TEST REPORT

Regulation : FCC Part15B – Scanning Receiver
Industry Canada RSS-215 Issue 1

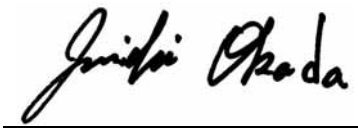
: FCC Part15B Class B
CANADA ICES-003 Class B

Applicant	Testing Laboratory
Vertex Standard Co., Ltd. 4-8-8 Nakameguro Meguro-ku, Tokyo 153-8644 Japan Tel : +81 3 5725 6111 Fax : +81 3 5725 6225	ETL SEMKO Japan K.K. Kashima Site 3-2 Sunayama, Kamisu, Ibaraki 314-0255 Japan Tel.: +81 479 40 1097 Fax.: +81 479 46 1788 URL: http://www.japan.intertek-etlsemko.com

Equipment Type	HF Transceiver
Category	Scanning Receiver & Peripherals
Trademark	YAESU
Model (s)	FT-950
Serial No.	7I000001
FCC ID	K6620311X50
IC	511B-20311X50
Test Result	Complied
Report Number	ESJ-107155
Report Issue Date	August 06, 2007

This equipment has been shown to be capable of compliance with the applicable standard(s) as indicated in the test report.
I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Approved by



Junichi Okada
[Site Manager]

Tested by

Kazuo Masuda

TABLE OF CONTENTS

SECTION 1. GENERAL INFORMATION

TEST PERFORMED

Location	Kashima No.1 Test Site (FCC Reg. : 934283) (IC File No. : IC 2065A-1)
EUT Received	July 20, 2007
Test Started	July 20, 2007
Test Completed	July 25, 2007
Standard Applied	FCC Part15B – Scanning Receiver Industry Canada RSS-215 Issue 1 FCC Part15B Class B - Peripherals and Canada ICES-003 Class B
Test Setup	ANSI C63.4-2003
Deviation from Standard (s)	No deviation

TEST TRACEABILITY
Traceability to national standards of test result is achieved by means of calibration traceability to national or international standards.

LIMITATIONS ON RESULTS
The test result of this report is effective for equipment under test itself and under the test configuration described on the report.
This test report does not assure that whether the test result taken in other testing laboratory is compatible or reproducible to the test result on this report or not.

ABBREVIATIONS

AE = Associated Equipment
AMN = Artificial Mains Network
AMP = Amplifier, ATT = Attenuator
ANT = Antenna, BBA = Broadband Antenna
AVG = Average
Cal = Calibration
CDN = Coupling Decoupling Network
LCD = Liquid-Crystal Display
SPKR = Speaker
DIP = Dipole Antenna
DoC = Device for Declaration of Conformity
EUT = Equipment Under Test
ISN = Impedance Stabilization Network
LISN = Line Impedance Stabilization Network
PK = Peak
Q-P = Quasi-peak
RX = Receive

SECTION 2. SUMMARY OF TEST RESULTS

This test report clearly shows that the EUT is in compliance with the
FCC Part15B (- Scanning Receiver with Industry Canada RSS-215) and
FCC Part15B Class B (- Peripheral with Canada ICES-003 Class B) specification.

The minimum margins to the limits are as follows:

Conducted Voltages on Mains Port	RX 56MHz mode	3.2 dB	at	0.1500 MHz
Radiated Electric Field	RX 56MHz mode	6.3 dB	at	432.03 MHz
Conducted Power on Antenna Port	RX 0.030MHz mode (ANT1)	22.1 dB	at	719.97 MHz
38dB Rejection Test (15.121(b))	No frequency of response was detected. - Passed -			

Note : See Section 9 for details.

SECTION 3. INFORMATION ABOUT EUT

The equipment under test (EUT) consisted of the following equipment.

3.1 List of System Configuration

Symbol	Item	Model No.	Serial No.	Manufacturer	Notes	FCC ID
A1	HF Transceiver	FT-950	7I000001	Vertex Standard	EUT	K6620311X50
A2	Microphone	MH-31B8	None	Vertex Standard	EUT	N.A.
A3	Data Management Unit	DMU-2000	7D060071	Vertex Standard	Option	N.A.
A4	Remote Control Keypad	FH-2	None	Vertex Standard	Option	N.A.
A5	Headphone	YH-77STA	None	Vertex Standard	Option	N.A.
A6	Speaker	SP-2000	None	Vertex Standard	Option	N.A.
Power Ratings of EUT : DC 13.8V, 22A (FT-950) AC 100 – 240V, 50 - 60Hz, 50VA (DMU-2000)						
Power Supply : AC 120V, 60 Hz (FP-1030A, DMU-2000)						
Condition of Equipment	Prototype					
Type	Tabletop					
Suppression Devices	No Modifications by the laboratory were made to the device					

3.2 Overview of EUT :

Frequency Ranges	0.030 – 56.000 MHz
Receiver Type	Triple Conversion Super-heterodyne
Mode of Operation	A1A, A3E, F3E, J3E

3.3 Intermediate Frequencies :

1st	69.45 MHz (Upper)
2nd	0.450 MHz (Lower)
3rd	24 kHz (FM and AM modes, Lower), 30kHz (Other modes, Lower)

3.4 Oscillator(s) / Crystal (s) :

Oscillator	Operating Frequency	Board Name	Notes
11.1 MHz	11.1 MHz	CNTL Unit	Microprocessor
18.432 MHz	18.432 MHz	DSP Unit	Microprocessor
25.0 MHz	25.0 MHz	DSP Unit	Microprocessor
277.92 – 503.8 MHz	69.48 – 125.95 MHz	LOCAL Unit	LOCAL Oscillator
69.0 MHz	69.0 MHz	LOCAL Unit	LOCAL Oscillator
420 kHz	420 kHz	LOCAL Unit	LOCAL Oscillator
35.4 MHz	35.4 MHz	LOCAL Unit	Reference OSC
133 MHz	667 MHz	EBC365LP6	DMU-2000 (Highest)

3.5 Port(s)/Connector(s) :

HF Transceiver (FT-950)

Port Name	Connector Type	Connector Pin	Notes
MIC	FM214-8SMPT-NI	8pin	
PHONE	6ϕ Stereo	1pin	
KEY	6ϕ Stereo	1pin	Front
ANT1, 2	MR-S (Coaxial)	1pin	
u-TUNE (to)	RCA	1pin	
u-TUNE (from)	RCA	1pin	
ROT	Mini-DIN	6pin	
LINER	Mini-DIN	10pin	
TUNER	Mini-DIN	8pin	
RTTY/PKT	Mini-DIN	6pin	
PTT	RCA	1pin	
REC	RCA	1pin	
REM	3.5ϕ Mono	1pin	
EXT SPKR	3.5ϕ Mono	1pin	
u-TUNE	Mini-DIN	10pin	
DMU	Mini-DIN	8pin	
CAT	D-sub	9pin	
KEY	6ϕ Stereo	1pin	Rear

Data Management Unit (DMU-2000)

Port Name	Connector Type	Connector Pin	Notes
DMU	Mini-DIN	8pin	
COM	D-sub	9pin	
KEYBOARD	Mini-DIN	6pin	
AUDIO OUT	3ϕ Stereo	1pin	
AUDIO IN	3ϕ Stereo	1pin	
USB	USB Type A	4pin	
DISPLAY	D-sub	15pin	
CF Card Slot	PCMCIA	68pin	

3.6 Frequency Range of Measurements

	Measured Frequency Range
Conducted Voltages on Mains Port	0.15 – 30 MHz
Radiated Electric Field	30 – 5000 MHz
Conducted Power on Antenna Port	30 – 5000 MHz
38dB Rejection	0.030 – 56 MHz

SECTION 4. SUPPORT EQUIPMENT(S)

The EUT was supported by the following equipment during the test.

Symbol	Item	Model No.	Serial No.	Manufacturer	FCC ID / DoC	Note
B	Power Supply Unit	FP-1030A	None	Vertex Standard	N.A.	
C	CF Card	AP-CF25611	None	Apacer Technology	DoC	
D	GPS Receiver	Etrex Venture	77697969	Garmin International	DoC	
E	Ext. Keyboard	SK-1000REW	M971229490	Dell Computer	GYUR36SK	
F	Ext. LCD Monitor	E152FPc	CN-0N1546-64180-443-12QH	Dell Computer	DoC	
G	Computer	Dimension2100 MCM	3V5W41S	Dell Computer	DoC	
H	LCD Monitor	E151FPb	CN-04W569-46633-35M-1B4T	Dell Computer	DoC	
I	Keyboard	SK-8110	CN-07N247-38842-35D-C526	Dell Computer	DoC	
J	Mouse	M-SAW34	LZC31257181	Dell Computer	DZL211029	
K	Printer	C6490B	MY35G1R1KT	Hewlett Packard	DoC	
L	AC Adapter	ADP-32BBA	PLT031803	Hewlett Packard	N.A.	
M	ANT Terminator	MP752A	M61773	Anritsu	N.A.	
N	ANT Terminator	MP752A	M65225	Anritsu	N.A.	
Power Supply :						
B, F, G, K, H, L	AC120V, 60Hz					

SECTION 5. USED CABLE (S)

The following cable(s) was used for the test.

No.	Name	Length (m)	Shield	Connector Type	Ferrite Core
1	Microphone cable	0.5 m	Yes	Metal	
2	Keypad cable	1.0 m	Yes	Metal	
3	Headphone cable	1.5 m	Yes	Metal	
4	KEY cable	1.5 m	Yes	Metal	
5	u-TUNE (to) cable	1.5 m	No	Metal	
6	u-TUNE (from) cable	1.5 m	Yes	Metal	
7	ROT cable	1.5 m	Yes	Metal	
8	LINER cable	1.5 m	Yes	Metal	
9	TUNER cable	1.5 m	Yes	Metal	
10	RTTY/PKT cable	1.5 m	Yes	Metal	
11	PTT cable	1.5 m	Yes	Metal	
12	REC cable	1.5 m	Yes	Metal	
13	REM cable	1.5 m	Yes	Metal	
14	EXT SPKR cable	1.0 m	Yes	Metal	
15	KEY cable	1.5 m	Yes	Metal	
16	u-TUNE cable	1.5 m	Yes	Metal	
17	DMU cable	1.5 m	Yes	Metal	
18	CAT cable	1.8 m	Yes	Metal	
19	COM cable (GPS Receiver)	2.0 m	Yes	Metal	
20	Ext. Keyboard cable	2.0 m	Yes	Metal	
21	Ext. LCD Monitor cable	1.8 m	Yes	Metal	
22	USB cable	1.0 m	Yes	Metal	
23	Audio cable (IN)	1.5 m	Yes	Metal	
24	Audio cable (OUT)	1.5 m	Yes	Metal	
25	Centronics cable	1.7 m	Yes	Metal	
26	LCD Monitor cable	1.8 m	Yes	Metal	Fixed ×1
27	Keyboard cable	2.0 m	Yes	Metal	
28	Mouse cable	1.8 m	Yes	Metal	
29	Power cable (DC) for EUT (FT-950)	3.0 m	No	-	
30	Power cable (AC) for PSU (FP-1030A)	1.6 m	No	-	

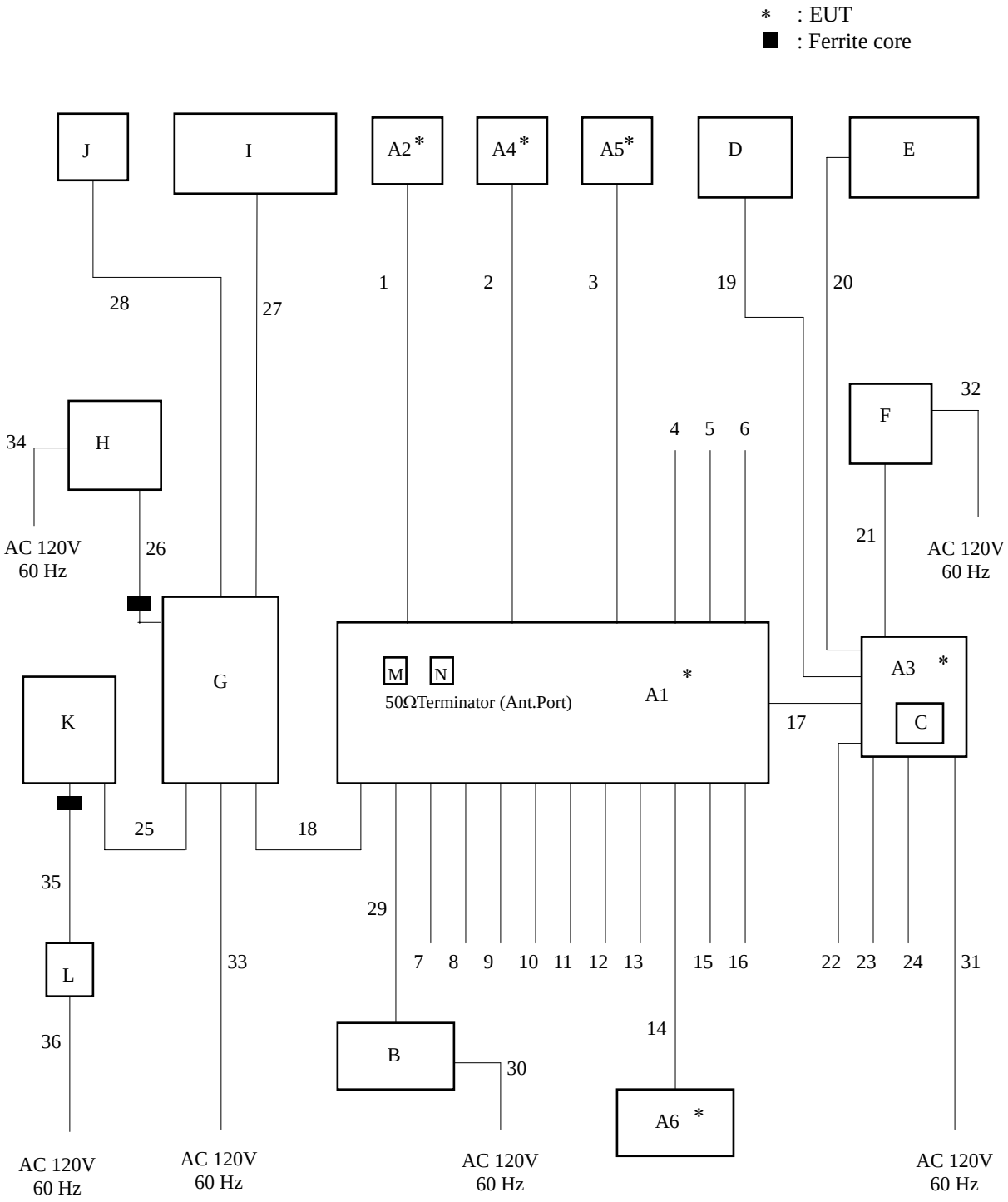
31	Power cable for EUT (DMU-2000)	1.7 m	No	-	
32	Power cable for Ext. LCD Monitor	1.8 m	No	-	
33	Power cable for Computer	1.9 m	No	-	
34	Power cable for LCD Monitor	1.8 m	No	-	
35	Power cable for Printer (DC)	1.7 m	No	-	Fixed ×1
36	Power cable for Printer (AC)	2.0 m	No	-	

