



TEST REPORT

REPORT NUMBER : ANKK-105041

APPLICANT : Vertex Standard Co., Ltd.

MODEL NUMBER : FT DX 9000D

FCC ID : K6620101X60
IC : 511B-20101X60

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

: FCC Part15B Class B
: Canada ICES-003 Class B

Conducted Emission Test
Radiated Emission Test
Antenna Power Conducted Test
38dB Rejection Test



NVLAP accreditation is valid for FCC Part15 (Digital Devices), CISPR22 and AS/NZS CISPR22. NVLAP accreditation does not cover ICES-003. (Antenna Power Conducted Test and 38dB Rejection Test)

Akzo Nobel K. K.
EMC Division
Kashima Site

1, Oaza Sunayama, Hasaki-machi, Kashima-gun
Ibaraki-ken, 314-0255 Japan
Tel.: +81 479 40 1097 Fax.: +81 479 46 1788

TABLE OF CONTENTS

	Page
ABBREVIATIONS	3
SECTION 1. TEST CERTIFICATION	4
SECTION 2. CONCLUSION.....	5
SECTION 3. EQUIPMENT UNDER TEST	6
SECTION 4. SUPPORT EQUIPMENT USED	8
SECTION 5. CABLE (S) USED	9
SECTION 6. CONSTRUCTION OF EQUIPMENT.....	10
SECTION 7. OPERATING CONDITIONS	13
SECTION 8. TEST PROCEDURE(S)	14
SECTION 9. EVALUATION OF TEST RESULTS.....	21
SECTION 10. INSTRUMENTS USED FOR FINAL TEST	52
SECTION 11. MEASUREMENT UNCERTAINTY	54
SECTION 12. DESCRIPTION OF TEST LABORATORY	55

ABBREVIATIONS

LISN = Line Impedance Stabilization Network

AMN = Artificial Mains Network

ISN = Impedance Stabilization Network

CDN = Coupling Decoupling Network

ANT = Antenna

BBA = Broadband Antenna

DIP = Dipole Antenna

AMP = Amplifier

ATT = Attenuator

EUT = Equipment Under Test

AE = Associated Equipment

Q-P = Quasi-peak

AVG = Average

RX = Receive

SPKR = Speaker

SECTION 1. TEST CERTIFICATION**APPLICANT INFORMATION**

Company	: Vertex Standard Co., Ltd.
Address	: 4-8-8, Nakameguro, Meguro-ku, Tokyo, 153-8644, Japan
Telephone number	: +81 3 5725 6111
Fax number	: +81 3 5725 6225

DESCRIPTION OF TEST ITEM

Kind of equipment	: HF Transceiver
Condition of equipment	: Pre-Prototype
Category	: Scanning Receiver & Peripherals
Trademark	: YAESU
FCC ID	K6620101X60
IC	511B-20101X60
Model number	: FT DX 9000D
Serial number	: 5D000001

TEST PERFORMED

Location	: Kashima No. 1 Test Site (FCC Reg. :90433)
	: (IC File No. : IC 2065-3)
EUT received	: February 14, 2005
Test started	: February 15, 2005
Test completed	: February 18, 2005
Purpose of test	: FCC Docket 87-389 and Canadian Interference-Causing Equipment Regulations
Regulation	: 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

Report issue date : February 21, 2005

Test engineer : Kazuo Masuda



Report approved by : Kazuo Gokita
[Assistant Site Manager]

**Note**

- 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.
- This test report shall not be reproduced except in full, without issuer's permission.

SECTION 2. CONCLUSION

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.

Traceability to national standards of test result is achieved by means of calibration traceability to national standards.

The minimum margins to the limits are as follows:

Conducted Voltages on Mains Port			
RX 30MHz	7.8 dB	at	20.2800 MHz
Radiated Electric Field			
RX 30MHz	2.5 dB	at	422.72 MHz
Conducted Power on Antenna Port			
RX 30MHz (ANT1)	16.8 dB	at	1196.84 MHz
38dB Rejection Test (15.121(b))			
VFO Scan	No frequency of response was detected. – Passed –		

Note : See Section 9 for details.

SECTION 3. EQUIPMENT UNDER TEST

The equipment under test (EUT) consisted of the following equipment.
Indication in the following left side column corresponds to Section 6.

Symbol	Item	Model No.	Serial No.	FCC ID / DoC	Manufacturer	Remarks
A)	HF Transceiver	FT DX9000D	5D000001	K6620101X60	Vertex Standard	EUT
B)	Microphone	MH-31B8	None	N.A.	Vertex Standard	Option
C)	Headphone	YH-77STA	None	N.A.	Vertex Standard	Option
D)	External Speaker	SP-8	None	N.A.	Vertex Standard	Option
E)	External Speaker	SP-8	None	N.A.	Vertex Standard	Option

Power ratings of EUT : AC 100 - 120V , 50 – 60Hz, 860W (Max)

3.1 Overview of EUT :

Frequency Ranges : 0.030 – 60.000 MHz
Receiver Type : Triple Conversion Super-heterodyne
Mode of Operation : A1A, A3E, F3E, J1D, J2D, J3E

3.2 Port(s)/Connector(s) :

Port name	Connector type	Connector pin	Remarks
MIC	NC3FBV2	3 pin	Front
PHONES	6 ϕ Stereo	1pin	
KEY	6 ϕ Stereo	1pin	
MIC	FM214-8SMPT-NI	8pin	Rear
ANT1, 2, 3, 4, RX	MR-S	1pin	
RX OUT (Main,Sub)	BNC	1pin	
CAT	D-sub	9pin	
ROTATOR	Mini-DIN	6pin	
EXT.ALC	RCA	1pin	
BAND DATA1, 2	DIN	7pin, 8pin	
TX GND	RCA	1pin	
ACC	Mini-DIN	8pin	
TRV	RCA	1pin	
PACKET	DIN	5pin	
RTTY	DIN	4pin	
AF OUT	3.5 ϕ Stereo	1pin	
EXT.SPKR1, 2	3.5 ϕ Mono	1pin	
PATCH	RCA	1pin	
PTT	RCA	1pin	
+13.8V	RCA	1pin	
REMOTE	3.5 ϕ Mono	1pin	
DISPLAY	D-sub	15pin	
USB	USB Type-A	4pin	
AUDIO IN, OUT	3.5 ϕ Stereo	1pin	
KEY BOARD	Mini-DIN	6pin	
COM	D-sub	9pin	

3.3 Oscillator(s)/Crystal(s) :

Oscillator	Operating frequency	Board name	Remarks
16.5 MHz	16.5 MHz	CNTL Unit	Microprocessor
24.0 MHz	24.0 MHz	CNTL Unit	UART
4.9152 MHz	4.9152 MHz	CNTL Unit	KEYER
12.0 MHz	12.0 MHz	MEMORY Unit	Memory Card
18.432 MHz	18.432 MHz	DSP Unit	DSP
10.0 MHz	10.0 MHz	REF Unit	OCXO
10.0 MHz	40.0 MHz	LOCAL Unit	Local Oscillator
40.485 - 100.455 MHz	40.485 – 100.455MHz	LOCAL Unit	Local Oscillator
40.480 – 100.450 MHz	40.480 – 100.450 MHz	LOCAL Unit	Local Oscillator
10.895 – 11.652 MHz	32.955 – 34.955 MHz	LOCAL Unit	Local Oscillator
10.983 – 11.650 MHz	32.950 – 34.950 MHz	LOCAL Unit	Local Oscillator
425 kHz or 431 kHz	425 kHz or 431 kHz	LOCAL Unit	Local Oscillator
420 kHz or 426 kHz	420 kHz or 426 kHz	LOCAL Unit	Local Oscillator
6.045 MHz	6.045 MHz	LOCAL Unit	Local Oscillator
133 MHz	667 MHz	EBC365LP6	Highest Frequency

3.4 Operation Ranges :

RX Frequency	0.030000	to	60.000000 MHz
1st LO	40.485000	to	100.455000 MHz

3.5 Intermediate Frequencies :

1st	:	40.455 MHz (Upper)
2nd	:	0.455 MHz (Lower)
3rd	:	30 kHz (Upper)

SECTION 4. SUPPORT EQUIPMENT USED

The EUT was supported by the following equipment during the test.
Indication in the following left side column corresponds to Section 6.

