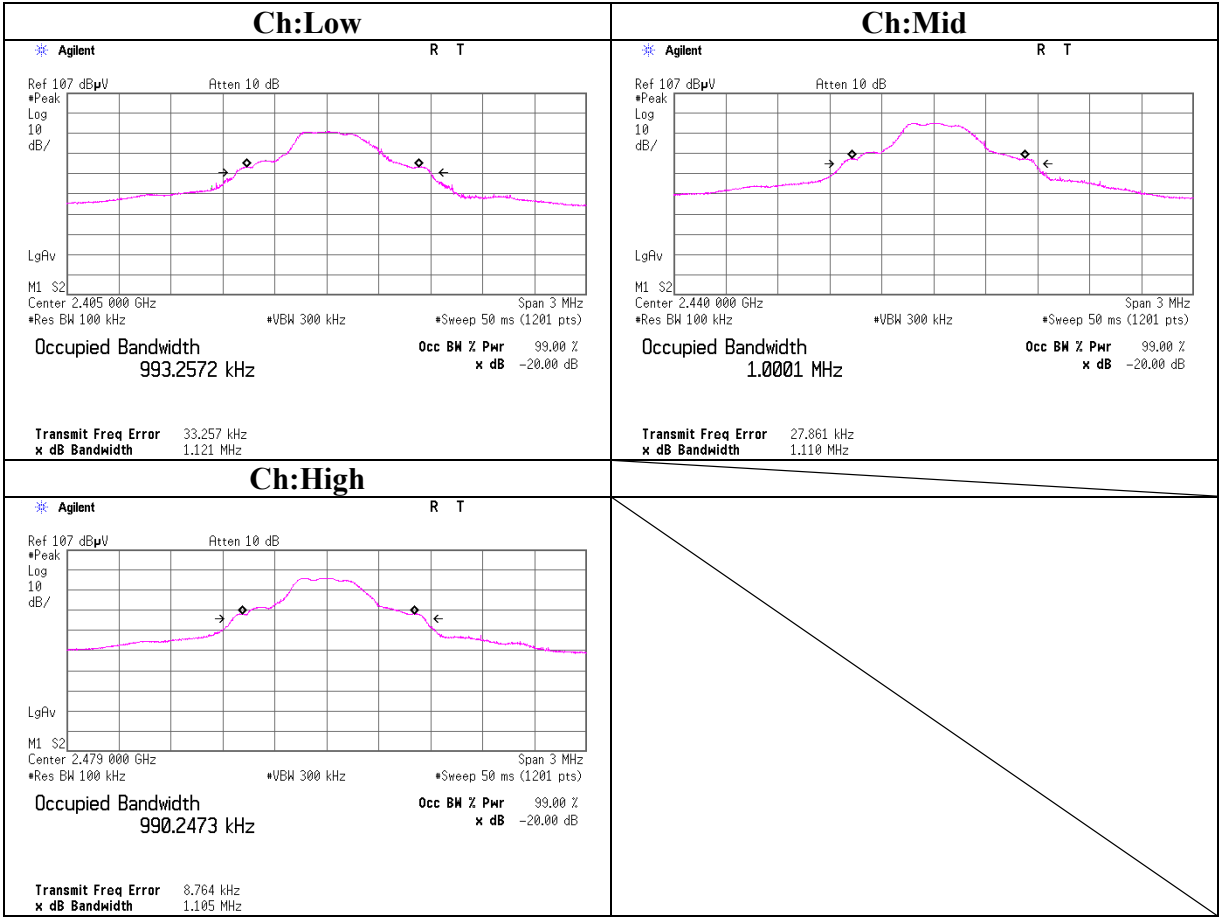
Company	: TANITA Corporation	UL Japan, Inc.
Equipment	: RF module	Head Office EMC Lab. No.4 Anechoic Chamber
Model No.	: BC5849501	Test Report No. : 29GE0111-HO-01
Serial No.	: MP001	Regulation : -
Power	: DC 6.0V (AC120V 60Hz)	Test distance : -
Mode	: Tx L/M/H ch	Date : 05/19/2009
		Temperature : 23deg.C
		Humidity : 51%
		Engineer : Hironobu Ohnishi

Ch	Freq.	20dB Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	2405.0	1.121	-
Mid	2440.0	1.110	-
High	2479.0	1.105	-

---

**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

20dB Bandwidth







**Radiated Spurious Emission (below 1GHz)**  
**Tx, Ch: Mid**

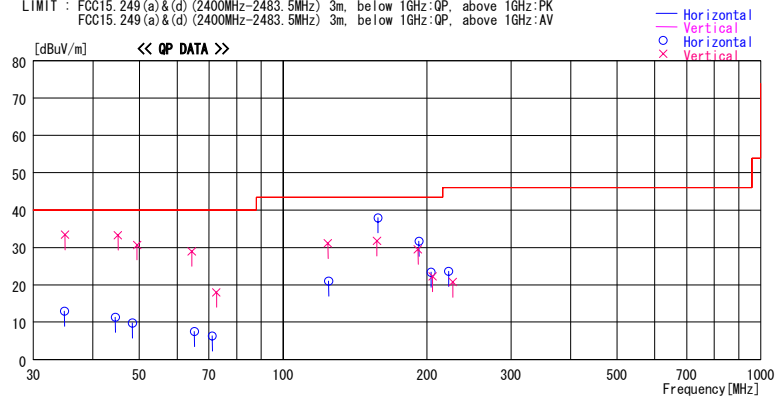
**DATA OF RADIATED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi-Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001  
Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg.C. / 66%  
Engineer : Hisayoshi Sato