Note :

SECTION 6. CONSTRUCTION OF EQUIPMENT

6.1 Conducted Voltages on Mains Port
Radiated Electric Field

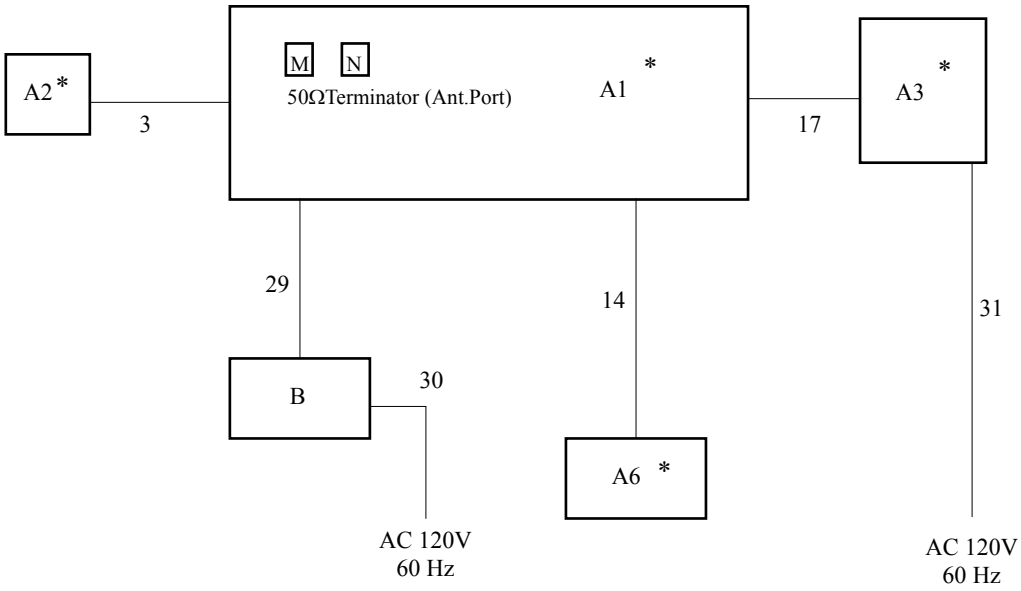
System configuration



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

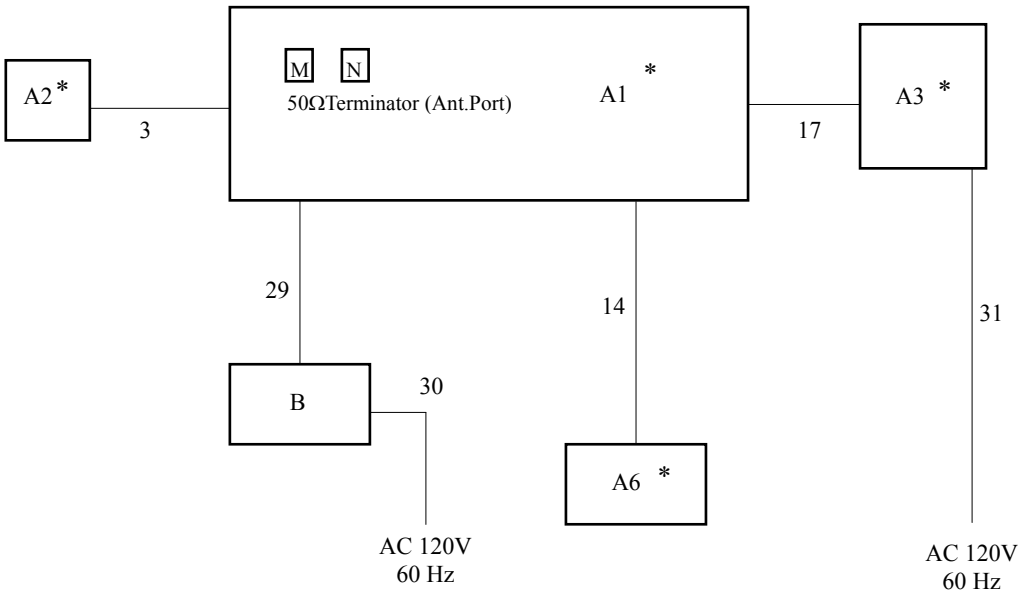
6.2 Conducted Power on Antenna Port

* : EUT



6.3 38dB Rejection

* : EUT



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

SECTION 7. OPERATING CONDITION

The EUT was operated under the following conditions during the test.

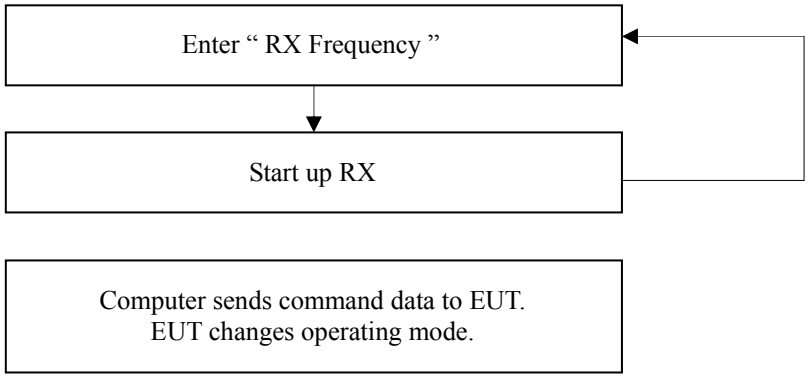
7.1 Operating Condition

The test was carried out under RX mode and VFO Scan mode.
EUT was examined in the operating conditions that had maximum emissions.

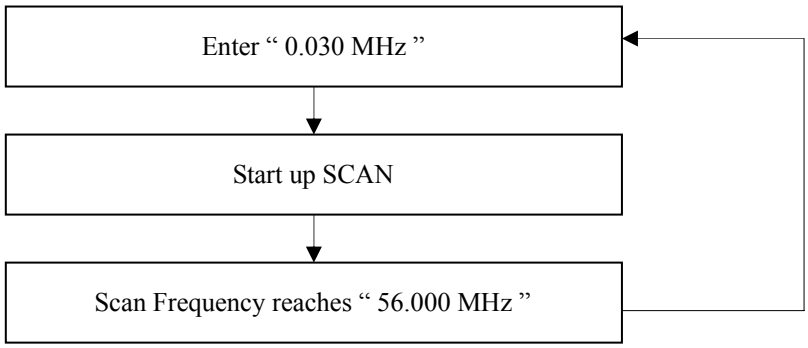
7.2 Operating Flow [RX mode and VFO Scan mode]

Following operations were performed continuously.

7.2.1 RX mode



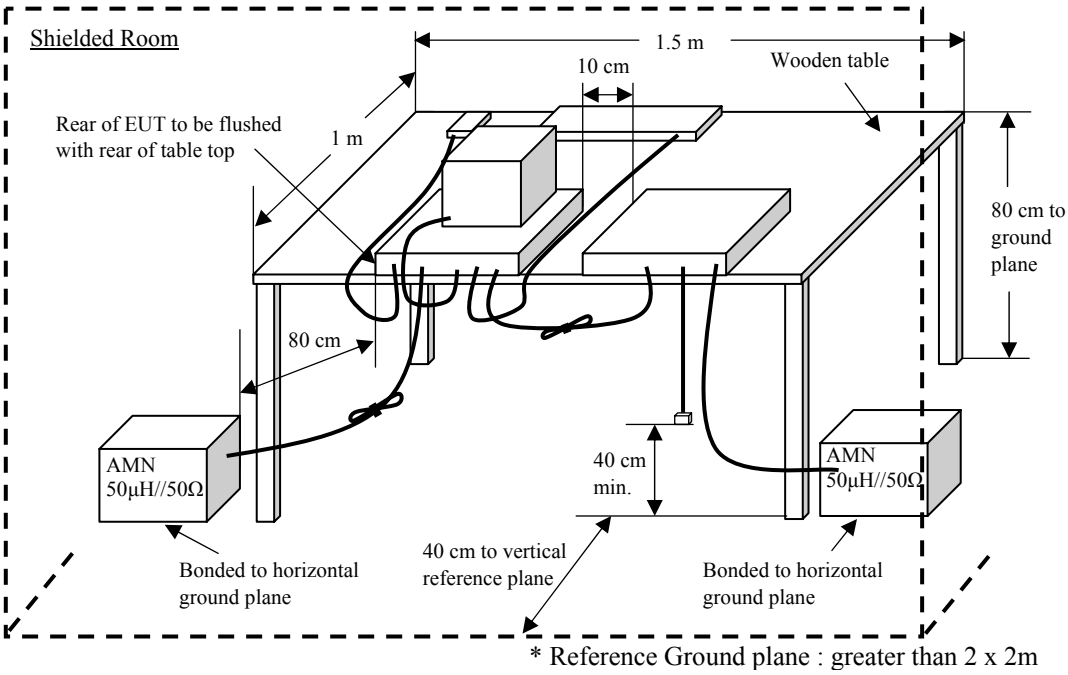
7.2.2 VFO Scan mode



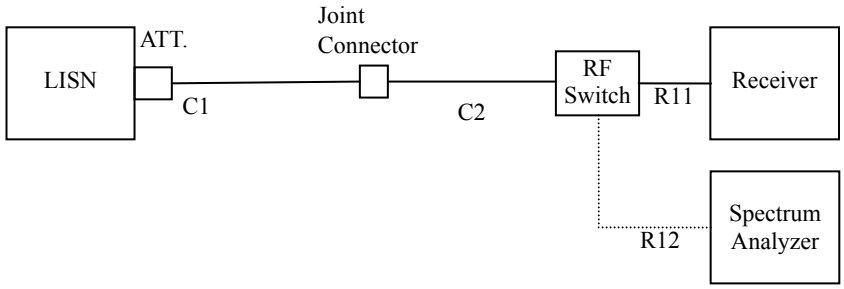
SECTION 8. TEST PROCEDURE(S)

Test was carried out under the following conditions.