Symbol	Item	Model No.	Serial No.	FCC ID / DoC	Manufacturer	Remarks
F)	CF Card	SDCFB-64-560	None	DoC	SanDisk	
G)	USB Memory Card	MAUSB-100	None	DoC	OLYMPUS	
H)	GPS Receiver	Etrex Venture	73800627	DoC	Garmin International	
I)	Key Board	RT7D00	TH-054EXM-37171-16Q-1253	AQ6-7D0080C0B	Dell Computer	
J)	CRT Display	D2813	TW70830537	A3KM043	Hewlett Packard	
K)	Computer	Dimension2100 MCM	3V5W41S	DoC	Dell Computer	
L)	CRT Display	E551	MY-044NEK-46632-0BF-9065	DoC	Dell Computer	
M)	Keyboard	SK-1000REW	M971229369	GYUR36SK	Dell Computer	
N)	Mouse	M-S34	LNA13038374	DZL211029	Dell Computer	
O)	Printer	C3941A	JPCD204480	B94C3941A	Hewlett Packard	

DoC : Device was tested and authorized under a Declaration of Conformity to the applicable FCC rules.

SECTION 5. CABLE (S) USED

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

Indication number in the following left side column corresponds to Section 6.

Number	Name	Length	Shield	Connector	Core
1)	MIC cable	1.00 m	Yes	Metal	
2)	KEY cable	1.50 m	Yes	Metal	
3)	PHONES cable	1.50 m	Yes	Metal	
4)	Microphone cable	0.50 m	Yes	Metal	
5)	EXT.SPKR cable	1.00 m	Yes	Metal	
6)	EXT.SPKR cable	1.00 m	Yes	Metal	
7)	KEY cable	1.50 m	Yes	Metal	
8)	ROTATOR cable	1.50 m	Yes	Metal	
9)	EXT.ALC cable	1.00 m	Yes	Metal	
10)	BAND DATA cable	1.50 m	Yes	Metal	
11)	BAND DATA cable	1.50 m	Yes	Metal	
12)	TX GND cable	1.00 m	Yes	Metal	
13)	ACC cable	1.50 m	Yes	Metal	
14)	TRV cable	1.00 m	Yes	Metal	
15)	PACKET cable	1.50 m	Yes	Metal	
16)	RTTY cable	1.50 m	Yes	Metal	
17)	AF OUT cable	2.00 m	Yes	Metal	
18)	PATCH cable	1.00 m	Yes	Metal	
19)	PTT cable	1.00 m	Yes	Metal	
20)	+13.8V cable	1.00 m	Yes	Metal	
21)	REMOTE cable	1.50 m	Yes	Metal	
22)	CAT cable	1.80 m	Yes	Metal	
23)	AUDIO cable (IN)	1.50 m	Yes	Metal	
24)	AUDIO cable (OUT)	1.50 m	Yes	Metal	

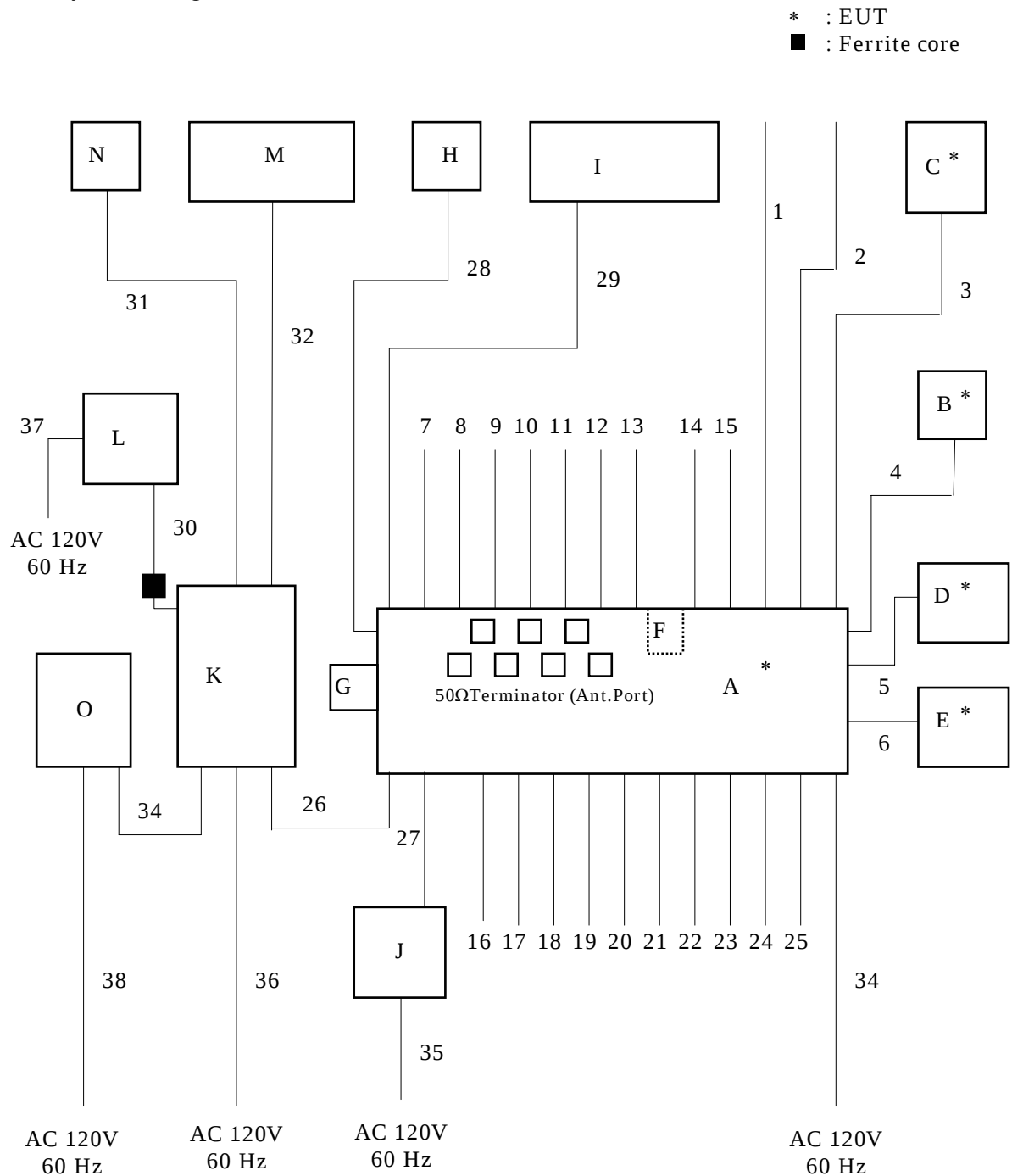
Number	Name	Length	Shield	Connector	Core
25)	Modular(LAN) cable	5.00 m	None	Plastic	
26)	CAT cable	1.80 m	Yes	Metal	
27)	CRT Display cable	1.50 m	Yes	Metal	
28)	COM cable	2.00 m	Yes	Metal	
29)	Keyboard cable	2.00 m	Yes	Metal	
30)	CRT Display cable	1.50 m	Yes	Metal	Fixed × 1
31)	Mouse cable	1.00 m	None	Metal	
32)	Keyboard cable	1.00 m	None	Metal	
33)	Centronics cable	2.30 m	Yes	Metal	
34)	Power cable for EUT	1.80 m	None		
35)	Power cable for CRT Display (J)	1.80 m	None		
36)	Power cable for Computer	1.80 m	None		
37)	Power cable for CRT Display (L)	1.80 m	None		
38)	Power cable for Printer	1.60 m	None		

SECTION 6. CONSTRUCTION OF EQUIPMENT

The construction of EUT during the test was as follows.

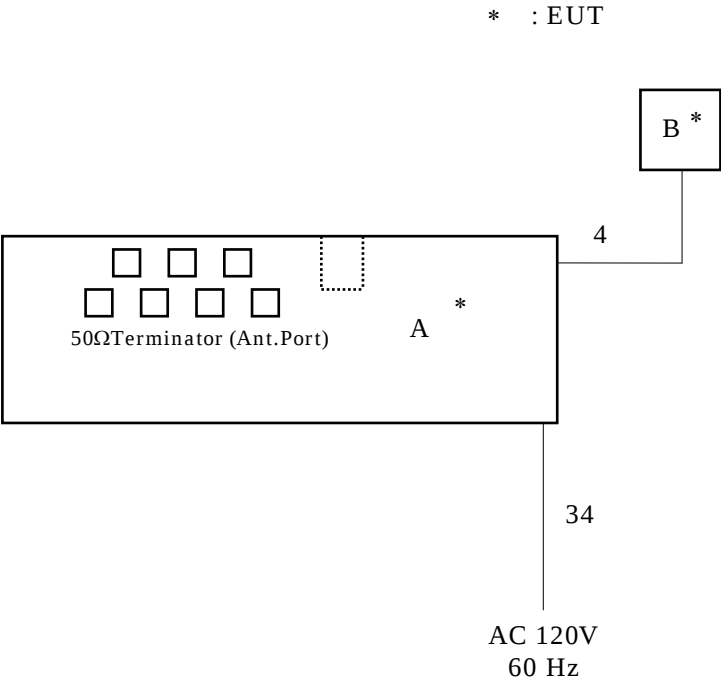
6.1 Conducted Voltages on Mains Port Radiated Electric Field

