APPENDIX 2: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MPA-04	Pre Amplifier	Agilent	8447D	RE	2005/05/24 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE	2005/11/14 * 12
MLPA-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	RE	2005/12/06 * 12
MOS-01	Digital Humidity Indicator	N.T	NT-1800	RE	2004/11/25 * 24
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	RE	2005/12/18 * 12
MCC-31	coaxial cable	ULApex	-	RE	2005/06/02 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/TSJ	-	RE	2006/02/20 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE	2005/11/10 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2005/12/16 * 12
MSTW-14	EMI Measurement Software	TSJ	TEPTO-DV	RE	-

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

Test Item:
RE: Radiated emission

APPENDIX 3: Data of EMI test

Radiated Emission below 30MHz (Fundamental)

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DATA OF MAGNETIC RADIATED EMISSION TEST

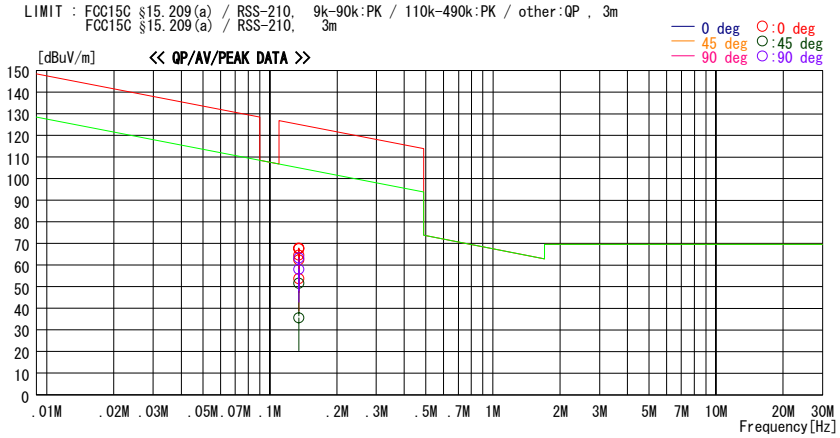
UL Apex Co.,LTD. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/09 11:16:32

Company : Kubota corporation
Kind of EUT : Immobilizer for Construction machine
Model No. : RC441-9315
Serial No. : 1

Report No. : 26HE0264-HO
Power : DC 12.0V
Temp./ Humi. : 21deg.C / 32%
Operator : Norihisa Hashimoto

Mode / Remarks : Transmitting / Max-axis(X)

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



Freq. [MHz]	Reading [dBuV]	DET	Ant.Fac [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Antenna	Comment
0.13453	74.5	PEAK	19.5	0.2	26.3	67.9	125.0	57.1	0deg	X-Axis
0.13453	74.2	PEAK	19.5	0.2	26.3	67.6	125.0	57.4	0deg	Y-Axis
0.13453	60.4	PEAK	19.5	0.2	26.3	53.8	125.0	71.2	0deg	Z-Axis
0.13453	69.1	AV	19.5	0.2	26.3	62.5	105.0	42.5	0deg	X-Axis
0.13453	71.3	QP	19.5	0.2	26.3	64.7	105.0	40.3	0deg	X-Axis
0.13461	42.3	AV	19.5	0.2	26.3	35.7	105.0	69.3	45deg	X-Axis
0.13461	64.6	AV	19.5	0.2	26.3	58.0	105.0	47.0	90deg	X-Axis
0.13461	58.3	PEAK	19.5	0.2	26.3	51.7	125.0	73.3	45deg	X-Axis
0.13461	70.0	PEAK	19.5	0.2	26.3	63.4	125.0	61.6	90deg	X-Axis

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

Radiated Emission below 30MHz (Sprious Emission)

DATA OF MAGNETIC RADIATED EMISSION TEST

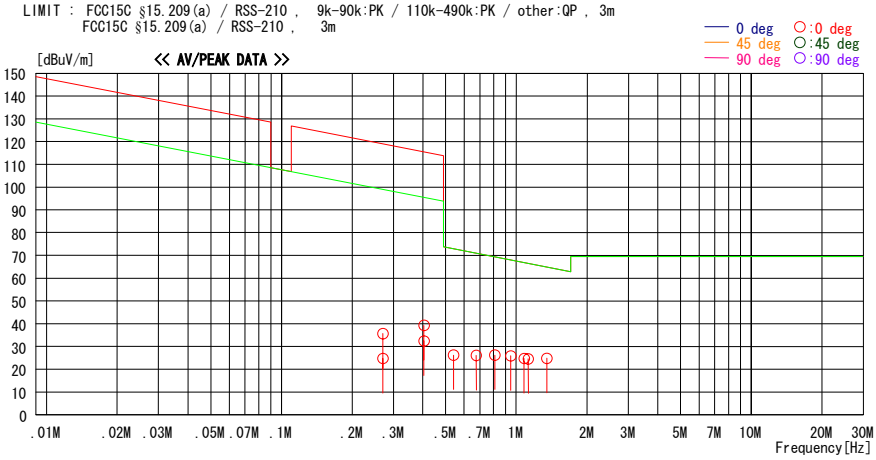
UL Apex Co.,LTD. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/09 11:16:32