Conducted Voltages on Mains Port



Schema for the conducted voltages on mains port measurement



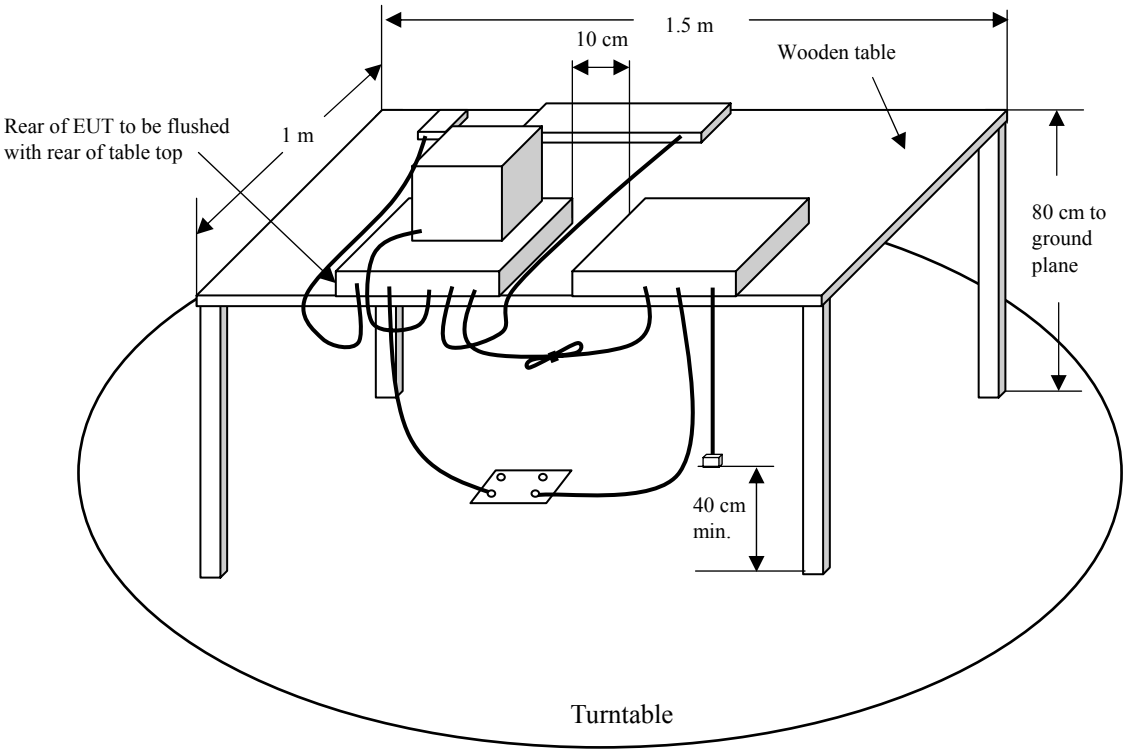
[Instrument Setup]

Frequency [MHz]	Instrument	Detector Function	Resolution Bandwidth	Video Bandwidth
0.15 – 30	Receiver	Quasi Peak	10 kHz	N.A.
		Average	10 kHz	N.A.

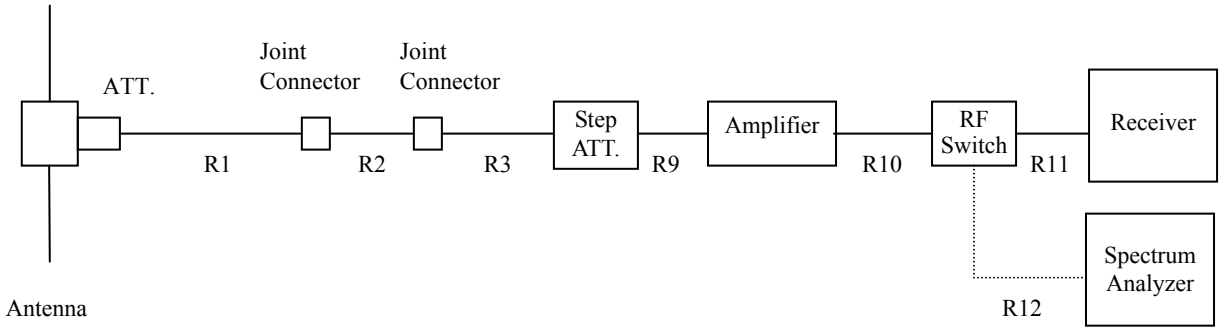
[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.
All leads other than safety ground are tested.

[Final Measurement]
The EUT is operated in the worst emission condition found by the preliminary test.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.
At least six highest spectrum are measured in quasi-peak and average (if necessary) using the test receiver.

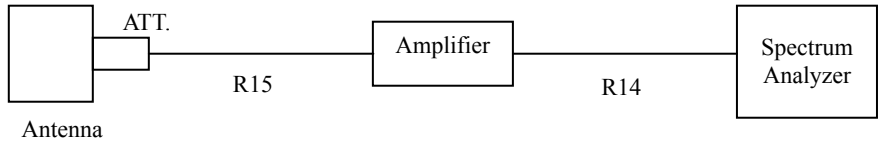
Radiated Electric Field



Schema for the radiated electric field measurement (30-1000MHz)



Above 1GHz



[Instrument Setup]

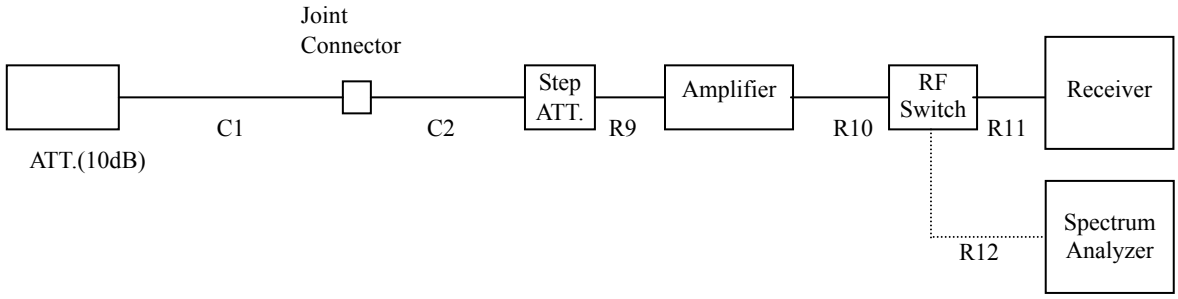
Frequency [MHz]	Instrument	Detector Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	Receiver	Quasi Peak	120 kHz	N.A.
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
		Average	1 MHz	10 Hz

[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree. Then spectrum chart are plotted out to find the worst emission conditions in configuration, operating mode, or ambient noise notation.

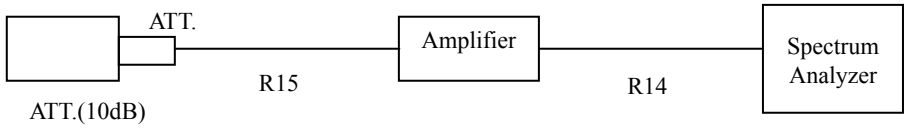
[Final Measurement]
The EUT operated in the worst emission condition found by the preliminary test.
The turntable azimuth (EUT direction) and antenna height (1 to 4 meters) are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.
At least six highest spectrum are measured by the test receiver (quasi-peak) and spectrum analyzer (peak and average).
When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

Conducted Power on Antenna port

Schema for the conducted power on antenna port measurement



Above 1GHz



[Instrument Setup]

Frequency [MHz]	Instrument	Detector Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	Receiver	Quasi Peak	120 kHz	N.A.
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
		Average	1 MHz	10 Hz

[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.

[Final Measurement]
The EUT is operated in the worst emission condition found by the preliminary test.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.
At least six highest spectrum are measured in quasi-peak using the test receiver.

38dB Rejection

Schema for the 38dB rejection measurement

[Preliminary Measurement]

The Signal Genarator conditions :
Output level = 66 dBuV.
Modulation = Frequency modulated to 1 kHz tone at 3 kHz peak deviation.
Frequency Points = 824.040 MHz, 836.505 MHz, 848.970 MHz
869.040 MHz, 881.505 MHz, 893.970 MHz
(The Cellular Radiotelephone Service mobile and base frequency bands)
The EUT condition :
Scanning Frequency = 0.030 MHz – 56.000 MHz (5 kHz Step).
Scan stopped point, was the detected frequency.

[Final Measurement]

Injected 12dB SINAD Reading (SG RF Output)
The EUT condition :
Frequency = Scan stopped point
The Signal Genarator condition :
Frequency = Cellular point
Detected 12dB SINAD Reading (SG RF Output)
The EUT condition :
Frequency = Scan stopped point
The Signal Genarator condition :
Frequency = Scan stopped point
Under the requirements of Section15.121(b) of the Rule.
Injected 12dB SINAD Reading – Detected 12dB SINAD Reading = 38 dB or more.

SECTION 9. EVALUATION OF TEST RESULTS

9.1 Conducted Voltages on Mains Port

9.1.1 RX 0.030MHz mode (Power Line for FP-1030A)

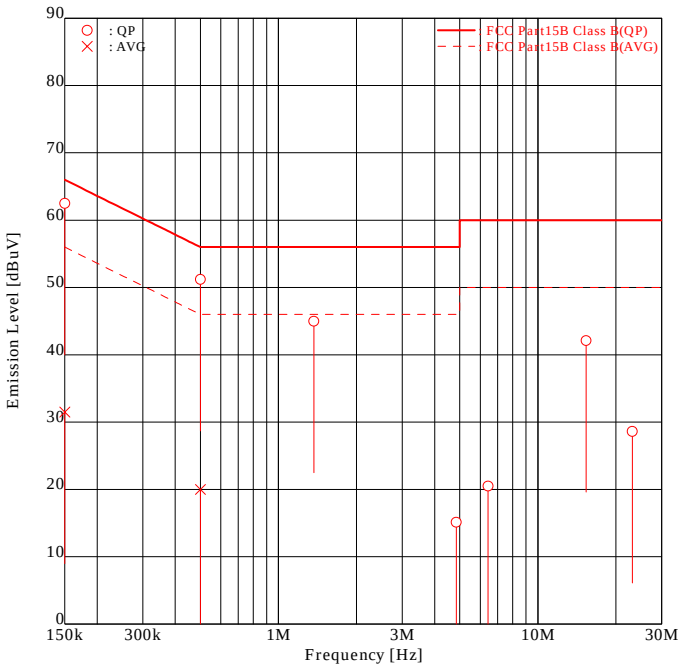
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	: Power Line for FP-1030A

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	52.9	56.4	6.1	6.1	59.0	62.5	66.0	7.0	**3.5**
2	0.1500	AVG	21.2	25.4	6.1	6.1	27.3	31.5	56.0	28.7	24.5
3	0.5000	QP	40.5	45.0	6.2	6.2	46.7	51.2	56.0	9.3	4.8
4	0.5000	AVG	9.4	13.8	6.2	6.2	15.6	20.0	46.0	30.4	26.0
5	1.3700	QP	38.8	36.9	6.2	6.2	45.0	43.1	56.0	11.0	12.9
6	4.8500	QP	8.7	8.6	6.4	6.4	15.1	15.0	56.0	40.9	41.0
7	6.4340	QP	8.8	14.0	6.5	6.5	15.3	20.5	60.0	44.7	39.5
8	15.3346	QP	35.4	30.3	6.7	6.8	42.1	37.1	60.0	17.9	22.9
9	23.1194	QP	18.6	21.5	6.8	7.1	25.4	28.6	60.0	34.6	31.4

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

9.1.2 RX 0.030MHz mode (Power Line for DMU-2000)

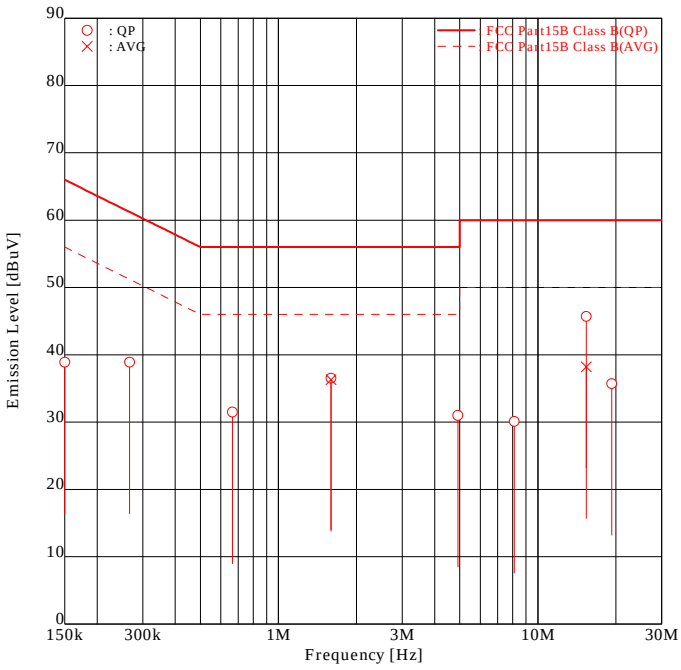
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	: Power Line for DMU-2000

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	32.8	32.1	6.1	6.1	38.9	38.2	66.0	27.1	27.8
2	0.2670	QP	30.7	32.8	6.1	6.1	36.8	38.9	61.2	24.4	22.3
3	0.6650	QP	25.2	20.2	6.3	6.2	31.5	26.4	56.0	24.5	29.6
4	1.5948	QP	30.3	24.1	6.2	6.2	36.5	30.3	56.0	19.5	25.7
5	1.5948	AVG	30.1	23.8	6.2	6.2	36.3	30.0	46.0	**9.7**	16.0
6	4.9163	QP	24.6	19.6	6.4	6.4	31.0	26.0	56.0	25.0	30.0
7	8.1066	QP	23.6	21.1	6.5	6.5	30.1	27.6	60.0	29.9	32.4
8	15.3719	QP	38.4	38.9	6.7	6.8	45.1	45.7	60.0	14.9	14.3
9	15.3719	AVG	31.5	31.4	6.7	6.8	38.2	38.2	50.0	11.8	11.8
10	19.2657	QP	26.9	28.6	6.9	7.1	33.8	35.7	60.0	26.2	24.3