System configuration



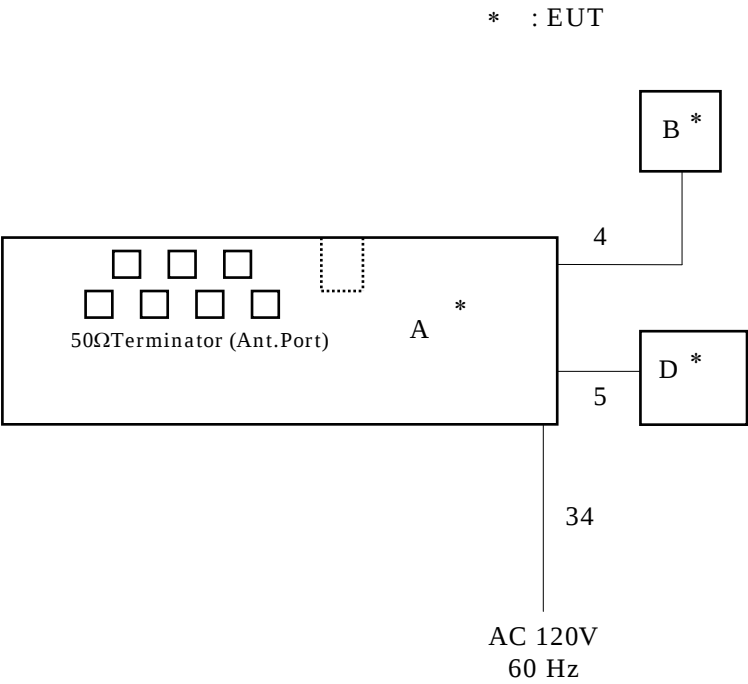
6.2 Conducted Power on Antenna Port

System configuration



6.3 38dB Rejection

System configuration



Symbols or numbers assigned to equipment or cables on this diagram are corresponded to the symbols or numbers assigned to equipment or cables on tables in Sections 3 to 5.

SECTION 7. OPERATING CONDITIONS

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

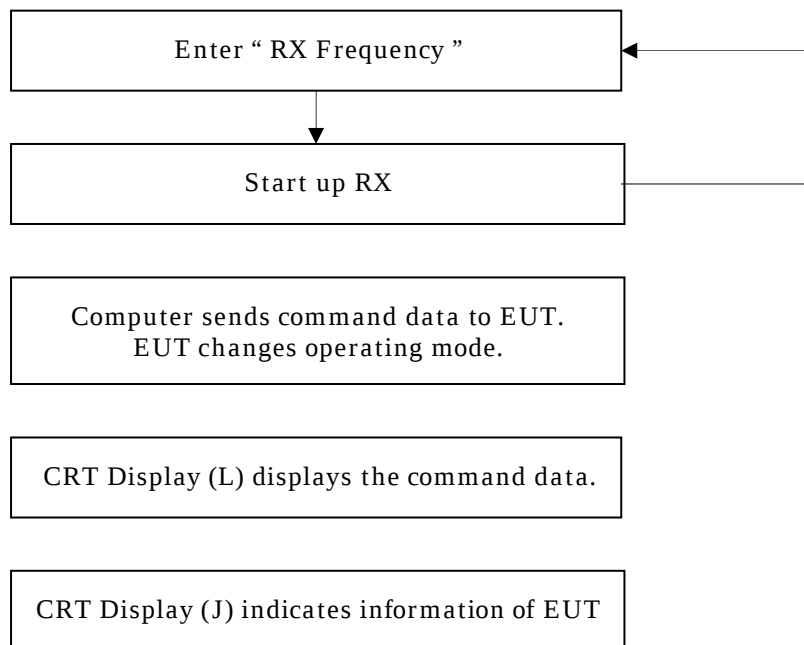
7.1 Operating condition

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

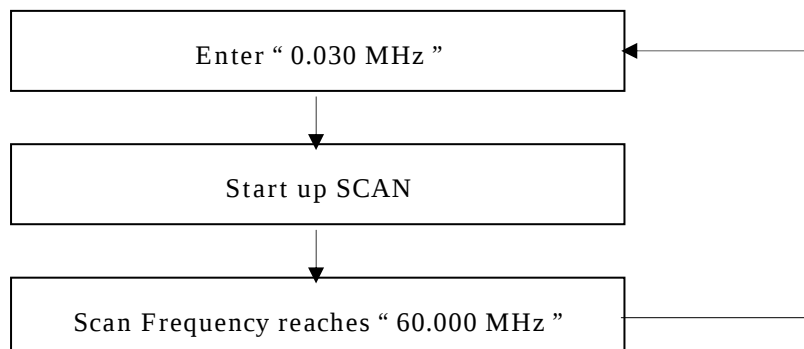
7.2 Operating flow

Following operations were performed continuously.

7.2.1 RX mode



7.2.2 VFO Scan mode

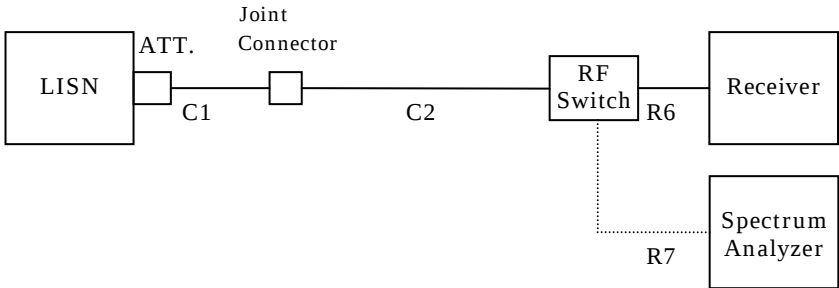


SECTION 8. TEST PROCEDURE(S)

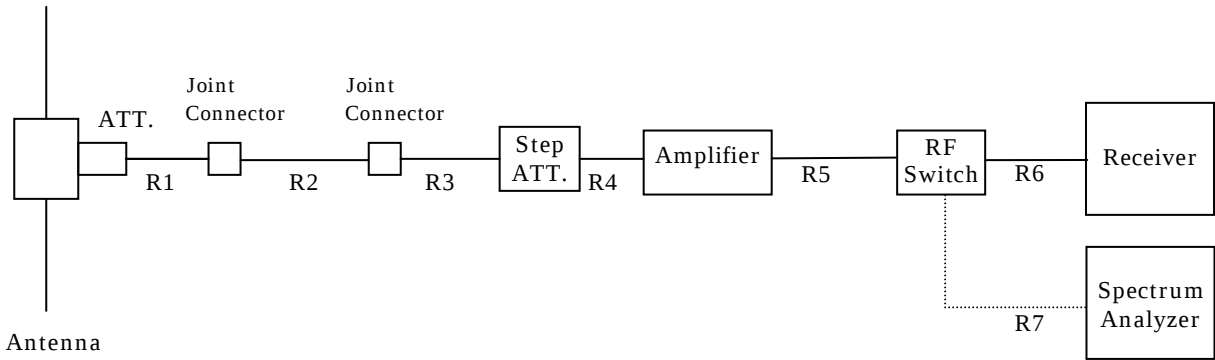
Test was carried out under the following conditions.
Test was carried out with no deviations from standards and test methods.