Mode / Remarks : Tx Mid ch(2440MHz) Worst axis(Hor:Z-axis Ver:X-axis)

LIMIT : FCC15.249(a)&(d) (2400MHz-2483.5MHz) 3m, below 1GHz:QP, above 1GHz:PK  
FCC15.249(a)&(d) (2400MHz-2483.5MHz) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
34.858	21.4	QP	16.5	-25.0	12.9	359	394	Hori.	40.0	27.1	
34.945	41.8	QP	16.5	-24.9	33.4	353	100	Vert.	40.0	6.6	
44.578	23.5	QP	12.5	-24.7	11.3	202	394	Hori.	40.0	28.7	
45.132	45.7	QP	12.3	-24.7	33.3	353	100	Vert.	40.0	6.7	
48.389	23.2	QP	11.1	-24.5	9.8	0	100	Hori.	40.0	30.2	
49.457	44.4	QP	10.8	-24.5	30.7	124	100	Vert.	40.0	9.3	
64.389	46.1	QP	7.2	-24.3	29.0	132	100	Vert.	40.0	11.0	
65.199	24.7	QP	7.1	-24.3	7.5	355	100	Hori.	40.0	32.5	
71.141	24.1	QP	6.4	-24.2	6.3	147	215	Hori.	40.0	33.7	
72.533	35.9	QP	6.3	-24.2	18.0	190	100	Vert.	40.0	22.0	
124.146	41.8	QP	13.0	-23.7	31.1	1	100	Vert.	43.5	12.4	
124.556	31.5	QP	13.1	-23.6	21.0	147	204	Hori.	43.5	22.5	
157.234	40.1	QP	14.9	-23.2	31.8	238	100	Vert.	43.5	11.7	
158.095	46.1	QP	15.0	-23.2	37.9	342	211	Hori.	43.5	5.6	
191.574	36.2	QP	16.3	-23.0	29.5	238	100	Vert.	43.5	14.0	
192.456	38.2	QP	16.3	-22.8	31.7	354	131	Hori.	43.5	11.8	
204.133	29.6	QP	16.6	-22.8	23.4	352	169	Hori.	43.5	20.1	
205.641	28.3	QP	16.6	-22.7	22.2	193	100	Vert.	43.5	21.3	
222.133	29.2	QP	17.0	-22.6	23.6	352	169	Hori.	46.0	22.4	
226.640	26.1	QP	17.1	-22.5	20.7	280	100	Vert.	46.0	25.3	

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.

Test report No. : 29GE0111-HO-01-A-R1  
Page : 25 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXC5849501

## Radiated Spurious Emission (below 1GHz)

### Tx, Ch: High

## DATA OF RADIATED EMISSION TEST

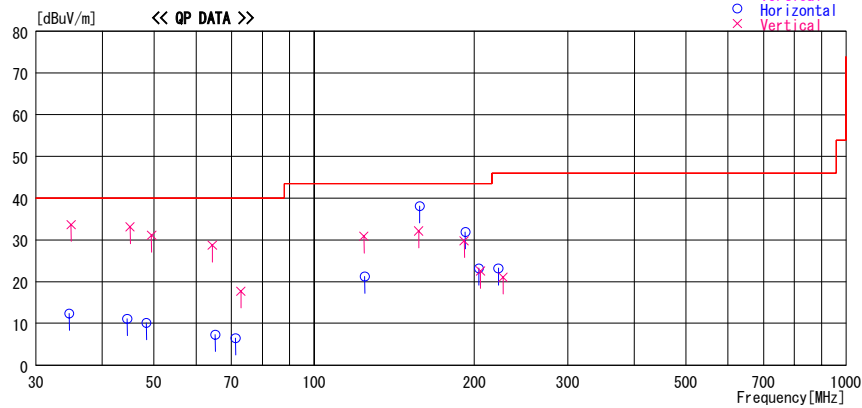
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hisayoshi Sato

Mode / Remarks : Tx High ch(2479MHz) Worst axis(Hor:Z-axis Ver:X-axis)