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

9.1.3 RX 30MHz mode (Power Line for FP-1030A)

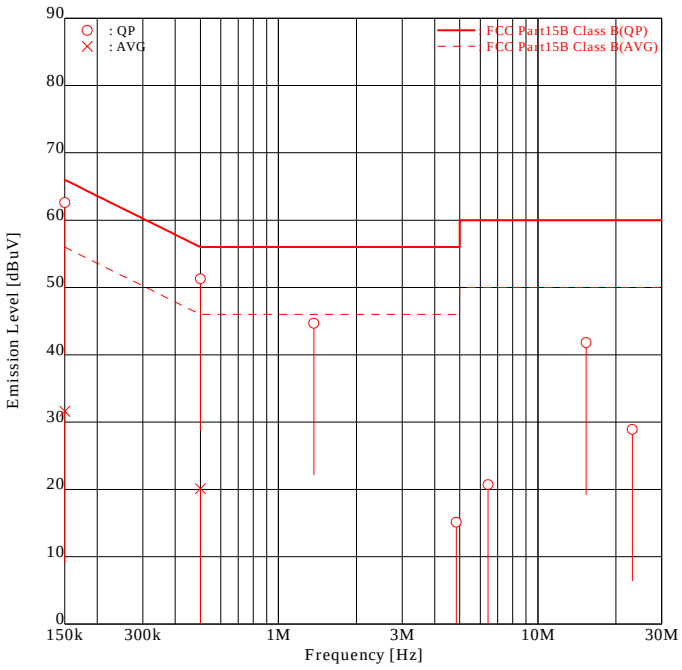
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	: Power Line for FP-1030A

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	52.8	56.5	6.1	6.1	58.9	62.6	66.0	7.1	**3.4**
2	0.1500	AVG	21.2	25.5	6.1	6.1	27.3	31.6	56.0	28.7	24.4
3	0.5000	QP	40.4	45.1	6.2	6.2	46.6	51.3	56.0	9.4	4.7
4	0.5000	AVG	9.4	13.9	6.2	6.2	15.6	20.1	46.0	30.4	25.9
5	1.3700	QP	38.5	37.0	6.2	6.2	44.7	43.2	56.0	11.3	12.8
6	4.8500	QP	8.2	8.7	6.4	6.4	14.6	15.1	56.0	41.4	40.9
7	6.4340	QP	9.0	14.2	6.5	6.5	15.5	20.7	60.0	44.5	39.3
8	15.3422	QP	35.1	28.6	6.7	6.8	41.8	35.4	60.0	18.2	24.6
9	23.1267	QP	19.1	21.8	6.8	7.1	25.9	28.9	60.0	34.1	31.1

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

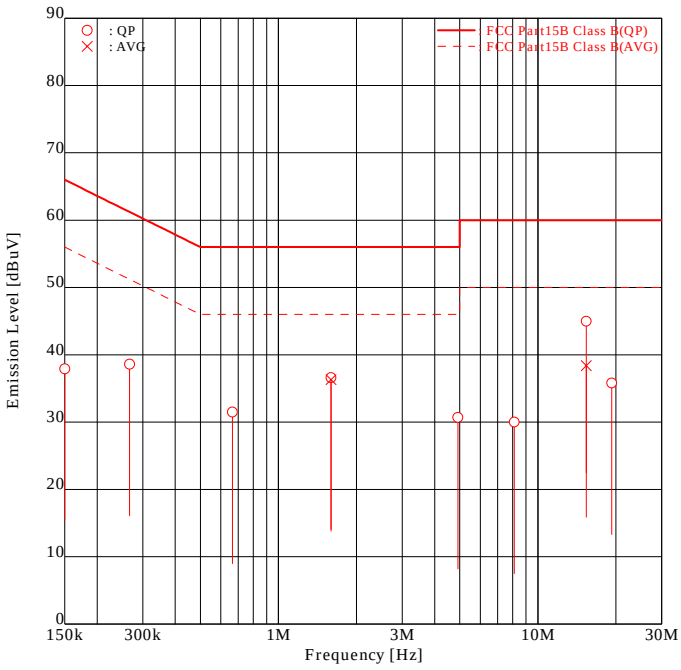
9.1.4 RX 30MHz mode (Power Line for DMU-2000)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	: Power Line for DMU-2000



ENGINEER : Kazuo Masuda

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	31.8	31.8	6.1	6.1	37.9	37.9	66.0	28.1	28.1
2	0.2670	QP	30.5	32.5	6.1	6.1	36.6	38.6	61.2	24.6	22.6
3	0.6650	QP	25.2	20.1	6.3	6.2	31.5	26.3	56.0	24.5	29.7
4	1.5946	QP	30.4	24.1	6.2	6.2	36.6	30.3	56.0	19.4	25.7
5	1.5946	AVG	30.1	23.8	6.2	6.2	36.3	30.0	46.0	**9.7**	16.0
6	4.9176	QP	24.3	19.7	6.4	6.4	30.7	26.1	56.0	25.3	29.9
7	8.1079	QP	23.5	21.2	6.5	6.5	30.0	27.7	60.0	30.0	32.3
8	15.3774	QP	38.1	38.2	6.7	6.8	44.8	45.0	60.0	15.2	15.0
9	15.3774	AVG	31.7	31.0	6.7	6.8	38.4	37.8	50.0	11.6	12.2
10	19.2657	QP	28.1	28.7	6.9	7.1	35.0	35.8	60.0	25.0	24.2

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

9.1.5 RX 56MHz mode (Power Line for FP-1030A)

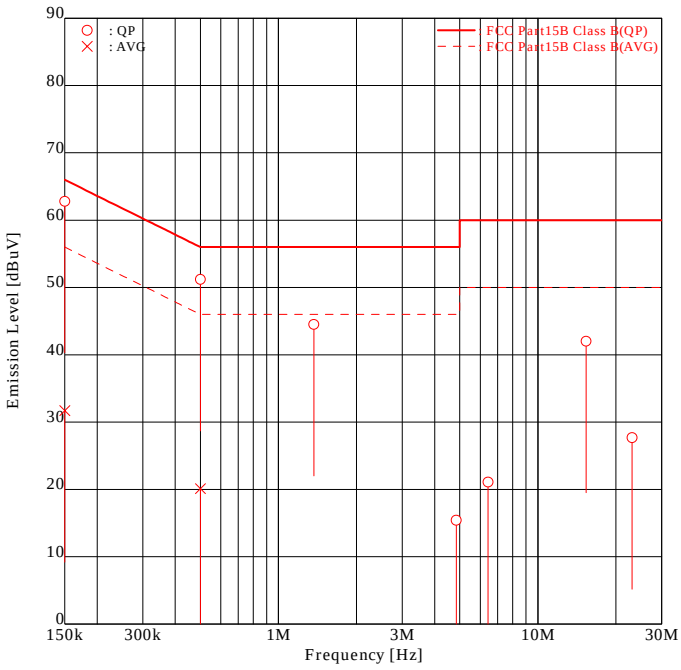
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Vertex Standard Co., Ltd.
EUT NAME : HF Transceiver
MODEL NO. : FT-950
SERIAL NO. : 7I000001
TEST MODE : RX 56MHz (ANT1)
POWER SOURCE : AC120V/60Hz
DATE TESTED : Jul 23 2007
FILE NO. : ESJ-107155
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 22.0 [degC]
HUMIDITY : 67.0 [%]
NOTE : Power Line for FP-1030A

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	52.9	56.7	6.1	6.1	59.0	62.8	66.0	7.0	**3.2**
2	0.1500	AVG	21.2	25.6	6.1	6.1	27.3	31.7	56.0	28.7	24.3
3	0.5000	QP	40.5	45.0	6.2	6.2	46.7	51.2	56.0	9.3	4.8
4	0.5000	AVG	9.5	13.9	6.2	6.2	15.7	20.1	46.0	30.3	25.9
5	1.3700	QP	38.3	37.6	6.2	6.2	44.5	43.8	56.0	11.5	12.2
6	4.8500	QP	8.1	9.0	6.4	6.4	14.5	15.4	56.0	41.5	40.6
7	6.4340	QP	9.4	14.6	6.5	6.5	15.9	21.1	60.0	44.1	38.9
8	15.3518	QP	35.3	30.2	6.7	6.8	42.0	37.0	60.0	18.0	23.0
9	23.1007	QP	17.8	20.6	6.8	7.1	24.6	27.7	60.0	35.4	32.3

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

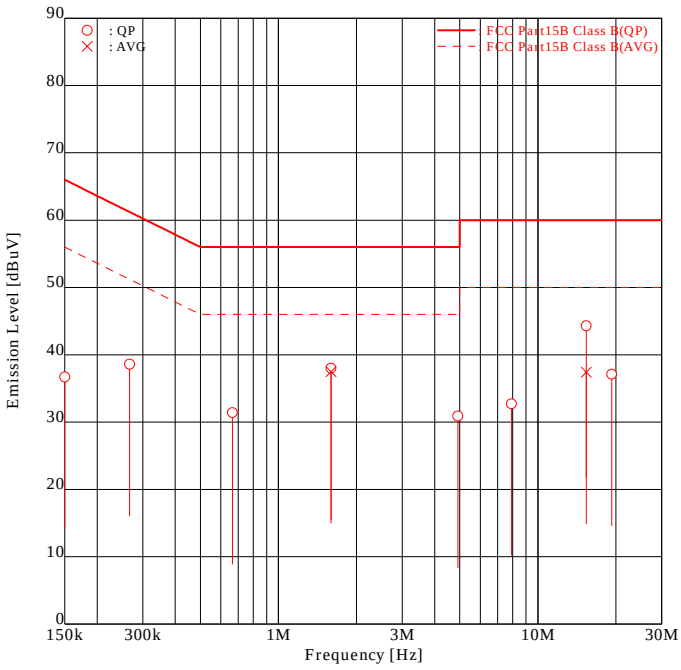
9.1.6 RX 56MHz mode (Power Line for DMU-2000)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Vertex Standard Co., Ltd.
EUT NAME : HF Transceiver
MODEL NO. : FT-950
SERIAL NO. : 7I000001
TEST MODE : RX 56MHz (ANT1)
POWER SOURCE : AC120V/60Hz
DATE TESTED : Jul 20 2007
FILE NO. : ESJ-107155
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 65.0 [%]
NOTE : Power Line for DMU-2000



ENGINEER : Kazuo Masuda

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	30.6	30.2	6.1	6.1	36.7	36.3	66.0	29.3	29.7
2	0.2669	QP	30.1	32.5	6.1	6.1	36.2	38.6	61.2	25.0	22.6
3	0.6649	QP	25.1	20.5	6.3	6.2	31.4	26.7	56.0	24.6	29.3
4	1.5959	QP	31.8	26.3	6.2	6.2	38.0	32.5	56.0	18.0	23.5
5	1.5959	AVG	31.3	25.6	6.2	6.2	37.5	31.8	46.0	**8.5**	14.2
6	4.9193	QP	24.5	22.0	6.4	6.4	30.9	28.4	56.0	25.1	27.6
7	7.9100	QP	25.2	26.2	6.5	6.5	31.7	32.7	60.0	28.3	27.3
8	15.3737	QP	36.8	37.5	6.7	6.8	43.5	44.3	60.0	16.5	15.7
9	15.3737	AVG	30.1	30.6	6.7	6.8	36.8	37.4	50.0	13.2	12.6
10	19.2621	QP	29.4	30.0	6.9	7.1	36.3	37.1	60.0	23.7	22.9

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(LISN,Pad,Cable)

9.2 Radiated Electric Field

9.2.1 RX 0.030MHz mode (30 – 1000MHz)

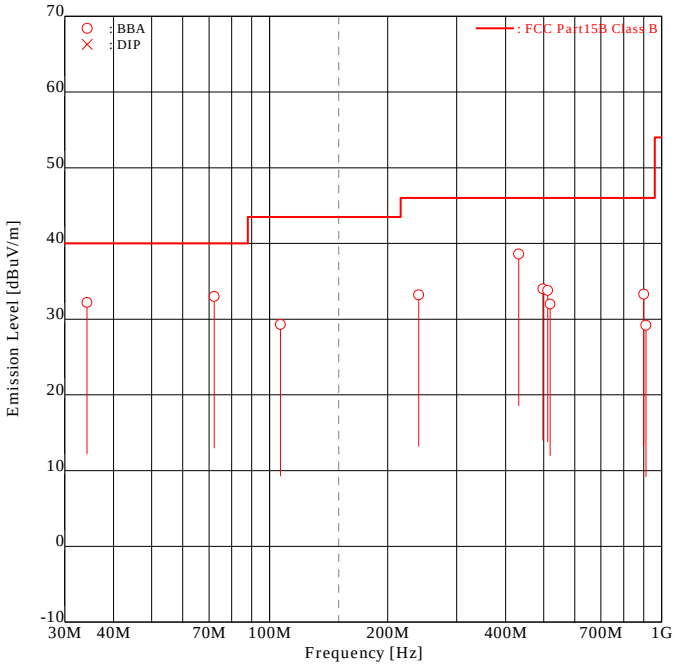
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 20 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 65.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	34.22	BBA	-	37.0	-4.8	-4.8	-	32.2	40.0	-	7.8
2	72.24	BBA	38.7	33.9	-5.7	-5.7	33.0	28.2	40.0	**7.0**	11.8
3	106.53	BBA	-	35.6	-6.3	-6.3	-	29.3	43.5	-	14.2
4	240.02	BBA	36.3	-	-3.1	-3.1	33.2	-	46.0	12.8	-
5	432.03	BBA	35.6	35.7	2.9	2.9	38.5	38.6	46.0	7.5	7.4
6	497.69	BBA	-	29.1	4.9	4.9	-	34.0	46.0	-	12.0
7	512.01	BBA	-	28.6	5.2	5.2	-	33.8	46.0	-	12.2
8	519.17	BBA	-	26.5	5.5	5.5	-	32.0	46.0	-	14.0
9	899.96	BBA	-	20.6	12.7	12.7	-	33.3	46.0	-	12.7
10	912.09	BBA	16.2	-	13.0	13.0	29.2	-	46.0	16.8	-