Subject	Scanned frequency
Conducted Voltages on Mains Port	0.15 – 30 MHz
Radiated Electric Field	30 – 5000 MHz

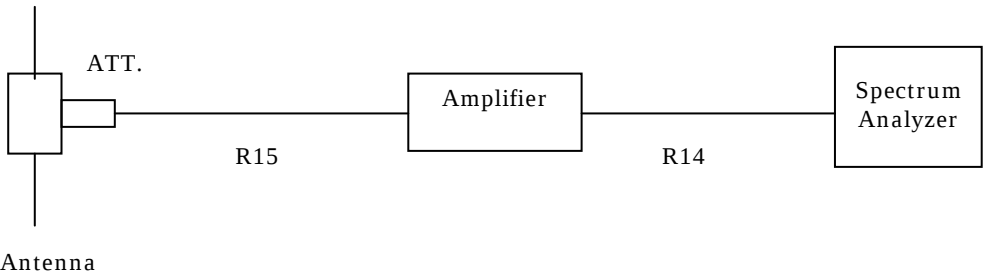
Schema for the conducted voltages on mains port measurement



Schema for the radiated electric field measurement



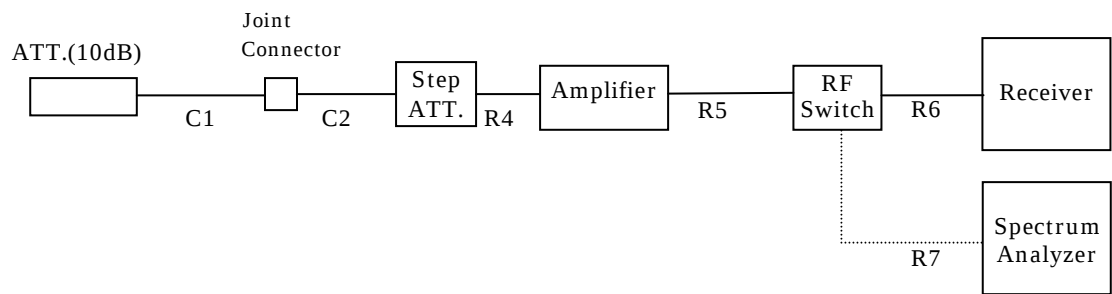
Above 1GHz



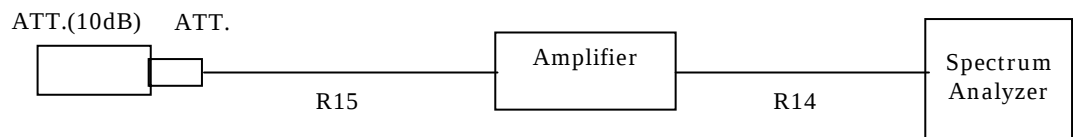
Test was carried out under the following conditions.
Test was carried out with no deviations from standards and test methods.

Subject	Scanned frequency
Conducted Power on Antenna Port	30 – 5000 MHz
38dB Rejection	0.030 – 60 MHz

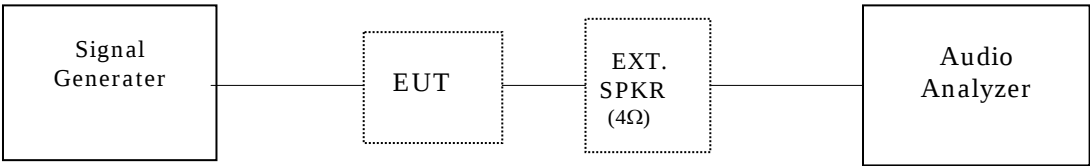
Schema for the conducted power on antenna port measurement



Above 1GHz



Schema for the 38dB rejection measurement



Summary ;

8.1 Conducted Voltages on Mains Port

8.1.1 Equipment Setup

System configuration and Equipment setup are shown on Section 6 and Annex A.

8.1.1.1 Tabletop Equipment

EUT is placed on the wooden table, the top of which is 0.8 meter above the metal ground plane.

8.1.1.2 Interconnecting Cables

Excess part of the interconnecting cables longer than 1 meter are bundled in the center. Cables that hang closer than 40 cm to the ground plane is folded back and forth forming bundle 30 to 40 cm long, hanging approx, in the middle between ground plane and table.

8.1.1.3 AC Power Cable

AC power cable for EUT is connected to one LISN which is placed on the ground plane. The LISN is placed in 80 cm from the nearest part of EUT chassis. The excess power cable is bundled in the center, or shortened to appropriate length. AC cables except from the EUT are connected second LISN.

8.1.2 Measuring Instruments

Measuring instruments list and their calibration schedule are shown on Section 10. The brief description are as follows;

8.1.2.1 Spectrum Analyzer

The Spectrum analyzer is used for preliminary measurement.

8.1.2.2 EMI Test Receiver

The Quasi-peak detector (IF bandwidth : 10 kHz) and average detector (IF bandwidth : 10 kHz) built in test receiver is used for final measurement. The test receiver is complied with the specification of the CISPR publication 16.

8.1.2.3 LISN

Two 50 μ H//50 Ω LISN are used. The chassis of the LISN is bonded to the ground plane by the copper blade. One LISN is connected to the EUT. Other LISN (2nd LISN) is connected to the support equipment. The signal output of the 2nd LISN is terminated with a 50 Ω termination.

8.1.3 Test Procedure

8.1.3.1 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.

8.1.3.2 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.

8.2 Radiated Electric Field

8.2.1 Equipment Setup

System configuration and Equipment setup are shown on Section 6 and Annex A.

8.2.1.1 Tabletop Equipment

EUT is placed on the wooden table, the top of which is 0.8meter above the metal ground plane (turntable).

8.2.1.2 Interconnecting Cables

Excess part of the interconnecting cables longer than 1 meter are bundled in the center. Cables that hang closer than 40 cm to the ground plane is folded back and forth forming bundle 30 to 40 cm long, hanging approx, in the middle between ground plane and table.

8.2.2 Measuring Instruments

Measuring instruments list and their calibration schedule are shown on Section 10. The brief description are as follows;

8.2.2.1 Antennas

The broadband Tri-log antenna is used for measurement on the frequency range 30 – 1000 MHz.

The Double ridged guide antenna is used for frequency higher than 1000 MHz.

If uncertain result was obtained, the broadband antenna is replaced by the half wave length dipole, then measurement is carried out over again.

8.2.2.2 Pre-amplifier

The broadband pre-amplifier is used for Radiated Electric Field measurement.

The signal to noise ratio is improved by using pre-amplifier.

8.2.2.3 Spectrum Analyzer

The spectrum analyzer is used for preliminary measurement of frequency range 30 – 1000 MHz, and also used for final measurement of higher than 1000 MHz (Resolution bandwidth : 1 MHz).

8.2.2.4 EMI Test Receiver

The Quasi-peak detector (IF bandwidth : 120 kHz) built in test receiver is used for final measurement of the frequency 30 – 1000 MHz.

The test receiver is complied with the specification of the CISPR publication 16.

8.2.2.5 Turntable

The turntable is capable for EUT weight and rotatable 0 to 360 degree horizontally by remote control in the test room.

8.2.2.6 Antenna Mast

The antenna mast is attachable to all antennas described on clause 8.2.2.1 and antenna height is adjustable 1 to 4 meters continuously by remote control at the test room, and antenna polarization is also changed by the remote control.

8.2.3 Test Procedure

8.2.3.1 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.

8.2.3.2 Final Measurement

The EUT operated in the worst emission condition found by the preliminary test.

The turntable azimuth (EUT direction) and antenna height 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.

When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

8.3 Conducted Power on Antenna Port

8.3.1 Equipment Setup

System configuration and Equipment setup are shown on Section 6 and Annex A.

8.3.1.1 Tabletop Equipment

EUT is placed on the wooden table, the top of which is 0.8 meter above the metal ground plane.

8.3.1.2 Interconnecting Cables

Excess part of the interconnecting cables longer than 1 meter are bundled in the center. Cables that hang closer than 40 cm to the ground plane is folded back and forth forming bundle 30 to 40 cm long, hanging approx, in the middle between ground plane and table.

8.3.2 Measuring Instruments

Measuring instruments list and their calibration schedule are shown on Section 10. The brief description are as follows;

8.3.2.1 Spectrum Analyzer

The Spectrum analyzer is used for preliminary measurement of frequency range 30 – 1000 MHz, and also used for final measurement of higher than 1000 MHz (Resolution bandwidth : 1 MHz).

8.3.2.2 EMI Test Receiver

The Quasi-peak detector (IF bandwidth : 120 kHz) built in test receiver is used for final measurement of the frequency 30 – 1000 MHz.

The test receiver is complied with the specification of the CISPR publication 16.

8.3.3 Test Procedure

8.3.3.1 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.

8.3.3.2 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.

8.4 38dB Rejection

8.4.1 Equipment Setup

System configuration and Equipment setup are shown on Section 6 and Annex A.

8.4.1.1 Tabletop Equipment

EUT is placed on the wooden table, the top of which is 0.8 meter above the metal ground plane.

8.4.2 Measuring Instruments

Measuring instruments list and their calibration schedule are shown on Section 10. The brief description is as follows;

8.4.3 Test Procedure

8.4.3.1 Preliminary Measurement

The Signal Generator 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 – 60.000 MHz (5 kHz Step).

Scan stopped point, was the detected frequency.