LIMIT : FCC15.249(a)&(d) (2400MHz~2483.5MHz) 3m. below 1GHz:QP, above 1GHz:PK  
FCC15.249(a)&(d) (2400MHz~2483.5MHz) 3m. below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
34.678	20.9	QP	16.5	-25.0	12.4	359	394	Hori.	40.0	27.6	
34.956	42.1	QP	16.5	-24.9	33.7	353	100	Vert.	40.0	6.3	
44.561	23.3	QP	12.5	-24.7	11.1	202	394	Hori.	40.0	28.9	
45.144	45.5	QP	12.3	-24.7	33.1	353	100	Vert.	40.0	6.9	
48.421	23.5	QP	11.1	-24.5	10.1	0	100	Hori.	40.0	29.9	
49.512	44.8	QP	10.8	-24.5	31.1	124	100	Vert.	40.0	8.9	
64.412	45.8	QP	7.2	-24.3	28.7	132	100	Vert.	40.0	11.3	
65.234	24.5	QP	7.1	-24.3	7.3	355	100	Hori.	40.0	32.7	
71.156	24.3	QP	6.4	-24.2	6.5	147	215	Hori.	40.0	33.5	
72.843	35.6	QP	6.3	-24.2	17.7	190	100	Vert.	40.0	22.3	
124.164	41.6	QP	13.0	-23.7	30.9	1	100	Vert.	43.5	12.6	
124.512	31.8	QP	13.1	-23.6	21.3	147	204	Hori.	43.5	22.2	
157.312	40.4	QP	14.9	-23.2	32.1	238	100	Vert.	43.5	11.4	
158.106	46.3	QP	15.0	-23.2	38.1	342	211	Hori.	43.5	5.4	
191.546	36.5	QP	16.3	-23.0	29.8	238	100	Vert.	43.5	13.7	
192.448	38.4	QP	16.3	-22.8	31.9	354	131	Hori.	43.5	11.6	
204.152	29.4	QP	16.6	-22.8	23.2	352	169	Hori.	43.5	20.3	
205.655	28.6	QP	16.6	-22.7	22.5	193	100	Vert.	43.5	21.0	
222.167	28.8	QP	17.0	-22.6	23.2	352	169	Hori.	46.0	22.8	
226.578	26.5	QP	17.1	-22.5	21.1	280	100	Vert.	46.0	24.9	

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.

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

Test report No. : 29GE0111-HO-01-A-R1  
Page : 26 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXBC5849501

## Radiated Spurious Emission (below 1GHz) Rx, Ch: Mid

### DATA OF RADIATED EMISSION TEST

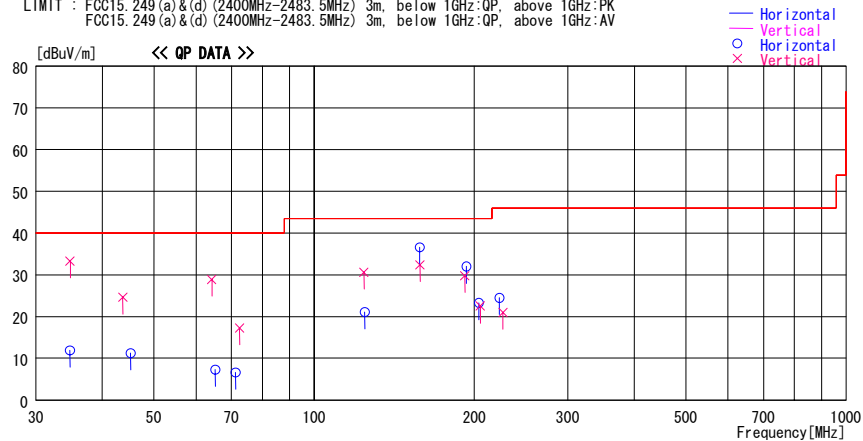
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2009/05/19

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C / 66%  
Engineer : Hisayoshi Sato

Mode / Remarks : Rx Mid ch(2440MHz) Worst axis(Hor:Z-axis Ver:X-axis)

LIMIT : FCC15.249(a)&(d) (2400MHz~2483.5MHz) 3m, below 1GHz:QP, above 1GHz:PK  
FCC15.249(a)&(d) (2400MHz~2483.5MHz) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
34.742	20.4	QP	16.5	-25.0	11.9	359	394	Hori.	40.0	28.1	
45.212	23.7	QP	12.3	-24.7	11.3	202	394	Hori.	40.0	28.8	
34.812	41.8	QP	16.5	-25.0	33.3	353	100	Vert.	40.0	6.7	
43.720	36.5	QP	12.8	-24.7	24.6	353	100	Vert.	40.0	15.4	
64.260	45.9	QP	7.3	-24.3	28.9	132	100	Vert.	40.0	11.1	
65.188	24.5	QP	7.1	-24.3	7.3	355	100	Hori.	40.0	32.7	
71.161	24.4	QP	6.4	-24.2	6.6	147	215	Hori.	40.0	33.4	
72.511	35.2	QP	6.3	-24.2	17.3	190	100	Vert.	40.0	22.7	
124.211	41.3	QP	13.0	-23.7	30.6	1	100	Vert.	43.5	12.9	
124.562	31.6	QP	13.1	-23.6	21.1	147	204	Hori.	43.5	22.4	
158.220	40.6	QP	15.0	-23.2	32.4	238	100	Vert.	43.5	11.1	
158.112	44.8	QP	15.0	-23.2	36.6	342	211	Hori.	43.5	6.9	
192.133	36.4	QP	16.3	-22.9	29.8	238	100	Vert.	43.5	13.7	
193.441	38.5	QP	16.3	-22.8	32.0	354	131	Hori.	43.5	11.5	
204.135	29.5	QP	16.6	-22.8	23.3	352	169	Hori.	43.5	20.2	
205.583	28.6	QP	16.6	-22.7	22.5	193	100	Vert.	43.5	21.0	
222.992	30.1	QP	17.0	-22.6	24.5	352	169	Hori.	46.0	21.5	
226.533	26.4	QP	17.1	-22.5	21.0	280	100	Vert.	46.0	25.0	

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.