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(Antenna,Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.2.2 RX 0.030MHz mode (1000 – 5000MHz)

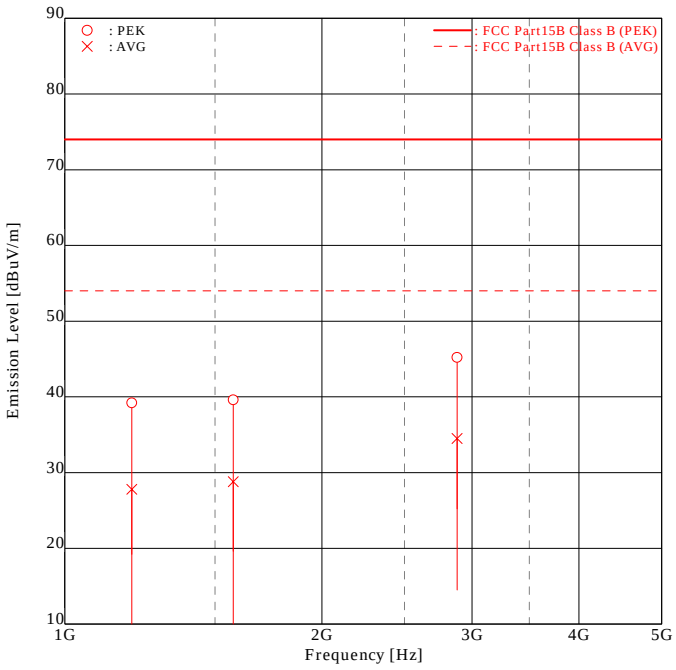
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1198.07	PEK	39.4	-	-0.2	-0.2	39.2	-	74.0	34.8	-
2	1198.07	AVG	28.0	-	-0.2	-0.2	27.8	-	54.0	26.2	-
3	1574.94	PEK	39.3	-	0.3	0.3	39.6	-	74.0	34.4	-
4	1574.94	AVG	28.5	-	0.3	0.3	28.8	-	54.0	25.2	-
5	2880.16	PEK	38.3	38.7	6.5	6.5	44.8	45.2	74.0	29.2	28.8
6	2880.16	AVG	27.8	28.0	6.5	6.5	34.3	34.5	54.0	19.7	**19.5**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.2.3 RX 30MHz mode (30 – 1000MHz)

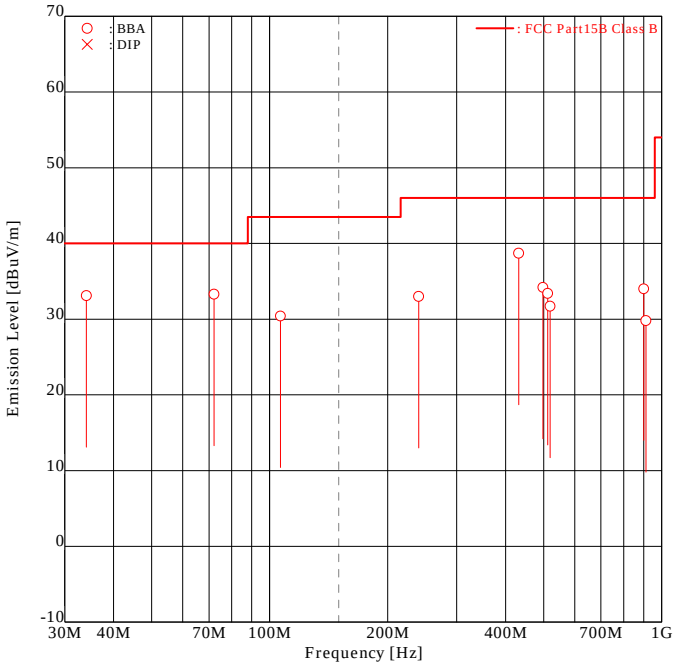
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 20 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 65.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	34.07	BBA	-	37.9	-4.8	-4.8	-	33.1	40.0	-	6.9
2	72.14	BBA	39.0	32.9	-5.7	-5.7	33.3	27.2	40.0	**6.7**	12.8
3	106.53	BBA	-	36.7	-6.3	-6.3	-	30.4	43.5	-	13.1
4	240.02	BBA	36.1	-	-3.1	-3.1	33.0	-	46.0	13.0	-
5	432.03	BBA	35.8	35.1	2.9	2.9	38.7	38.0	46.0	7.3	8.0
6	497.69	BBA	-	29.3	4.9	4.9	-	34.2	46.0	-	11.8
7	512.01	BBA	-	28.2	5.2	5.2	-	33.4	46.0	-	12.6
8	519.17	BBA	-	26.2	5.5	5.5	-	31.7	46.0	-	14.3
9	899.96	BBA	-	21.3	12.7	12.7	-	34.0	46.0	-	12.0
10	912.09	BBA	16.8	-	13.0	13.0	29.8	-	46.0	16.2	-

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(Antenna,Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.2.4 RX 30MHz mode (1000 – 5000MHz)

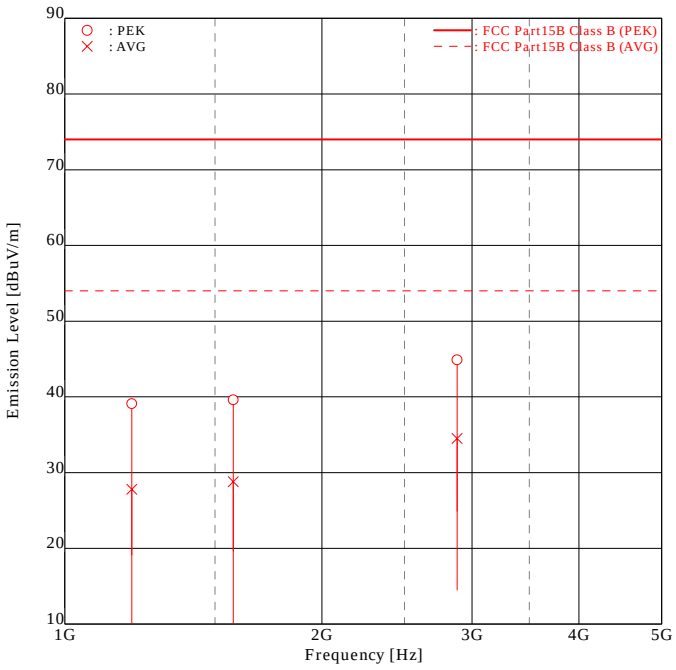
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
EUT NAME : HF Transceiver
MODEL NO. : FT-950
SERIAL NO. : 7I000001
TEST MODE : RX 30MHz (ANT1)
POWER SOURCE : AC120V/60Hz
DATE TESTED : Jul 23 2007
FILE NO. : ESJ-107155
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 22.0 [degC]
HUMIDITY : 67.0 [%]
NOTE :

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1198.07	PEK	39.3	-	-0.2	-0.2	39.1	-	74.0	34.9	-
2	1198.07	AVG	28.0	-	-0.2	-0.2	27.8	-	54.0	26.2	-
3	1574.94	PEK	39.3	-	0.3	0.3	39.6	-	74.0	34.4	-
4	1574.94	AVG	28.5	-	0.3	0.3	28.8	-	54.0	25.2	-
5	2880.16	PEK	38.0	38.4	6.5	6.5	44.5	44.9	74.0	29.5	29.1
6	2880.16	AVG	27.8	28.0	6.5	6.5	34.3	34.5	54.0	19.7	**19.5**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.2.5 RX 56MHz mode (30 – 1000MHz)

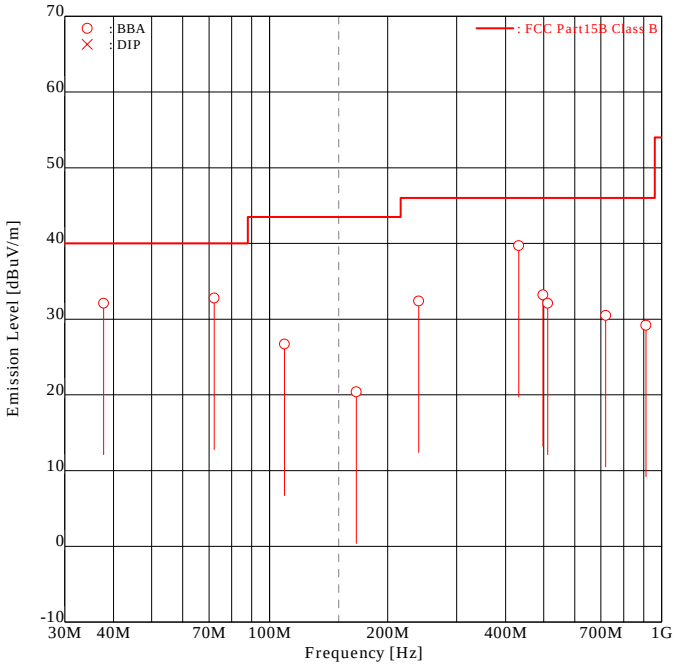
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 56MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 20 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 65.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	37.70	BBA	-	36.6	-4.5	-4.5	-	32.1	40.0	-	7.9
2	72.22	BBA	38.5	32.9	-5.7	-5.7	32.8	27.2	40.0	7.2	12.8
3	109.13	BBA	-	32.4	-5.7	-5.7	-	26.7	43.5	-	16.8
4	166.31	BBA	23.1	-	-2.7	-2.7	20.4	-	43.5	23.1	-
5	240.02	BBA	35.5	-	-3.1	-3.1	32.4	-	46.0	13.6	-
6	432.03	BBA	36.6	36.8	2.9	2.9	39.5	39.7	46.0	6.5	**6.3**
7	497.69	BBA	-	28.3	4.9	4.9	-	33.2	46.0	-	12.8
8	512.01	BBA	-	26.9	5.2	5.2	-	32.1	46.0	-	13.9
9	719.97	BBA	-	21.6	8.9	8.9	-	30.5	46.0	-	15.5
10	912.09	BBA	16.2	-	13.0	13.0	29.2	-	46.0	16.8	-

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emission Level = Read + Factor(Antenna,Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.2.6 RX 56MHz mode (1000 – 5000MHz)

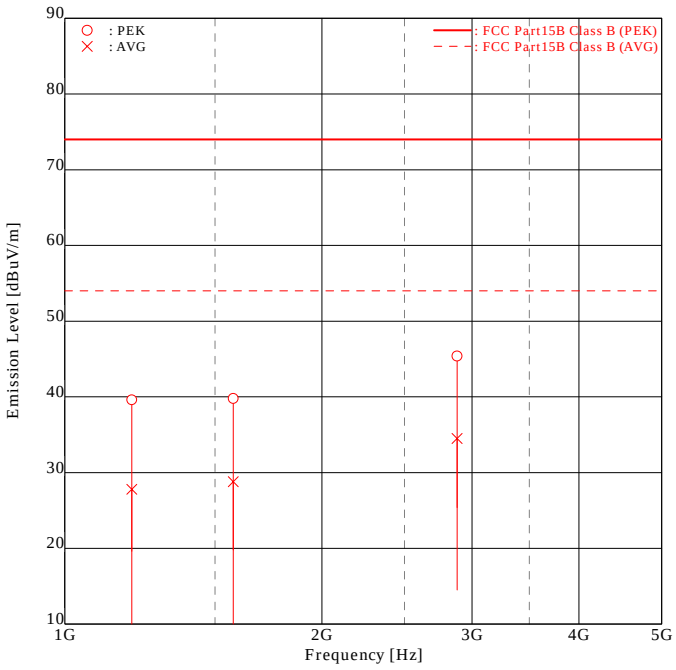
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 56MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 23 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 67.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1198.07	PEK	39.8	-	-0.2	-0.2	39.6	-	74.0	34.4	-
2	1198.07	AVG	28.0	-	-0.2	-0.2	27.8	-	54.0	26.2	-
3	1574.94	PEK	39.5	-	0.3	0.3	39.8	-	74.0	34.2	-
4	1574.94	AVG	28.5	-	0.3	0.3	28.8	-	54.0	25.2	-
5	2880.16	PEK	38.8	38.9	6.5	6.5	45.3	45.4	74.0	28.7	28.6
6	2880.16	AVG	27.8	28.0	6.5	6.5	34.3	34.5	54.0	19.7	**19.5**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.3 Conducted Power on Antenna Port