8.4.3.2 Final Measurement

Injected 12dB SINAD Reading (SG RF Output)

The EUT condition :

Frequency = Scan stopped point

The Signal Generator condition :

Frequency = Cellular point

Detected 12dB SINAD Reading (SG RF Output)

The EUT condition :

Frequency = Scan stopped point

The Signal Generator condition :

Frequency = Scan stopped point

Under the requirements of Section 15.121(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

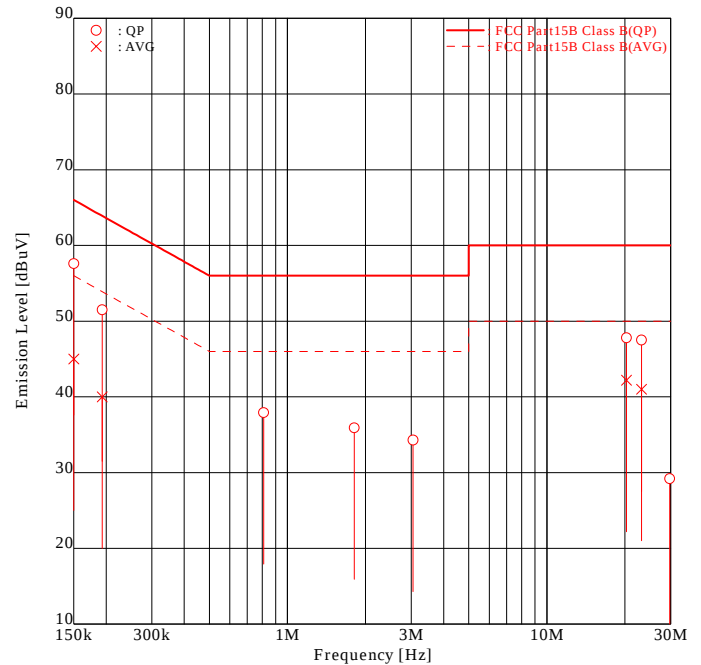
9.1.1 RX 0.030MHz mode

Akzo Nobel K. K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 0.030MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY MODE			READING		FACTOR		EMISSION		LIMIT	MARGIN	
[No]	[MHz]		[dBuV]		[dB]		[dBuV]		[dBuV]	[dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	<u>51.9</u>	51.8	5.7	5.6	<u>57.6</u>	57.4	66.0	<u>8.4</u>	8.6
2	0.1500	AVG	<u>39.3</u>	39.2	5.7	5.6	<u>45.0</u>	44.8	56.0	<u>11.0</u>	11.2
3	0.1931	QP	<u>45.9</u>	46.0	5.6	5.5	<u>51.5</u>	51.5	63.9	<u>12.4</u>	12.4
4	0.1931	AVG	<u>34.4</u>	34.1	5.6	5.5	<u>40.0</u>	39.6	53.9	<u>13.9</u>	14.3
5	0.8101	QP	<u>32.4</u>	31.2	5.5	5.5	<u>37.9</u>	36.7	56.0	<u>18.1</u>	19.3
6	1.8106	QP	<u>30.2</u>	28.3	5.7	5.7	<u>35.9</u>	34.0	56.0	<u>20.1</u>	22.0
7	3.0491	QP	<u>28.4</u>	28.6	5.8	5.7	<u>34.2</u>	34.3	56.0	<u>21.8</u>	21.7
8	20.2800	QP	<u>40.1</u>	<u>40.7</u>	6.9	7.1	<u>47.0</u>	<u>47.8</u>	60.0	<u>13.0</u>	<u>12.2</u>
9	20.2800	AVG	<u>34.5</u>	<u>35.1</u>	6.9	7.1	<u>41.4</u>	<u>42.2</u>	50.0	<u>8.6</u>	<u>7.8</u>
10	23.1560	QP	<u>39.0</u>	<u>40.3</u>	6.9	7.2	<u>45.9</u>	<u>47.5</u>	60.0	<u>14.1</u>	<u>12.5</u>
11	23.1560	AVG	<u>32.7</u>	<u>33.8</u>	6.9	7.2	<u>39.6</u>	<u>41.0</u>	50.0	<u>10.4</u>	<u>9.0</u>
12	29.7600	QP	<u>22.3</u>	<u>19.7</u>	6.9	7.6	<u>29.2</u>	<u>27.3</u>	60.0	<u>30.8</u>	<u>32.7</u>

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(LISN,Pad,Cable)

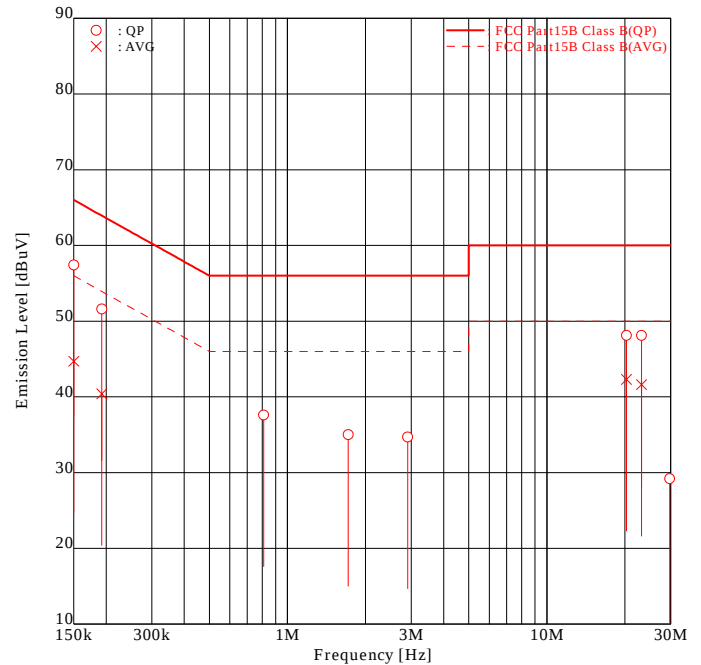
9.1.2 RX 30MHz mode

Akzo Nobel K. K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY MODE			READING		FACTOR		EMISSION		LIMIT	MARGIN	
[No]	[MHz]		[dBuV]		[dB]		[dBuV]		[dBuV]	[dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	<u>51.7</u>	51.6	5.7	5.6	<u>57.4</u>	57.2	66.0	<u>8.6</u>	8.8
2	0.1500	AVG	<u>39.0</u>	39.0	5.7	5.6	<u>44.7</u>	44.6	56.0	<u>11.3</u>	11.4
3	0.1925	QP	46.0	45.9	5.6	5.5	51.6	51.4	63.9	12.3	12.5
4	0.1925	AVG	34.6	34.9	5.6	5.5	40.2	40.4	53.9	13.7	13.5
5	0.8102	QP	32.1	30.9	5.5	5.5	37.6	36.4	56.0	18.4	19.6
6	1.7144	QP	29.3	28.1	5.7	5.7	35.0	33.8	56.0	21.0	22.2
7	2.9058	QP	28.9	28.2	5.8	5.7	34.7	33.9	56.0	21.3	22.1
8	20.2800	QP	40.4	<u>41.0</u>	6.9	7.1	47.3	<u>48.1</u>	60.0	12.7	<u>11.9</u>
9	20.2800	AVG	34.8	<u>35.2</u>	6.9	7.1	41.7	<u>42.3</u>	50.0	8.3	<u>7.7</u>
10	23.1560	QP	40.2	<u>40.9</u>	6.9	7.2	47.1	<u>48.1</u>	60.0	12.9	<u>11.9</u>
11	23.1560	AVG	33.5	<u>34.4</u>	6.9	7.2	40.4	<u>41.6</u>	50.0	9.6	<u>8.4</u>
12	29.7600	QP	22.3	19.8	6.9	7.6	29.2	27.4	60.0	30.8	32.6

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(LISN,Pad,Cable)