Company : Kubota corporation
Kind of EUT : Immobilizer for Construction machine
Model No. : RC441-9315
Serial No. : 1

Report No. : 26HE0264-HO
Power : DC 12.0V
Temp./ Humi. : 21deg.C / 32%
Operator : Norihisa Hashimoto

Mode / Remarks : Transmitting / Max-axis(X)

LIMIT : FCC15C §15.209(a) / RSS-210 , 9k-90k:PK / 110k-490k:PK / other:QP , 3m
FCC15C §15.209(a) / RSS-210 , 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]
0.27000	43.1	PEAK	19.5	0.4	27.4	35.6	119.0	83.4	0deg	181
0.27000	32.2	AV	19.5	0.4	27.4	24.7	99.0	74.3	0deg	181
0.40397	40.3	AV	19.5	0.4	27.7	32.5	95.5	63.0	0deg	187
0.40397	47.1	PEAK	19.5	0.4	27.7	39.3	115.5	76.2	0deg	187
0.54000	34.2	QP	19.5	0.4	27.8	26.3	73.0	46.7	0deg	178
0.67500	34.1	QP	19.5	0.4	27.9	26.1	71.0	44.9	0deg	182
0.81000	34.2	QP	19.5	0.5	27.9	26.3	69.4	43.1	0deg	177
0.94500	33.9	QP	19.5	0.4	27.9	25.9	68.1	42.2	0deg	176
1.08000	32.7	QP	19.5	0.4	27.9	24.7	66.9	42.2	0deg	182
1.12500	32.6	QP	19.5	0.4	27.9	24.6	66.6	42.0	0deg	194
1.35000	32.6	QP	19.6	0.5	27.9	24.8	65.0	40.2	0deg	180

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

Radiated Emission above 30MHz (Sprious Emission)

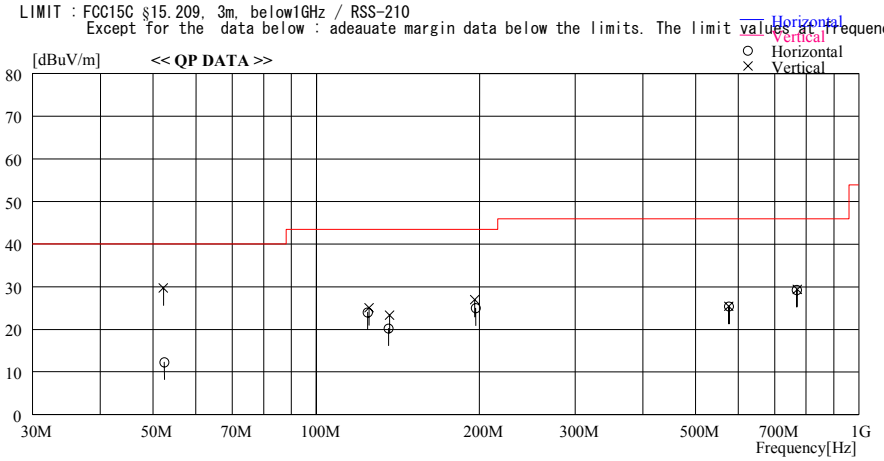
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2006/04/09 14:56:28

Company	: Kubota corporation	Report No.	: 26HE0264-HO
Kind of EUT	: Immobilizer for Construction machine	Power	: DC12V
Model No.	: RC441-9315	Temp./Humi.	: 20deg.C. / 32%
Serial No.	: 1	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting / Max-axis(X)

LIMIT : FCC15C §15.209, 3m, below1GHz / RSS-210
Except for the data below : adeauate margin data below the limits. The limit values at frequencies ex



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
52.290	39.7	QP	10.1	-20.1	29.7	310	100	Vert.	40.0	10.3
52.508	22.3	QP	10.1	-20.1	12.3	152	232	Hori.	40.0	27.7
125.206	30.4	QP	13.5	-18.8	25.1	69	100	Vert.	43.5	18.4
124.352	29.3	QP	13.5	-18.8	24.0	353	279	Hori.	43.5	19.5
136.086	24.3	QP	14.4	-18.5	20.2	6	259	Hori.	43.5	23.3
136.501	27.4	QP	14.4	-18.5	23.3	338	100	Vert.	43.5	20.2
195.965	27.7	QP	17.0	-17.7	27.0	250	100	Vert.	43.5	16.5
196.832	25.7	QP	17.0	-17.7	25.0	338	108	Hori.	43.5	18.5
576.353	22.7	QP	18.8	-16.1	25.4	356	100	Hori.	46.0	20.6
576.353	22.7	QP	18.8	-16.1	25.4	276	102	Vert.	46.0	20.6
768.541	23.0	QP	21.3	-15.0	29.3	306	112	Hori.	46.0	16.7
769.944	23.0	QP	21.3	-14.9	29.4	7	100	Vert.	46.0	16.6