9.3.1 RX 0.030MHz mode (30 – 1000MHz) : ANT1

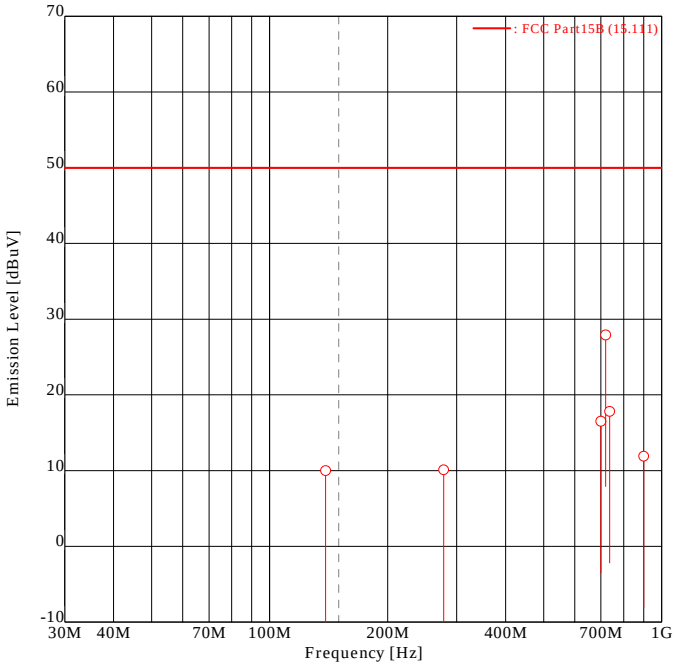
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	138.9500	21.7	-11.7	10.0	50.0	40.0
2	277.9100	21.0	-10.9	10.1	50.0	39.9
3	700.4100	24.8	-8.3	16.5	50.0	33.5
4	719.9700	36.2	-8.3	27.9	50.0	**22.1**
5	737.2800	26.0	-8.2	17.8	50.0	32.2
6	899.9600	19.1	-7.2	11.9	50.0	38.1

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.2 RX 0.030MHz mode (1000 – 5000MHz) : ANT1

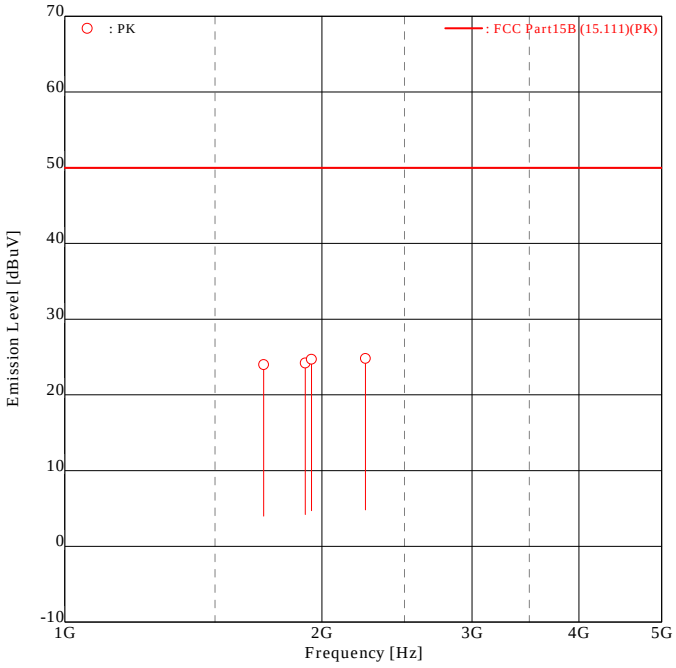
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1709.9200	39.0	-15.0	24.0	50.0	26.0
2	1912.4200	38.6	-14.4	24.2	50.0	25.8
3	1945.3800	39.0	-14.3	24.7	50.0	25.3
4	2249.9100	38.5	-13.7	24.8	50.0	**25.2**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

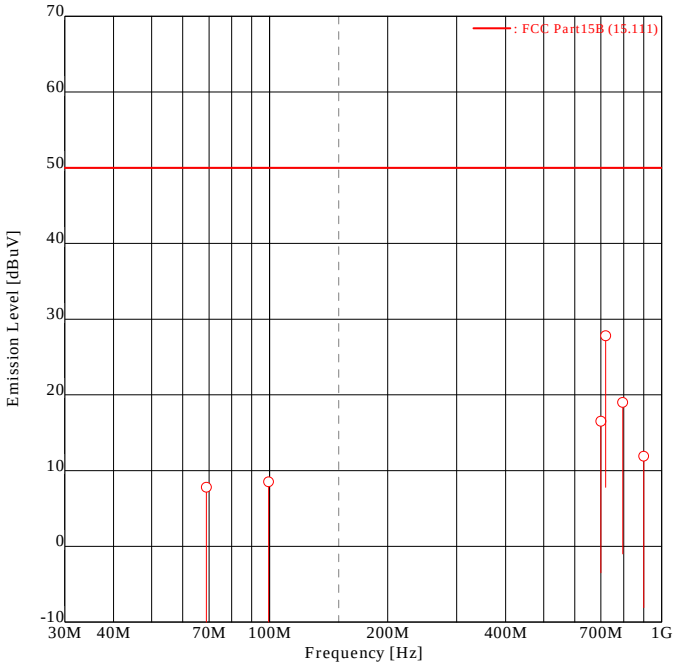
9.3.3 RX 30MHz mode (30 – 1000MHz) : ANT1

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Kazuo Masuda

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	69.0000	20.1	-12.3	7.8	50.0	42.2
2	99.4400	20.5	-12.0	8.5	50.0	41.5
3	700.4100	24.8	-8.3	16.5	50.0	33.5
4	719.9700	36.1	-8.3	27.8	50.0	**22.2**
5	795.5800	26.9	-7.9	19.0	50.0	31.0
6	899.9600	19.1	-7.2	11.9	50.0	38.1

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.4 RX 30MHz mode (1000 – 5000MHz) : ANT1

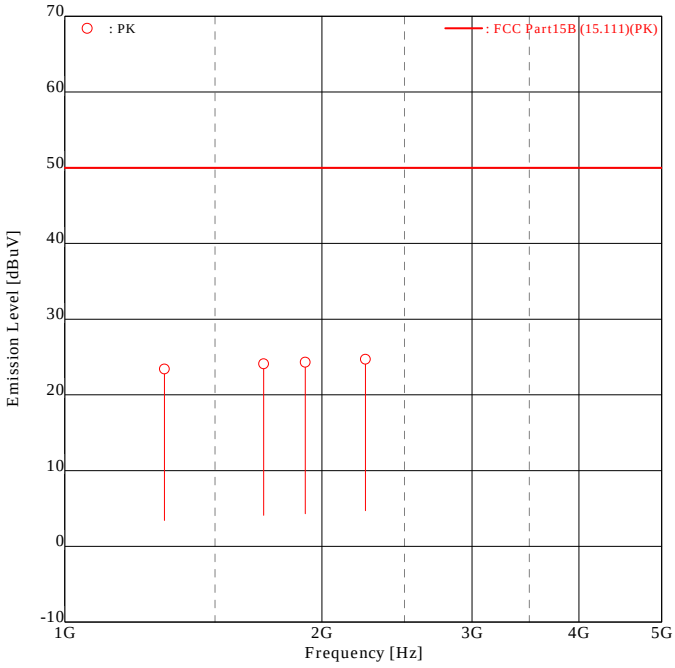
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1308.6800	38.9	-15.5	23.4	50.0	26.6
2	1709.9200	39.1	-15.0	24.1	50.0	25.9
3	1912.4200	38.7	-14.4	24.3	50.0	25.7
4	2249.9100	38.4	-13.7	24.7	50.0	**25.3**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

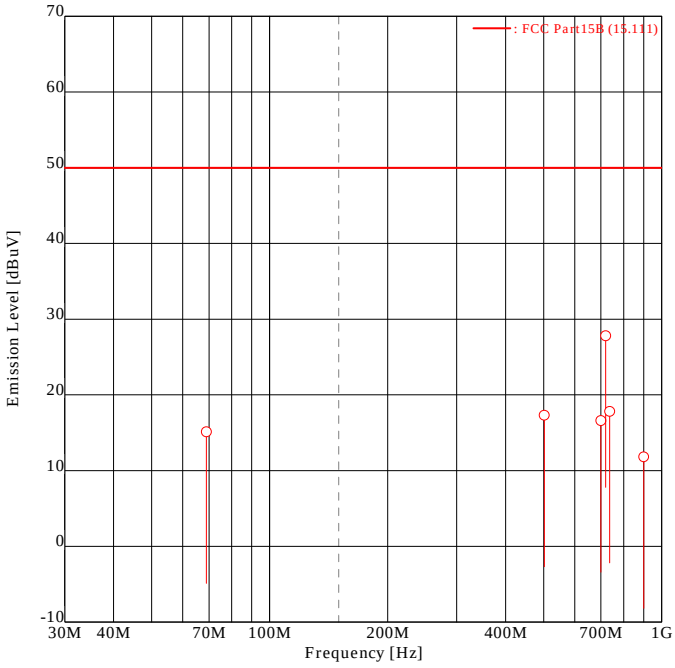
9.3.5 RX 56MHz mode (30 – 1000MHz) : ANT1

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 56MHz (ANT1)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Kazuo Masuda

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	69.0000	27.4	-12.3	15.1	50.0	34.9
2	501.7900	26.7	-9.4	17.3	50.0	32.7
3	700.4100	24.9	-8.3	16.6	50.0	33.4
4	719.9700	36.1	-8.3	27.8	50.0	**22.2**
5	737.2800	26.0	-8.2	17.8	50.0	32.2
6	899.9600	19.0	-7.2	11.8	50.0	38.2

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.6 RX 56MHz mode (1000 – 5000MHz) : ANT1

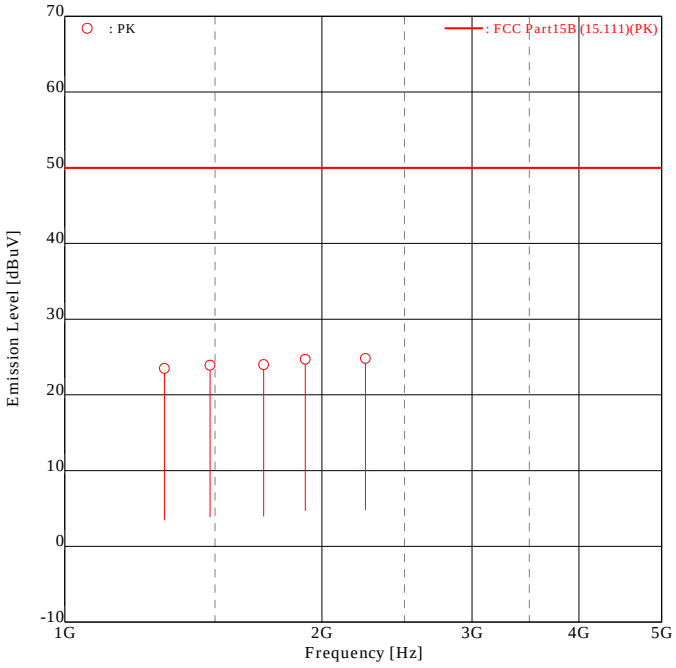
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
EUT NAME : HF Transceiver
MODEL NO. : FT-950
SERIAL NO. : 7I000001
TEST MODE : RX 56MHz (ANT1)
POWER SOURCE : AC120V/60Hz
DATE TESTED : Jul 24 2007
FILE NO. : ESJ-107155
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 24.0 [degC]
HUMIDITY : 56.0 [%]
NOTE :

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1308.6800	39.0	-15.5	23.5	50.0	26.5
2	1479.5500	39.5	-15.6	23.9	50.0	26.1
3	1709.8800	39.0	-15.0	24.0	50.0	26.0
4	1912.4200	39.1	-14.4	24.7	50.0	25.3
5	2249.9100	38.5	-13.7	24.8	50.0	**25.2**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.7 VFO Scan mode (ANT1)