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

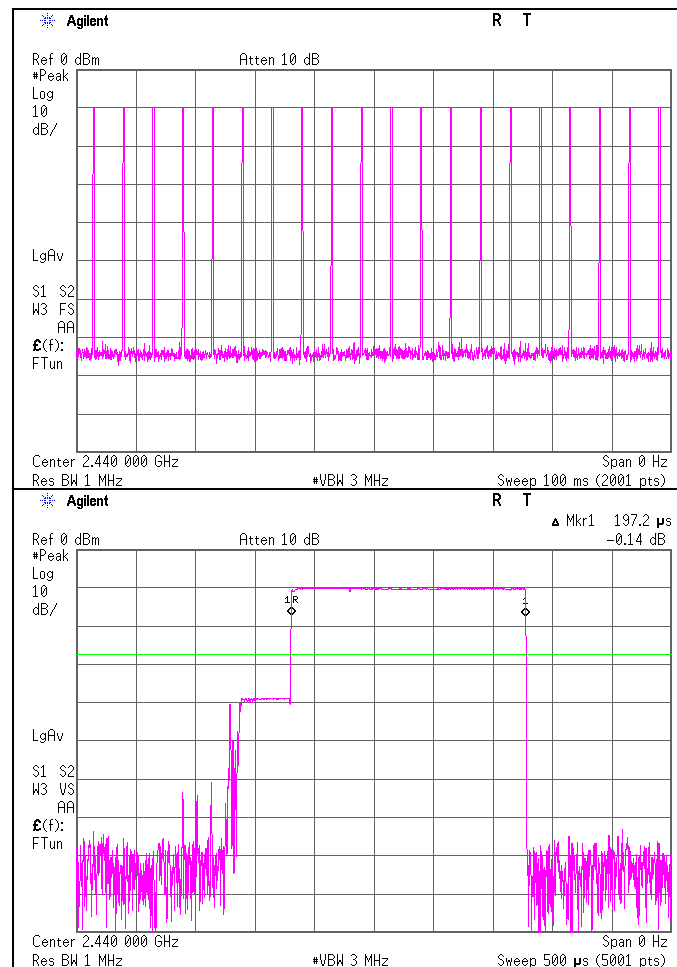
### Transmitting Specification (Duty Cycle)

Pulse width [ms]	Number of pulses (in 100ms)	ON Time(in 100ms) [ms]	Duty	Duty factor [dB]
0.1972	20	3.9440	0.03944	-28.0

\*1)ON time(in 100ms) = Pulse width [ms] \* Number of pulses

\*2)The train of pulses was exceeding 100msec, and that sampled 100msec was the worst case against the pulse train.

\*3)Duty factor =  $20\log_{10}(\text{Duty})$



Test report No. : 29GE0111-HO-01-A-R1  
Page : 28 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXBC5849501

## Electric Field Strength of Fundamental and Spurious Emission (above 1GHz)

### Tx, Ch: Low

UL Japan, Inc.  
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company : TANITA Corporation  
Equipment : RF module  
Model : BC5849501  
Sample No. : MP001  
Power : DC 6.0V(AC 120V / 60Hz)  
Mode : Transmitting 2405MHz  
Remarks : Hor Z-axis , Ver X-axis

REPORT NO : 29GE0111-HO-01  
REGULATION : FCC15.249(a),(d) and (e)/RSS-210 A2.9  
TEST DISTANCE : 3m (below 10GHz), 1m (above 10GHz)  
DATE : 05/18/2009  
TEMPERATURE : 21deg.C  
HUMIDITY : 66%  
ENGINEER : Hironobu Ohnishi

PK DETECT (RBW: 1MHz, VBW: 1MHz)													
No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]		RESULT [dBuV/m]		Limit PK [dBuV/m]	MARGIN [dB]	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2335.0	69.3	69.8	27.1	32.8	2.7	0.0		66.3	66.8	73.9	7.6	7.1
2	2388.1	70.7	70.5	27.2	32.7	2.8	0.0		68.0	67.8	73.9	5.9	6.1
3	2390.0	62.2	61.8	27.2	32.7	2.8	0.0		59.5	59.1	73.9	14.4	14.8
4	2400.0	71.1	68.1	27.2	32.7	2.8	0.0		68.4	65.4	73.9	5.5	8.5
5 **	2405.0	101.9	98.4	27.2	32.7	2.8	0.0		99.2	95.7	113.9	14.7	18.2
6	4810.0	51.5	52.0	31.5	31.9	4.1	1.2		56.4	56.9	73.9	17.5	17.0
7	7215.0	54.0	49.0	36.0	32.6	4.6	1.0		63.0	58.0	73.9	10.9	15.9
8	9620.0	44.5	45.2	38.3	33.4	5.5	1.2		56.1	56.8	73.9	17.8	17.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
9	12025.0	NS	NS	-	-	-	-		-	-	73.9	-	-
10	14430.0	NS	NS	-	-	-	-		-	-	73.9	-	-
11	16835.0	NS	NS	-	-	-	-		-	-	73.9	-	-
12	19240.0	NS	NS	-	-	-	-		-	-	73.9	-	-
13	21645.0	NS	NS	-	-	-	-		-	-	73.9	-	-
14	24050.0	44.6	45.1	38.6	32.5	8.4	0.0		49.6	50.1	73.9	24.3	23.8