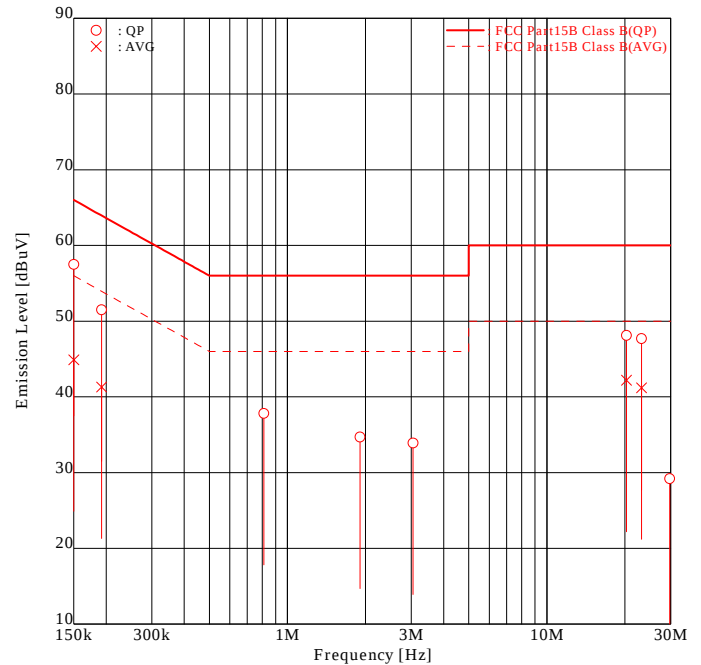
9.1.3 RX 60MHz mode

Akzo Nobel K. K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 60MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY MODE			READING		FACTOR		EMISSION		LIMIT	MARGIN	
[No]	[MHz]		[dBuV]		[dB]		[dBuV]		[dBuV]	[dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	<u>51.8</u>	51.7	5.7	5.6	<u>57.5</u>	57.3	66.0	<u>8.5</u>	8.7
2	0.1500	AVG	<u>39.2</u>	39.1	5.7	5.6	<u>44.9</u>	44.7	56.0	<u>11.1</u>	11.3
3	0.1922	QP	45.9	45.3	5.6	5.5	51.5	50.8	63.9	12.4	13.1
4	0.1922	AVG	34.6	35.8	5.6	5.5	40.2	41.3	53.9	13.7	12.6
5	0.8105	QP	32.3	30.9	5.5	5.5	37.8	36.4	56.0	18.2	19.6
6	1.9053	QP	29.0	28.1	5.7	5.7	34.7	33.8	56.0	21.3	22.2
7	3.0496	QP	28.1	28.2	5.8	5.7	33.9	33.9	56.0	22.1	22.1
8	20.2800	QP	40.1	<u>41.0</u>	6.9	7.1	47.0	<u>48.1</u>	60.0	13.0	<u>11.9</u>
9	20.2800	AVG	34.4	<u>35.1</u>	6.9	7.1	41.3	<u>42.2</u>	50.0	8.7	<u>7.8</u>
10	23.1560	QP	38.4	<u>40.5</u>	6.9	7.2	45.3	<u>47.7</u>	60.0	14.7	<u>12.3</u>
11	23.1560	AVG	32.2	<u>34.0</u>	6.9	7.2	39.1	<u>41.2</u>	50.0	10.9	<u>8.8</u>
12	29.7600	QP	22.3	19.7	6.9	7.6	29.2	27.3	60.0	30.8	32.7

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

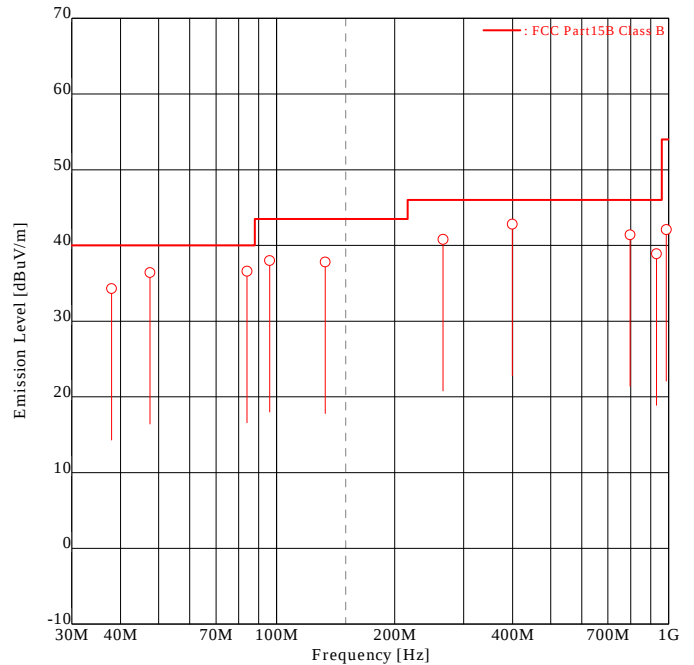
9.2.1 RX 0.030MHz mode (30 – 1000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 0.030MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	[MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	37.94	-	42.4	-8.1	-8.1	-	34.3	40.0	-	5.7
2	47.50	-	<u>43.9</u>	-7.5	-7.5	-	<u>36.4</u>	40.0	-	<u>3.6</u>
3	84.00	<u>48.2</u>	-	-11.6	-11.6	<u>36.6</u>	-	40.0	<u>3.4</u>	-
4	96.01	-	<u>49.2</u>	-11.2	-11.2	-	<u>38.0</u>	43.5	-	<u>5.5</u>
5	132.98	44.6	-	-6.8	-6.8	37.8	-	43.5	5.7	-
6	265.97	<u>46.6</u>	-	-5.8	-5.8	<u>40.8</u>	-	46.0	<u>5.2</u>	-
7	398.95	<u>44.6</u>	41.1	-1.8	-1.8	<u>42.8</u>	39.3	46.0	<u>3.2</u>	6.7
8	797.90	<u>34.3</u>	-	7.1	7.1	<u>41.4</u>	-	46.0	<u>4.6</u>	-
9	930.88	-	29.2	9.7	9.7	-	38.9	46.0	-	7.1
10	986.44	-	31.7	10.4	10.4	-	42.1	54.0	-	11.9

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

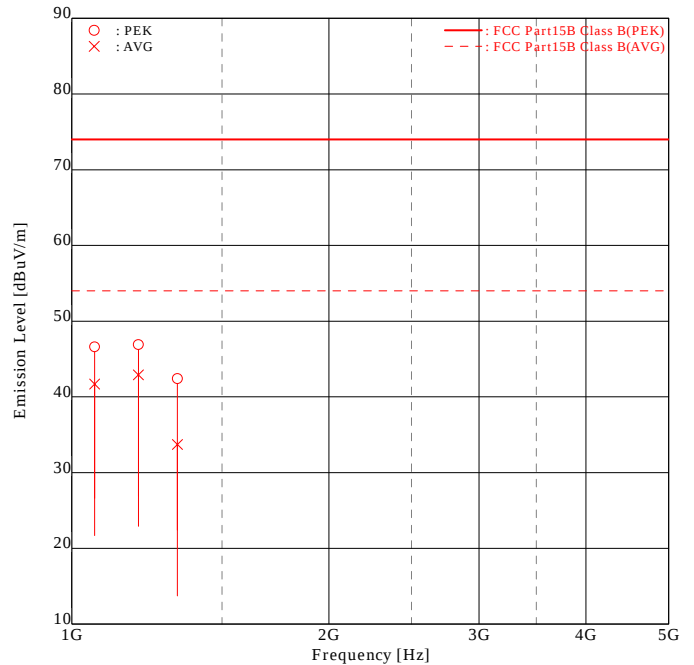
9.2.2 RX 0.030MHz mode (1000 – 5000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 0.030MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1063.82	PEK	-	<u>47.3</u>	-0.7	-0.7	-	<u>46.6</u>	74.0	-	<u>27.4</u>
2	1063.82	AVG	-	<u>42.4</u>	-0.7	-0.7	-	<u>41.7</u>	54.0	-	<u>12.3</u>
3	1196.92	PEK	-	<u>47.5</u>	-0.6	-0.6	-	<u>46.9</u>	74.0	-	<u>27.1</u>
4	1196.92	AVG	-	<u>43.5</u>	-0.6	-0.6	-	<u>42.9</u>	54.0	-	<u>11.1</u>
5	1329.90	PEK	42.7	<u>42.9</u>	-0.5	-0.5	42.2	<u>42.4</u>	74.0	31.8	<u>31.6</u>
6	1329.90	AVG	34.1	<u>34.2</u>	-0.5	-0.5	33.6	<u>33.7</u>	54.0	20.4	<u>20.3</u>

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamplifier)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