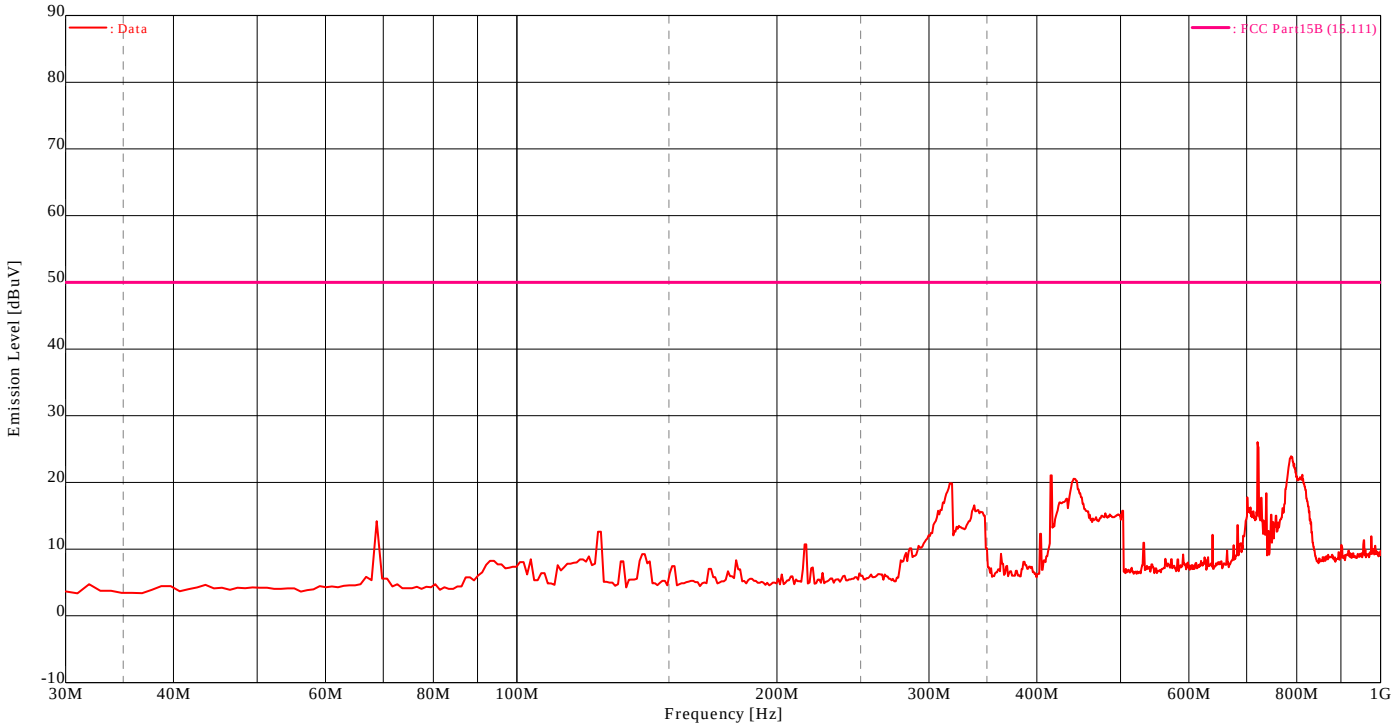
< Graph number #1 >

SPECTRUM ANALYSIS

Kashima No.1 Test Site

24.0degC/56.0%

Date tested	: Jul 24 2007	Test mode	: VFO Scan (ANT1)
Company	: Vertex Standard Co., Ltd.	Power source	: AC120V/60Hz
EUT Name	: HF Transceiver	File number	: ESJ-107155
Model number	: FT-950	Engineer	: Kazuo Masuda
Serial number	: 7I000001	Note	: Band : 0.030 - 56.000MHz



9.3.8 RX 0.030MHz mode (30 – 1000MHz) : ANT2

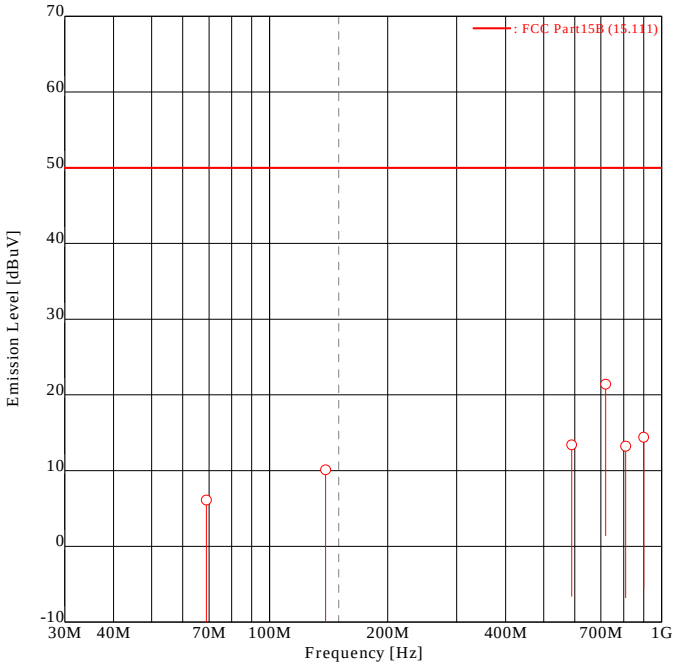
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT2)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	69.0000	18.4	-12.3	6.1	50.0	43.9
2	138.9500	21.8	-11.7	10.1	50.0	39.9
3	589.8200	22.2	-8.8	13.4	50.0	36.6
4	719.9700	29.7	-8.3	21.4	50.0	**28.6**
5	809.9600	21.0	-7.8	13.2	50.0	36.8
6	899.9600	21.6	-7.2	14.4	50.0	35.6

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.9 RX 0.030MHz mode (1000 – 5000MHz) : ANT2

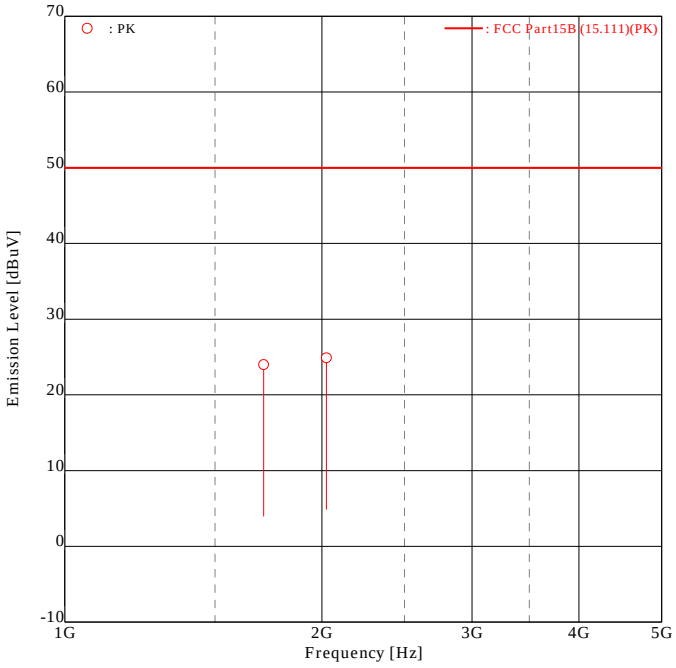
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 0.030MHz (ANT2)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1709.9400	39.0	-15.0	24.0	50.0	26.0
2	2024.9200	39.0	-14.1	24.9	50.0	**25.1**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.10 RX 30MHz mode (30 – 1000MHz) : ANT2

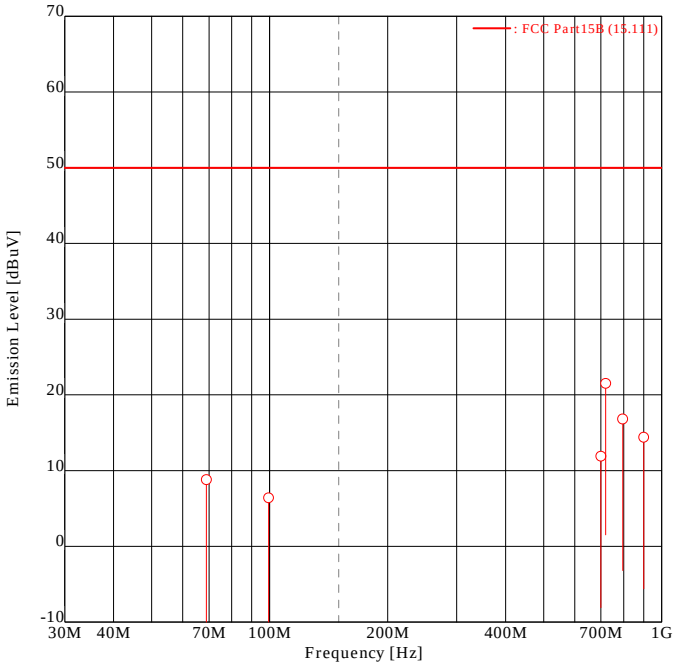
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT2)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	69.0000	21.1	-12.3	8.8	50.0	41.2
2	99.4400	18.4	-12.0	6.4	50.0	43.6
3	700.4100	20.2	-8.3	11.9	50.0	38.1
4	719.9700	29.8	-8.3	21.5	50.0	**28.5**
5	795.5900	24.7	-7.9	16.8	50.0	33.2
6	899.9600	21.6	-7.2	14.4	50.0	35.6

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.11 RX 30MHz mode (1000 – 5000MHz) : ANT2

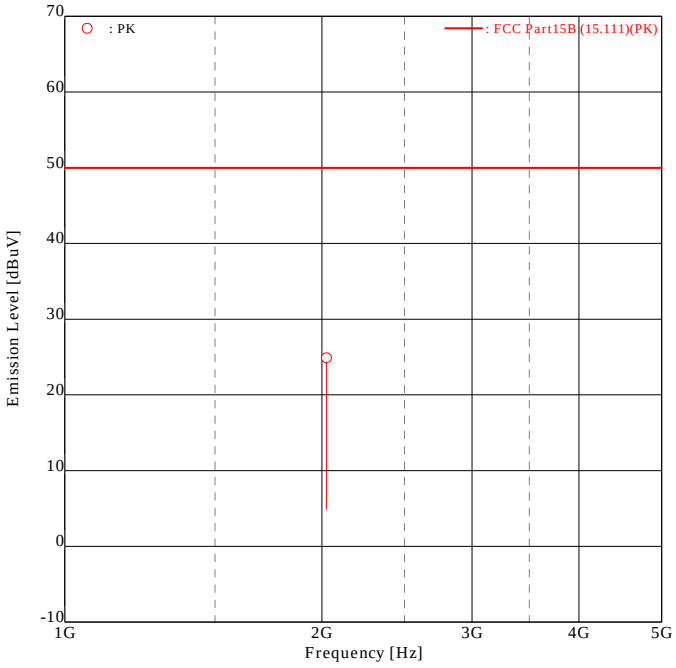
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 30MHz (ANT2)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	2024.9200	39.0	-14.1	24.9	50.0	**25.1**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.12 RX 56MHz mode (30 – 1000MHz) : ANT2

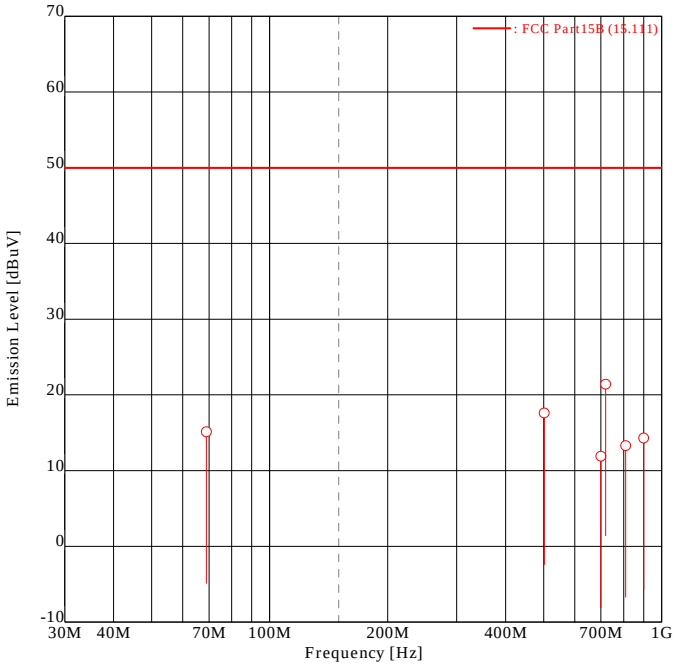
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
EUT NAME : HF Transceiver
MODEL NO. : FT-950
SERIAL NO. : 7I000001
TEST MODE : RX 56MHz (ANT2)
POWER SOURCE : AC120V/60Hz
DATE TESTED : Jul 24 2007
FILE NO. : ESJ-107155
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 24.0 [degC]
HUMIDITY : 56.0 [%]
NOTE :

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	69.0000	27.4	-12.3	15.1	50.0	34.9
2	501.7900	27.0	-9.4	17.6	50.0	32.4
3	700.4100	20.2	-8.3	11.9	50.0	38.1
4	719.9700	29.7	-8.3	21.4	50.0	**28.6**
5	809.9600	21.1	-7.8	13.3	50.0	36.7
6	899.9600	21.5	-7.2	14.3	50.0	35.7

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.13 RX 56MHz mode (1000 – 5000MHz) : ANT2

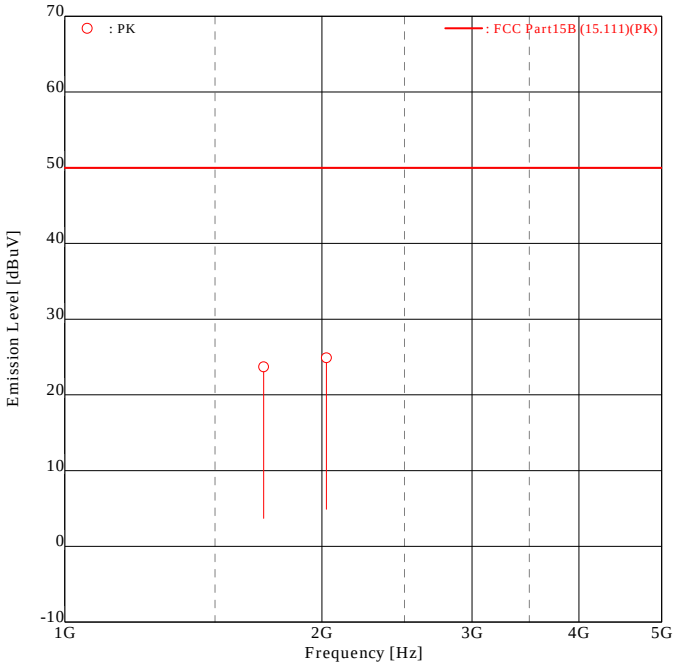
ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT	: Vertex Standard Co., Ltd.
EUT NAME	: HF Transceiver
MODEL NO.	: FT-950
SERIAL NO.	: 7I000001
TEST MODE	: RX 56MHz (ANT2)
POWER SOURCE	: AC120V/60Hz
DATE TESTED	: Jul 24 2007
FILE NO.	: ESJ-107155
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:

ENGINEER : Kazuo Masuda



[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1709.9300	38.7	-15.0	23.7	50.0	26.3
2	2024.9200	39.0	-14.1	24.9	50.0	**25.1**

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad,Cable,Preamp)

9.3.14 VFO Scan mode (ANT2)

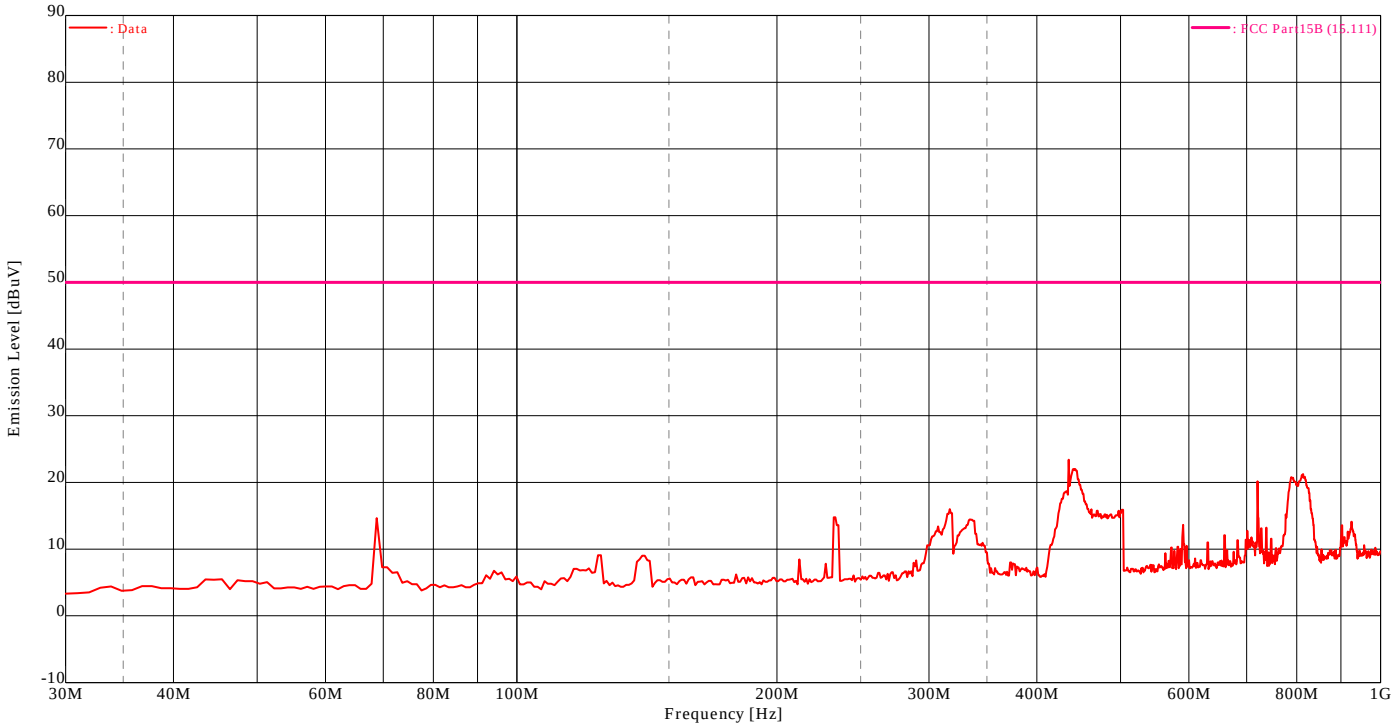
< Graph number #2 >

SPECTRUM ANALYSIS

Kashima No.1 Test Site

24.0degC/56.0%

Date tested	: Jul 25 2007	Test mode	: VFO Scan (ANT2)
Company	: Vertex Standard Co., Ltd.	Power source	: AC120V/60Hz
EUT Name	: HF Transceiver	File number	: ESJ-107155
Model number	: FT-950	Engineer	: Kazuo Masuda
Serial number	: 7I000001	Note	: Band : 0.030 - 56.000MHz



9.4 38dB Rejection Test

9.4.1 VFO Scan mode (ANT1)

Location	:	Kashima No.1 Test Site
Date Tested	:	July. 24, 2007
Temperature	:	24 [degC]
Humidity	:	56 [%]
Engineer	:	Kazuo Masuda

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Reading Injected Frequency [dBm]	12dB SINAD Reading Detected Frequency [dBm]	Rejection Level [dB]	Margin [dB]
824.040	No Point Detected	N / A	N / A	N / A	N / A
836.505	No Point Detected	N / A	N / A	N / A	N / A
848.970	No Point Detected	N / A	N / A	N / A	N / A
869.040	No Point Detected	N / A	N / A	N / A	N / A
881.505	No Point Detected	N / A	N / A	N / A	N / A
893.970	No Point Detected	N / A	N / A	N / A	N / A

The Audio Analyzer condition :
12dB SINAD measurment level = 450mV.

9.4.2 VFO Scan mode (ANT2)

Location	:	Kashima No.1 Test Site
Date Tested	:	July 25, 2007
Temperature	:	23 [degC]
Humidity	:	58 [%]
Engineer	:	Kazuo Masuda

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Reading Injected Frequency [dBm]	12dB SINAD Reading Detected Frequency [dBm]	Rejection Level [dB]	Margin [dB]
824.040	No Point Detected	N / A	N / A	N / A	N / A
836.505	No Point Detected	N / A	N / A	N / A	N / A
848.970	No Point Detected	N / A	N / A	N / A	N / A
869.040	No Point Detected	N / A	N / A	N / A	N / A
881.505	No Point Detected	N / A	N / A	N / A	N / A
893.970	No Point Detected	N / A	N / A	N / A	N / A

The Audio Analyzer condition :
12dB SINAD measurment level = 450mV.

9.5 Sample Calculations

9.5.1 Conducted Voltages on Mains Port

Example @ 0.1500MHz

Emission Level	=	Meter Reading		56.7	dBuV
	+	Factor	+	6.1	dB
			=	62.8	dBuV
Margin	=	Limit		66.0	dBuV
	-	Emission Level	-	62.8	dBuV
			=	3.2	dB

Factor = LISN Factor + Cable Loss + Pad Loss

9.5.2 Radiated Electric Field

Example @ 432.03MHz

Emission Level	=	Meter Reading		36.8	dBuV
	+	Factor	+	2.9	dB/m
			=	39.7	dBuV/m
Margin	=	Limit		46.0	dBuV/m
	-	Emission Level	-	39.7	dBuV/m
			=	6.3	dB

Factor = Antenna Factor + Cable Loss + Amplifier Gain + Pad Loss

9.5.3 Conducted Power on Antenna Port

Example @ 719.97MHz

Output Power Level	=	Meter Reading		36.2	dBuV
	+	Factor	+	-8.3	dB
			=	27.9	dBuV
Margin	=	Limit (:2.0nW)		50.0	dBuV
	-	Output Power Level	-	27.9	dBuV
			=	22.1	dB

Factor = Cable Loss + Amplifier Gain + Pad Loss

9.5.4 38dB Rejection

Example @ N/A MHz

Rejection Level	=	12dB SINAD Reading at Injected Frequency		N/A	dBm
	-	12dB SINAD Reading at Detected Frequency	-	N/A	dBm
			=	N/A	dB
Margin	=	Rejection Level		N/A	dB
	-	Limit	-	38.0	dB
			=	N/A	dB

SECTION 10. LIST OF MEASURING INSTRUMENTS

Instrument	Model No.	Serial No.	Manufacturer	Cal. Date	Calibration Expired
LISN (EUT)	ESH2-Z5	882395/022	Rohde & Schwarz	Sep. 29, 06	Sep. 30, 07
6dB Attenuator	CFA-01	None	TME	Nov. 13, 06	Nov. 30, 07
LISN (Peripheral)	KNW-242	8-851-21	Kyoritsu	Feb. 03, 07	Feb. 29, 08
50Ω Termination	CT-01	A010CON50	TME	Sep. 29, 06	Sep. 30, 07
Coaxial cable	5D-2W (7.0 m)	C1	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (2.0 m)	C2	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (1.0 m)	R6	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (1.0 m)	R7	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Tri-Log antenna	VULB9168	106	Schwarzbeck	Jun. 14, 07	Jun. 30, 08
6dB Attenuator	MP721B	M57593	Anritsu	Jan. 15, 07	Jan. 31, 08
Step Attenuator	8494B	2726A14513	Hewlett Packard	Jan. 15, 07	Jan. 31, 08
Amplifier	ZX60-3018G	001	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Double Ridged Antenna	3115	5044	EMCO	Jun. 21, 07	Jun. 30, 08
3dB Attenuator	4768-3	79	narda	Sep. 27, 06	Sep. 30, 07
Amplifier	83051A	3332A00329	Hewlett Packard	Sep. 27, 06	Sep. 30, 07
Coaxial cable	5D-2W (9.0 m)	R1	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	10D-2W (5.5 m)	R2	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (2.0 m)	R3	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (0.2 m)	R4	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R5	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R6	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R7	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	SUCOFLEX102 (1.0m)	R14 712/2	SUHNER	Sep. 27, 06	Sep. 30, 07
Coaxial cable	KPS-1501-2362-KPS (5.0m)	R15 03292004	Insulated Wire	Sep. 27, 06	Sep. 30, 07
Spectrum Analyzer	8564E	3643A00665	Hewlett Packard	Apr. 06, 07	Apr. 30, 08
Site Attenuation				Apr. 27, 07	Apr. 30, 08
Test receiver	ESS (Firmware Version 1.07)	844861/004	Rohde & Schwarz	May. 21, 07	May. 31, 08
RF Switch	ACX-150-1	None	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Testing Software : emiT (Version 2.0.2.0)					
Attenuator (10dB)	CFA-05NPJ-10	262843	TME	Aug. 01, 06	Aug. 31, 07
RF Signal Generator	SMG	860289/011	Rohde & Schwarz	Jul. 09, 07	Jul. 31, 08
Audio Analyzer	8903B	2948A07326	Hewlett Packard	Apr. 25, 07	Apr. 30, 08

Note : Test instruments are calibrated according to Quality Manual and Calibration Rules of ETL SEMKO Japan.

SECTION 11. MEASUREMENT UNCERTAINTY

The uncertainty of the measurements performed for this report lies:

Radiated Electric Field at 3m		
30 MHz – 1000 MHz Above 1 GHz	± 3.7 dB ± 4.1 dB	
Radiated Electric Field at 10m		
30 MHz – 1000 MHz Above 1 GHz	± 3.8 dB ± 4.1 dB	
Radiated Electric Field at 30m		
Under consideration		
Radiated Effective Power		
11.7 GHz – 12.7 GHz	± 3.8 dB	
Conducted Voltages on Mains Port		
9 kHz – 30 MHz	± 3.0 dB	
Conducted Voltages on Telecommunication Port		
9 kHz – 30 MHz	± 3.4 dB	
Conducted Current on Telecommunication Port		
9 kHz – 30 MHz	± 1.3 dB	
Conducted Voltages on Terminals		
150 kHz – 30 MHz	± 1.0 dB	
Radiated Power		
30 MHz – 300 MHz	± 3.3 dB	

Note on Radiated Electric Field measurement uncertainty

The following items are not included in the calculations in spite of their own uncertainty components because it is impracticable to find the value.

It is our problem awaiting solution in future.

(1) Repeatability of measurement
It is not possible to calculate repeatability since the measurement was carried out only one time.

(2) Antenna factor variation
The definition of measured (radiated electric field strength) is not completed on the referred standard(s).

(3) Loss of EUT radiation propagation
It is certainly one of the uncertainty components, however is not able to calculate.

Please note that these uncertainties are not reflected to the compliance judgment of the test results in this report.

SECTION 12. DESCRIPTION OF TEST LABORATORY

ETL SEMKO is a division of Intertek plc (LSE: ITRK), a global leader in testing, inspection and certification services, operating in 273 laboratories and 521 offices in 100 countries throughout the world. The ETL SEMKO division of Intertek provides access to global markets through its local services, which include product safety testing and certification, EMC testing and performance testing for customers in such industries as wireless technology, security, appliances, HVAC, cables and wiring accessories, industrial machinery, medical devices, telecommunications, lighting, automotive, semiconductor, building products and electronics.

ACCREDITATION		SCOPE	LAB. CODE
NVLAP LAB CODE 100290-0	NVLAP USA	EMC Testing	100290-0
VLAC	VLAC JAPAN	EMC Testing	VLAC-008-1
BSMI	BSMI TAIWAN	EMC Testing	SL2-IN-E-6008

FILING		SCOPE	LAB. CODE
VCCI	VCCI JAPAN	EMC Testing	-
Federal Communications Commission	FCC USA	EMC Testing	Registration Number 934283
Industry Canada	IC CANADA	EMC Testing Telecom Testing	IC 2065
	SAUDI ARABIA	EMC Testing	-