PK DETECT with Duty factor (RBW: 1MHz, VBW: 1MHz)													
No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	Duty Factor	RESULT		Limit AV	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Duty Factor													
1	2335.0	69.3	69.8	27.1	32.8	2.7	0.0	-28.0	38.3	38.8	53.9	15.6	15.1
2	2388.1	70.7	70.5	27.2	32.7	2.8	0.0	-28.0	40.0	39.8	53.9	13.9	14.1
3	2390.0	62.2	61.8	27.2	32.7	2.8	0.0	-28.0	31.5	31.1	53.9	22.4	22.8
4	2400.0	71.1	68.1	27.2	32.7	2.8	0.0	-28.0	40.4	37.4	53.9	13.5	16.5
5 **	2405.0	101.9	98.4	27.2	32.7	2.8	0.0	-28.0	71.2	67.7	93.9	22.7	26.2
6	4810.0	51.5	52.0	31.5	31.9	4.1	1.2	-28.0	28.4	28.9	53.9	25.5	25.0
7	7215.0	54.0	49.0	36.0	32.6	4.6	1.0	-28.0	35.0	30.0	53.9	18.9	23.9
8	9620.0	44.5	45.2	38.3	33.4	5.5	1.2	-28.0	28.1	28.8	53.9	25.8	25.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Duty Factor													
9	12025.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
10	14430.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
11	16835.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
12	19240.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
13	21645.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
14	24050.0	44.6	45.1	38.6	32.5	8.4	0.0	-28.0	21.6	22.1	53.9	32.3	31.8

Test Distance 1.0m : Distance Factor(Dfac) =  $20\log(3/1.0) = 9.5\text{dB}$   
\* The test result is round off to one or two decimal places, so some differences might be observed.  
\* Hi-Pass Fiter was not used for factor 0.0dB of the above table.  
\* NS: No signal detect  
\*\* Carier

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

Test report No. : 29GE0111-HO-01-A-R1  
Page : 29 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXBC5849501

## Electric Field Strength of Fundamental and Spurious Emission (above 1GHz) Tx, Ch: Mid

UL Japan, Inc.  
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company : TANITA Corporation  
Equipment : RF module  
Model : BC5849501  
Sample No. : MP001  
Power : DC 6.0V(AC 120V / 60Hz)  
Mode : Transmitting 2440MHz  
Remarks : Hor Z-axis , Ver X-axis

REPORT NO : 29GE0111-HO-01  
REGULATION : FCC15.249(a), (d), and (e)/RSS-210 A2.9  
TEST DISTANCE : 3m (below 10GHz), 1m (above 10GHz)  
DATE : 05/18/2009  
TEMPERATURE : 21deg.C  
HUMIDITY : 66%  
ENGINEER : Hironobu Ohnishi

PK DETECT (RBW: 1MHz, VBW: 1MHz)														
No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter		RESULT		Limit PK	MARGIN		
		HOR	VER						HOR	VER		HOR	VER	
	[MHz]			[dBm]	[dB]	[dB]	[dB]			[dBuV/m]	[dBuV/m]		[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss														
1	2335.2	69.7	68.8	27.1	32.8	2.7	0.0			66.7	65.8	73.9	7.2	8.1
2	2388.4	70.8	69.6	27.2	32.7	2.8	0.0			68.1	66.9	73.9	5.8	7.0
3 **	2440.0	101.3	99.2	27.2	32.7	2.8	0.0			98.6	96.5	113.9	15.3	17.4
4	2792.0	45.2	44.8	28.1	32.6	3	0.0			43.7	43.3	73.9	30.2	30.6
5	4880.0	50.9	50.6	31.7	31.9	4.2	1.1			56.0	55.7	73.9	17.9	18.2
6	7320.0	52.0	54.9	36.1	32.6	4.6	1.0			61.1	64.0	73.9	12.8	9.9
7	9760.0	NS	NS	-	-	-	-			-	-	73.9	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac														
8	12200.0	41.7	45.3	39.1	33.5	6.6	1.5			45.9	49.5	73.9	28.0	24.4
9	14640.0	NS	NS	-	-	-	-			-	-	73.9	-	-
10	17080.0	NS	NS	-	-	-	-			-	-	73.9	-	-
11	19520.0	NS	NS	-	-	-	-			-	-	73.9	-	-
12	21960.0	NS	NS	-	-	-	-			-	-	73.9	-	-
13	24400.0	45.6	45.1	38.9	32.3	8.4	0.0			51.1	50.6	73.9	22.8	23.3