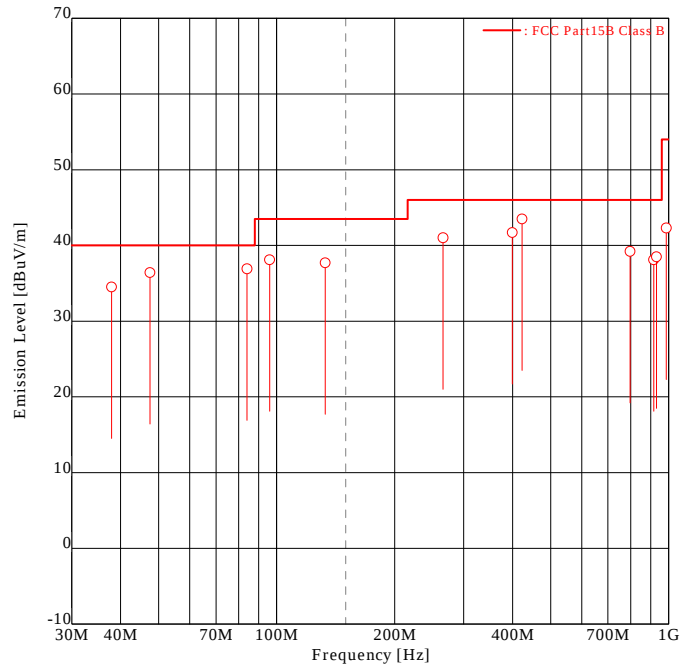
9.2.3 RX 30MHz mode (30 – 1000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	[MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	37.94	-	42.6	-8.1	-8.1	-	34.5	40.0	-	5.5
2	47.50	-	<u>43.9</u>	-7.5	-7.5	-	<u>36.4</u>	40.0	-	<u>3.6</u>
3	84.00	<u>48.5</u>	-	-11.6	-11.6	<u>36.9</u>	-	40.0	<u>3.1</u>	-
4	96.01	-	<u>49.3</u>	-11.2	-11.2	-	<u>38.1</u>	43.5	-	<u>5.4</u>
5	132.98	44.5	-	-6.8	-6.8	37.7	-	43.5	5.8	-
6	265.97	<u>46.8</u>	-	-5.8	-5.8	<u>41.0</u>	-	46.0	<u>5.0</u>	-
7	398.95	<u>43.5</u>	-	-1.8	-1.8	<u>41.7</u>	-	46.0	<u>4.3</u>	-
8	422.72	<u>44.6</u>	41.7	-1.1	-1.1	<u>43.5</u>	40.6	46.0	<u>2.5</u>	5.4
9	797.90	32.1	-	7.1	7.1	39.2	-	46.0	6.8	-
10	915.93	-	28.6	9.5	9.5	-	38.1	46.0	-	7.9
11	930.88	-	28.8	9.7	9.7	-	38.5	46.0	-	7.5
12	986.44	-	31.9	10.4	10.4	-	42.3	54.0	-	11.7

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

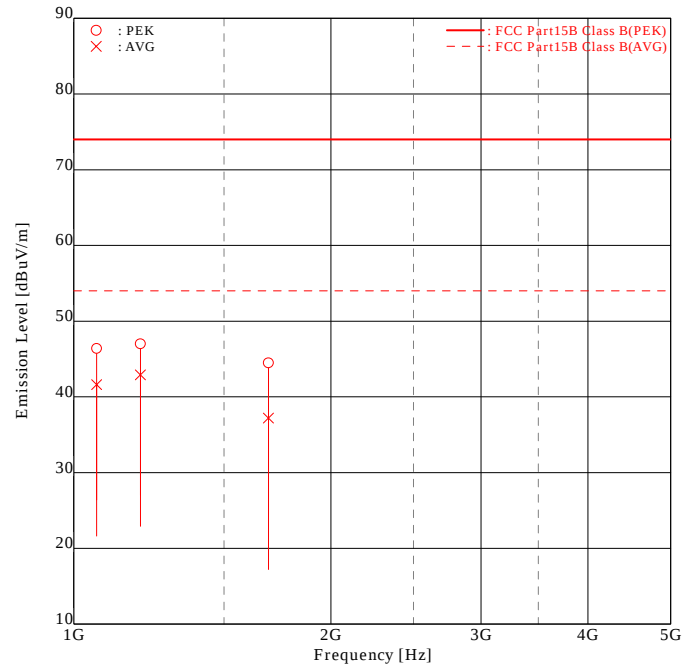
9.2.4 RX 30MHz mode (1000 – 5000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1063.82	PEK	-	<u>47.1</u>	-0.7	-0.7	-	<u>46.4</u>	74.0	-	<u>27.6</u>
2	1063.82	AVG	-	<u>42.3</u>	-0.7	-0.7	-	<u>41.6</u>	54.0	-	<u>12.4</u>
3	1196.92	PEK	-	<u>47.6</u>	-0.6	-0.6	-	<u>47.0</u>	74.0	-	<u>27.0</u>
4	1196.92	AVG	-	<u>43.5</u>	-0.6	-0.6	-	<u>42.9</u>	54.0	-	<u>11.1</u>
5	1690.95	PEK	<u>43.6</u>	43.3	0.9	0.9	<u>44.5</u>	44.2	74.0	<u>29.5</u>	29.8
6	1690.95	AVG	<u>36.3</u>	35.3	0.9	0.9	<u>37.2</u>	36.2	54.0	<u>16.8</u>	17.8

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamplifier)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

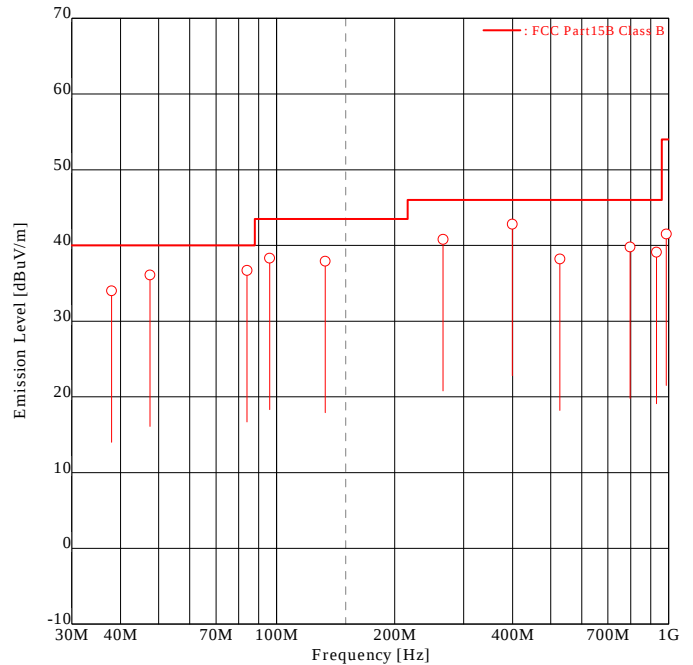
9.2.5 RX 60MHz mode (30 – 1000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 60MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	[MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	37.94	-	42.1	-8.1	-8.1	-	34.0	40.0	-	6.0
2	47.50	-	<u>43.6</u>	-7.5	-7.5	-	<u>36.1</u>	40.0	-	<u>3.9</u>
3	84.00	<u>48.3</u>	-	-11.6	-11.6	<u>36.7</u>	-	40.0	<u>3.3</u>	-
4	96.01	-	<u>49.5</u>	-11.2	-11.2	-	<u>38.3</u>	43.5	-	<u>5.2</u>
5	132.98	<u>44.7</u>	-	-6.8	-6.8	<u>37.9</u>	-	43.5	<u>5.6</u>	-
6	265.97	<u>46.6</u>	-	-5.8	-5.8	<u>40.8</u>	-	46.0	<u>5.2</u>	-
7	398.95	<u>44.6</u>	38.9	-1.8	-1.8	<u>42.8</u>	37.1	46.0	<u>3.2</u>	8.9
8	528.00	-	36.5	1.7	1.7	-	38.2	46.0	-	7.8
9	797.90	32.7	-	7.1	7.1	39.8	-	46.0	6.2	-
10	930.88	-	29.4	9.7	9.7	-	39.1	46.0	-	6.9
11	986.44	-	31.1	10.4	10.4	-	41.5	54.0	-	12.5

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

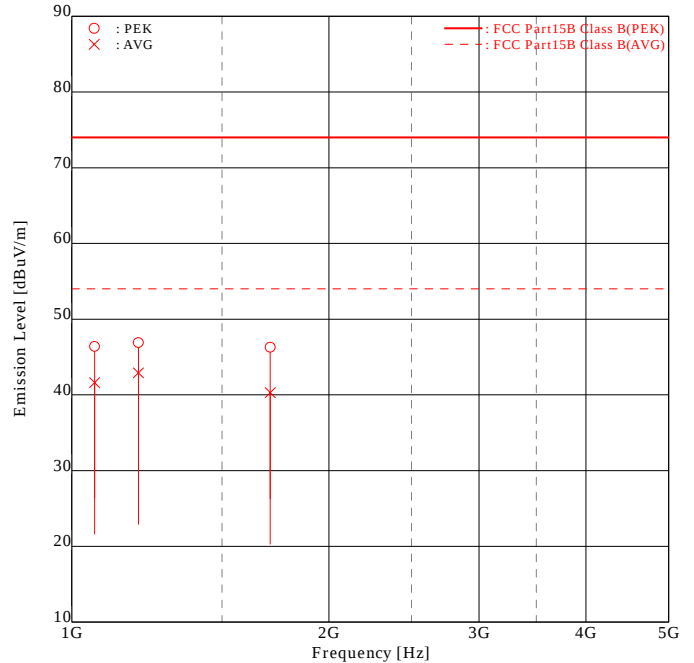
9.2.6 RX 60MHz mode (1000 – 5000MHz)

Akzo Nobel K. K.