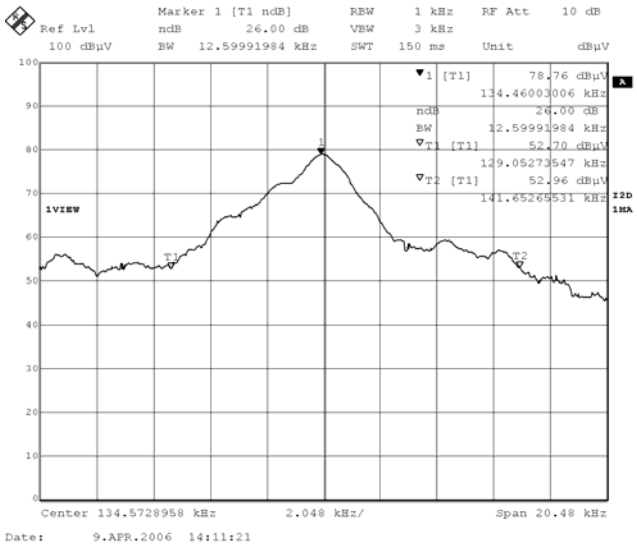
CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

-26dB Bandwidth

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

COMPANY	:	Kubota corporation	REPORT NO	:	26HE0264-HO
EQUIPMENT	:	Immobilizer for Construction machine	REGULATION	:	Reference data
MODEL	:	RC441-9315	TEST DISTANCE	:	3m
S/ N	:	1	DATE	:	04/09/2006
POWER	:	DC 12.0V	TEMPERATURE	:	21 deg.C
MODE	:	Transmitting	HUMIDITY	:	32 %
			Engineer	:	Norihisa Hashimoto

FREQ [kHz]	-26dB Bandwidth [kHz]
134.5	12.599

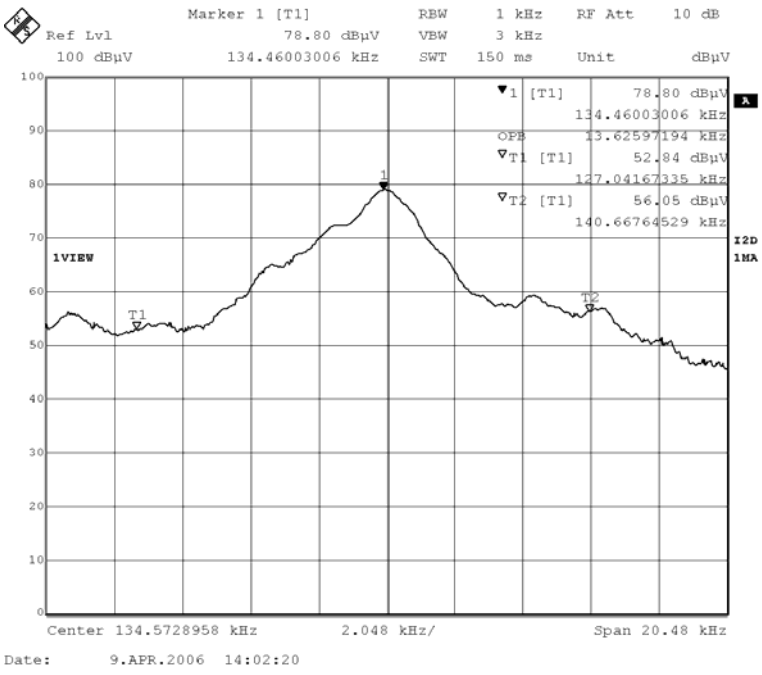


99% Occupied Bandwidth

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

COMPANY	: Kubota corporation	REPORT NO	: 26HE0264-HO
EQUIPMENT	: Immobilizer for Construction machine	REGULATION	: RSS-Gen 4.4.1
MODEL	: RC441-9315	TEST DISTANCE	: 3m
S/N	: 1	DATE	: 04/09/2006
POWER	: DC 12.0V	TEMPERATURE	: 21 deg.C.
Mode	: Transmitting	HUMIDITY	: 32 %
		ENGINEER	: Norihisa Hashimoto

99% Occupied Bandwidth (RSS-Gen)



* 99% Occupied Bandwidth : 13.626kHz