PK DETECT with Duty factor (RBW: 1MHz, VBW: 1MHz)													
No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	Duty Factor	RESULT		Limit AV	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Duty Factor													
1	2335.2	69.7	68.8	27.1	32.8	2.7	0.0	-28.0	38.7	37.8	53.9	15.2	16.1
2	2388.4	70.8	69.6	27.2	32.7	2.8	0.0	-28.0	40.1	38.9	53.9	13.8	15.0
3 **	2440.0	101.3	99.2	27.2	32.7	2.8	0.0	-28.0	70.6	68.5	93.9	23.3	25.4
4	2792.0	45.2	44.8	28.1	32.6	3.0	0.0	-28.0	15.7	15.3	53.9	38.2	38.6
5	4880.0	50.9	50.6	31.7	31.9	4.2	1.1	-28.0	28.0	27.7	53.9	25.9	26.2
6	7320.0	52.0	54.9	36.1	32.6	4.6	1.0	-28.0	33.1	36.0	53.9	20.8	17.9
7	9760.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Duty Factor													
8	12200.0	41.7	45.3	39.1	33.5	6.6	1.5	-28.0	17.9	21.5	53.9	36.0	32.4
9	14640.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
10	17080.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
11	19520.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
12	21960.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
13	24400.0	45.6	45.1	38.9	32.3	8.4	0.0	-28.0	23.1	22.6	53.9	30.8	31.3

Test Distance 1.0m : Distance Factor(Dfac) =  $20\log(3/1.0) = 9.5\text{dB}$   
\* The test result is round off to one or two decimal places, so some differences might be observed.  
\* Hi-Pass Fiter was not used for factor 0.0dB of the above table.  
\* NS: No signal detect  
\*\* Carier

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

Test report No. : 29GE0111-HO-01-A-R1  
Page : 30 of 34  
Issued date : May 28, 2009  
Revised date : June 15, 2009  
FCC ID : XBXC5849501

## Electric Field Strength of Fundamental and Spurious Emission (above 1GHz) Tx, Ch: High

UL Japan, Inc.  
Head Office EMC Lab. No.4 Semi Anechoic Chamber

Company : TANITA Corporation  
Equipment : RF module  
Model : BC5849501  
Sample No. : MP001  
Power : DC 6.0V(AC 120V / 60Hz)  
Mode : Transmitting 2479MHz  
Remarks : Hor Z-axis , Ver X-axis

REPORT NO : 29GE0111-HO-01  
REGULATION : FCC15.249(a), (d), and (e)/RSS-210 A2.9  
TEST DISTANCE : 3m (below 10GHz), 1m (above 10GHz)  
DATE : 05/18/2009  
TEMPERATURE : 21deg.C  
HUMIDITY : 66%  
ENGINEER : Hironobu Ohnishi

PK DETECT (RBW: 1MHz, VBW: 1MHz)													
No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter		RESULT		Limit PK	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]		[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2445.9	72.0	68.9	27.2	32.7	2.8	0.0		69.3	66.2	73.9	4.6	7.7
2 **	2479.0	101.4	96.6	27.3	32.7	2.8	0.0		98.8	94.0	113.9	15.1	19.9
3	2483.5	71.6	66.7	27.3	32.7	2.8	0.0		69.0	64.1	73.9	4.9	9.8
4	2569.9	68.2	60.7	27.5	32.6	2.9	0.0		66.0	58.5	73.9	7.9	15.4
5	4958.0	50.3	47.8	31.8	31.9	4.2	1.1		55.5	53.0	73.9	18.4	20.9
6	7437.0	51.3	58.9	36.3	32.7	4.7	1.0		60.6	68.2	73.9	13.3	5.7
7	9916.0	42.1	52.0	38.6	33.5	5.6	1.4		54.2	64.1	73.9	19.7	9.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
8	12395.0	41.4	43.5	39.1	33.5	6.7	1.6		45.8	47.9	73.9	28.1	26.0
9	14874.0	NS	NS	-	-	-	-		-	-	73.9	-	-
10	17353.0	NS	NS	-	-	-	-		-	-	73.9	-	-
11	19832.0	NS	NS	-	-	-	-		-	-	73.9	-	-
12	22311.0	NS	NS	-	-	-	-		-	-	73.9	-	-
13	24790.0	45.6	45.4	39.2	32.2	8.5	0.0		51.6	51.4	73.9	22.3	22.5

PK DETECT with Duty factor (RBW: 1MHz, VBW: 1MHz)													
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Duty Factor [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
		[dBuV]							[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Duty Factor													
1	2445.9	72.0	68.9	27.2	32.7	2.8	0.0	-28.0	41.3	38.2	53.9	12.6	15.7
2 **	2479.0	101.4	96.6	27.3	32.7	2.8	0.0	-28.0	70.8	66.0	93.9	23.1	27.9
3	2483.5	71.6	66.7	27.3	32.7	2.8	0.0	-28.0	41.0	36.1	53.9	12.9	17.8
4	2569.9	68.2	60.7	27.5	32.6	2.9	0.0	-28.0	38.0	30.5	53.9	15.9	23.4
5	4958.0	50.3	47.8	31.8	31.9	4.2	1.1	-28.0	27.5	25.0	53.9	26.4	28.9
6	7437.0	51.3	58.9	36.3	32.7	4.7	1.0	-28.0	32.6	40.2	53.9	21.3	13.7
7	9916.0	42.1	52.0	38.6	33.5	5.6	1.4	-28.0	26.2	36.1	53.9	27.7	17.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Duty Factor													
8	12395.0	41.4	43.5	39.1	33.5	6.7	1.6	-28.0	17.8	19.9	53.9	36.1	34.0
9	14874.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
10	17353.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
11	19832.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
12	22311.0	NS	NS	-	-	-	-	-28.0	-	-	53.9	-	-
13	24790.0	45.6	45.4	39.2	32.2	8.5	0.0	-28.0	23.6	23.4	53.9	30.3	30.5

Test Distance 1.0m : Distance Factor(Dfac) =  $20\log(3/1.0) = 9.5\text{dB}$   
\* The test result is round off to one or two decimal places, so some differences might be observed.  
\* Hi-Pass Fiter was not used for factor 0.0dB of the above table.  
\* NS: No signal detect  
\*\* Carier

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

**Radiated Spurious Emission (above 1GHz)**  
**Rx, Ch: Mid**

**DATA OF RADIATED EMISSION TEST**

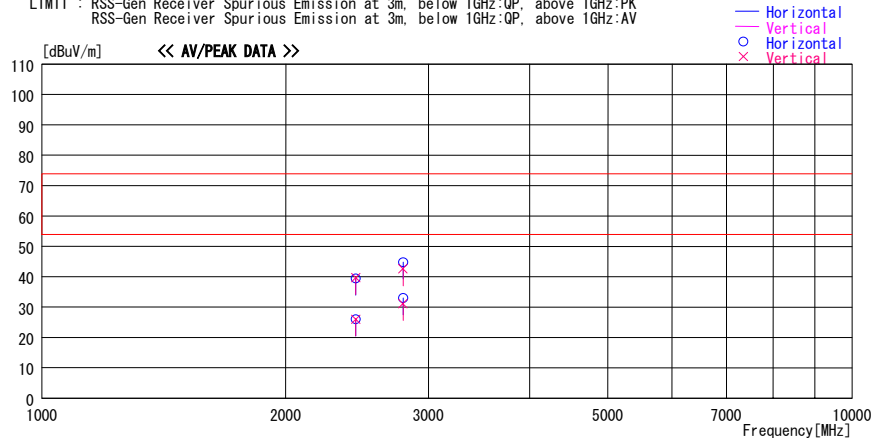
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber  
Date : 2009/05/18

Company : TANITA Corporation  
Kind of EUT : RF module  
Model No. : BC5849501  
Serial No. : MP001

Report No. : 29GE0111-HO-01  
Power : DC 6.0V (AC120V 60Hz)  
Temp./Humi. : 21deg. C. / 66%  
Engineer : Hironobu Ohnishi

Mode / Remarks : Rx Mch(2440MHz) Worst axis(Hor:Z-axis Ver:X-axis)

LIMIT : RSS-Gen Receiver Spurious Emission at 3m, below 1GHz:QP, above 1GHz:PK  
RSS-Gen Receiver Spurious Emission at 3m, below 1GHz:QP, above 1GHz:AV



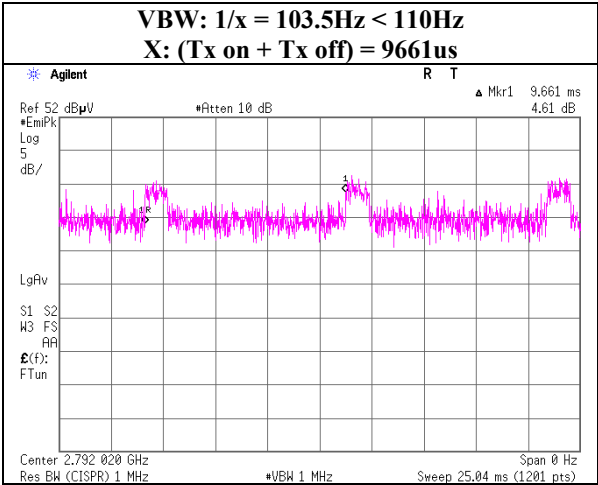
Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
			Factor	Gain							
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
2440.000	42.2	PK	27.2	-29.9	39.5	0	100	Hori.	73.9	34.4	NS
2440.000	42.4	PK	27.2	-29.9	39.7	0	100	Vert.	73.9	34.2	NS
2440.000	28.7	AV	27.2	-29.9	26.0	0	100	Hori.	53.9	27.9	NS VBW=10Hz
2440.000	28.7	AV	27.2	-29.9	26.0	0	100	Vert.	53.9	27.9	NS VBW=10Hz
2792.020	46.3	PK	28.1	-29.6	44.8	103	100	Hori.	73.9	29.1	
2792.020	44.1	PK	28.1	-29.6	42.6	118	100	Vert.	73.9	31.3	
2792.020	34.5	AV	28.1	-29.6	33.0	103	100	Hori.	53.9	20.9	VBW=110Hz
2792.020	32.6	AV	28.1	-29.6	31.1	118	100	Vert.	53.9	22.8	VBW=110Hz

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)

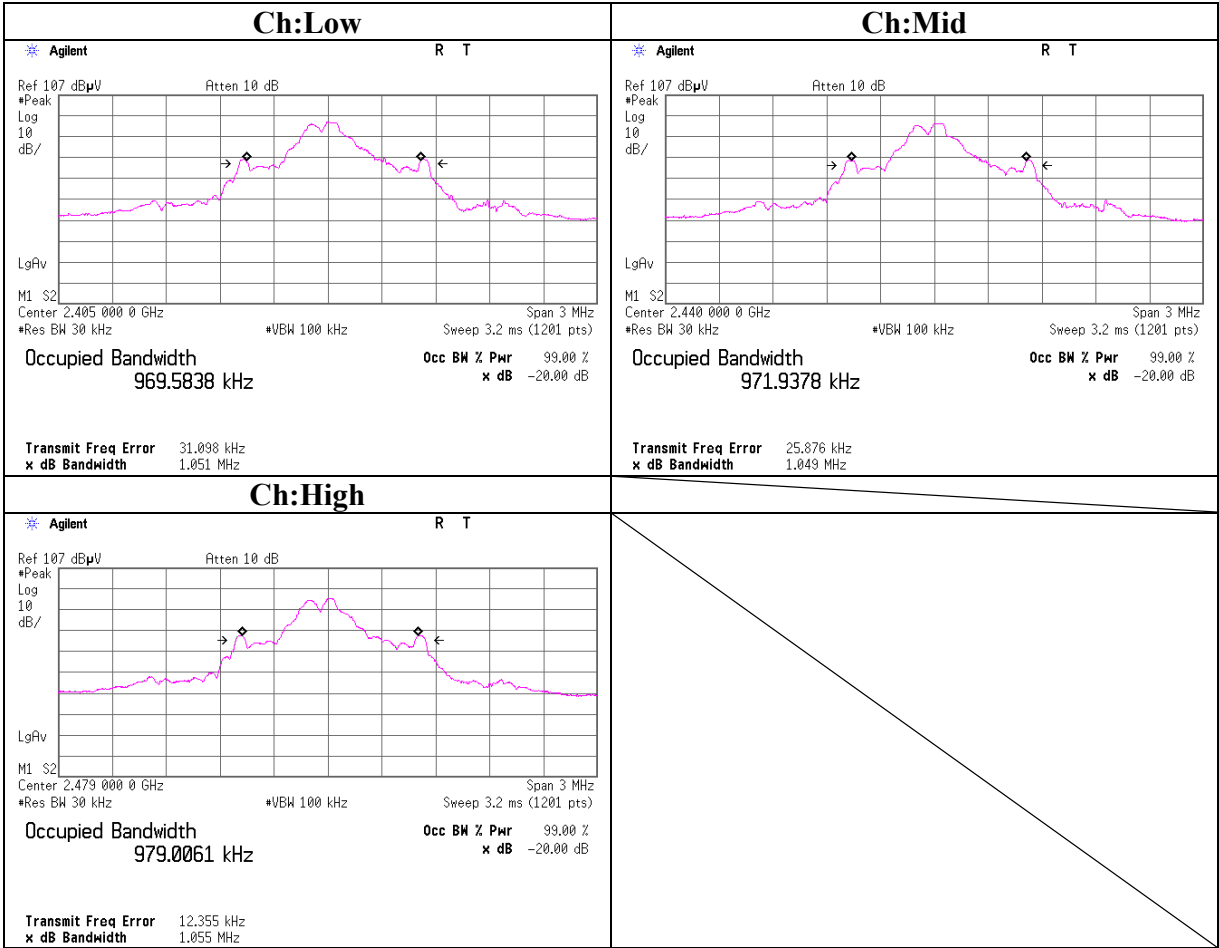
\*The test result is rounded off to one or two decimal places, so some differences might be observed.



VBW(AV) Calculation



99%Occupied Bandwidth



### **APPENDIX 3:Test instruments**

#### **EMI test equipment**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-04	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2009/02/03 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2009/02/06 * 12
MJM-07	Measure	PROMART	SEN1955	-	RE/CE	-
CUST-MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	RE	2008/08/11 * 12
MCC-57	Microwave Cable 1G-26.5GHz 6m	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2008/11/05 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	MY39500780	RE	2009/03/19 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170307	RE	2009/04/30 * 12
MHF-20	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCC	607	RE	2008/12/12 * 12
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2008/12/17 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2008/08/18 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE	2009/02/18 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	-	-	CE	2008/07/03 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	RE/CE	2008/06/25 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	RE/CE	2008/10/03 * 12
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	1302	RE	2009/01/10 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	N/A	RE	2009/01/10 * 12
MCC-50	Coaxial cable	UL Japan	-	-	RE	2009/03/18 * 12
MAT-31	Attenuator(6dB)	TME	UFA-01	-	RE	2009/03/03 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	260833	RE	2009/03/18 * 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.

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

**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