Kashima No.1 Test Site

Radiated Electric Field

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 60MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 18 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.0 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1063.82	PEK	-	<u>47.1</u>	-0.7	-0.7	-	<u>46.4</u>	74.0	-	<u>27.6</u>
2	1063.82	AVG	-	<u>42.3</u>	-0.7	-0.7	-	<u>41.6</u>	54.0	-	<u>12.4</u>
3	1196.92	PEK	-	<u>47.5</u>	-0.6	-0.6	-	<u>46.9</u>	74.0	-	<u>27.1</u>
4	1196.92	AVG	-	<u>43.5</u>	-0.6	-0.6	-	<u>42.9</u>	54.0	-	<u>11.1</u>
5	1707.78	PEK	<u>45.3</u>	44.3	1.0	1.0	<u>46.3</u>	45.3	74.0	<u>27.7</u>	28.7
6	1707.78	AVG	<u>39.3</u>	37.4	1.0	1.0	<u>40.3</u>	38.4	54.0	<u>13.7</u>	15.6

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamplifier)

ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

9.3 Conducted Power on Antenna Port

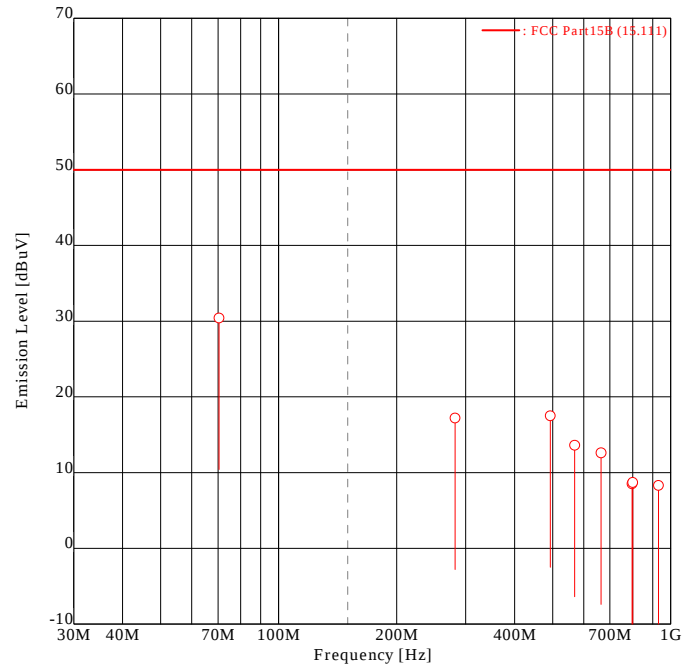
9.3.1 RX 30MHz mode (30 – 1000MHz) : ANT1

Akzo Nobel K. K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	70.4500	<u>46.6</u>	-16.2	<u>30.4</u>	50.0	<u>19.6</u>
2	281.7600	<u>32.7</u>	-15.5	<u>17.2</u>	50.0	<u>32.8</u>
3	493.2200	<u>32.4</u>	-14.9	<u>17.5</u>	50.0	<u>32.5</u>
4	569.1000	<u>28.8</u>	-15.2	<u>13.6</u>	50.0	<u>36.4</u>
5	664.9200	<u>26.9</u>	-14.3	<u>12.6</u>	50.0	<u>37.4</u>
6	797.9000	23.3	-14.8	8.5	50.0	41.5
7	800.0000	<u>23.5</u>	-14.8	<u>8.7</u>	50.0	<u>41.3</u>
8	930.8900	22.2	-13.9	8.3	50.0	41.7

Higher six points are underlined.

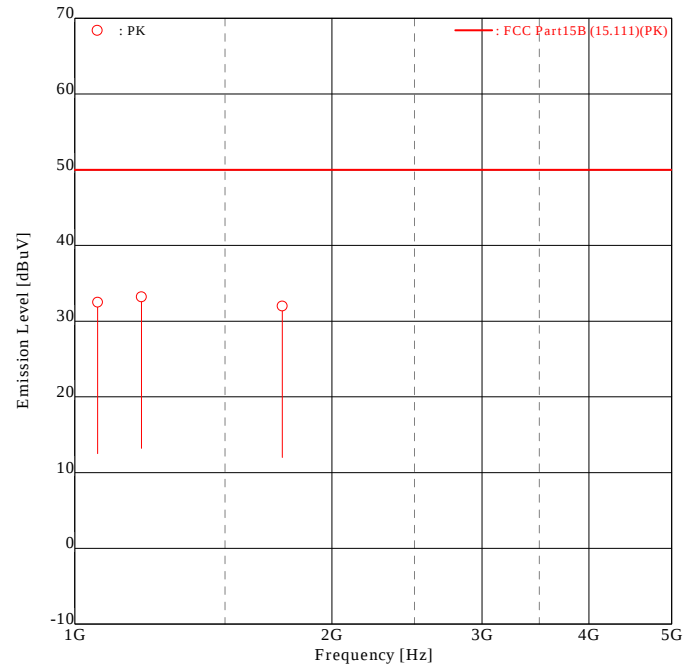
Other frequencies : Below the FCC Part15B (15.111) limit

Emission Level = Read + Factor(Pad,Cable,Preamplifier)

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

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT1)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1063.7800	<u>52.1</u>	-19.6	<u>32.5</u>	50.0	<u>17.5</u>
2	1196.8400	<u>52.5</u>	-19.3	<u>33.2</u>	50.0	16.8
3	1749.8300	<u>50.3</u>	-18.3	<u>32.0</u>	50.0	<u>18.0</u>

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

9.3.3 VFO Scan mode (ANT1)

< Graph number #1 >

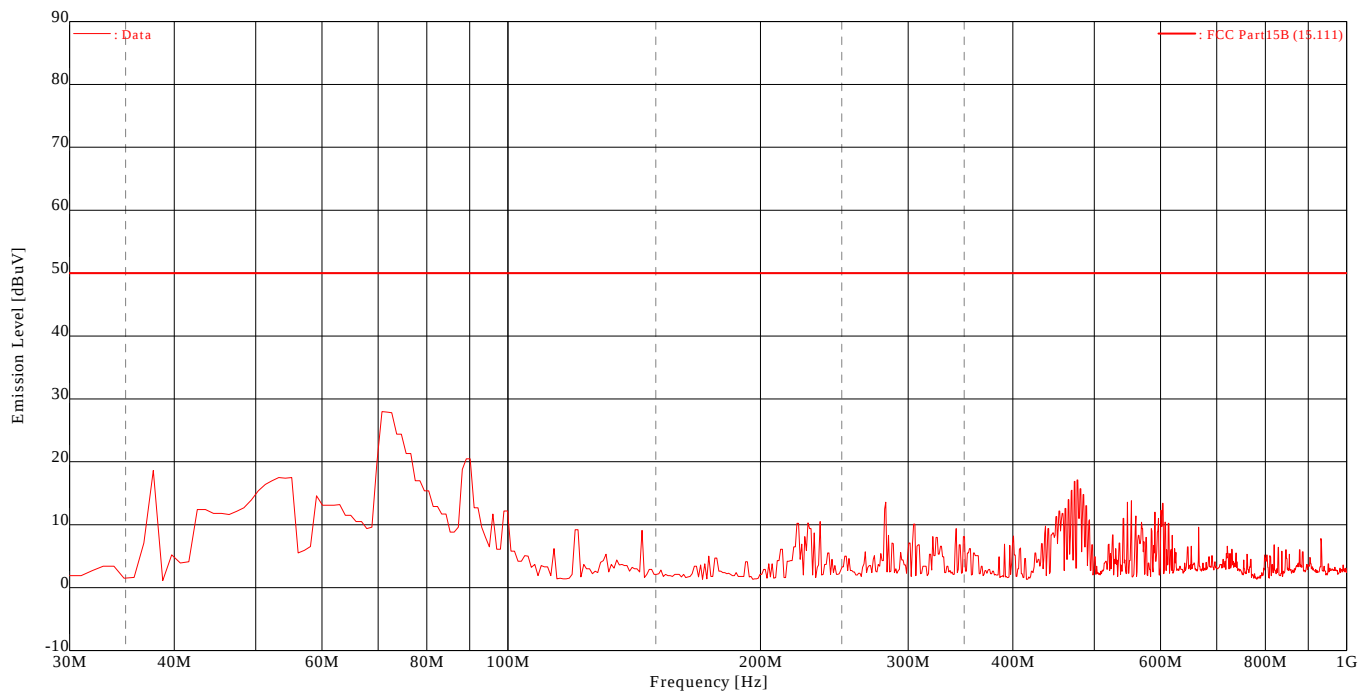
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/33.0%

Date tested : Feb 15 2005
Company : Vertex Standard Co., Ltd.
EUT Name : HF Transceiver
Model number : FT DX9000D
Serial number : 5D000001

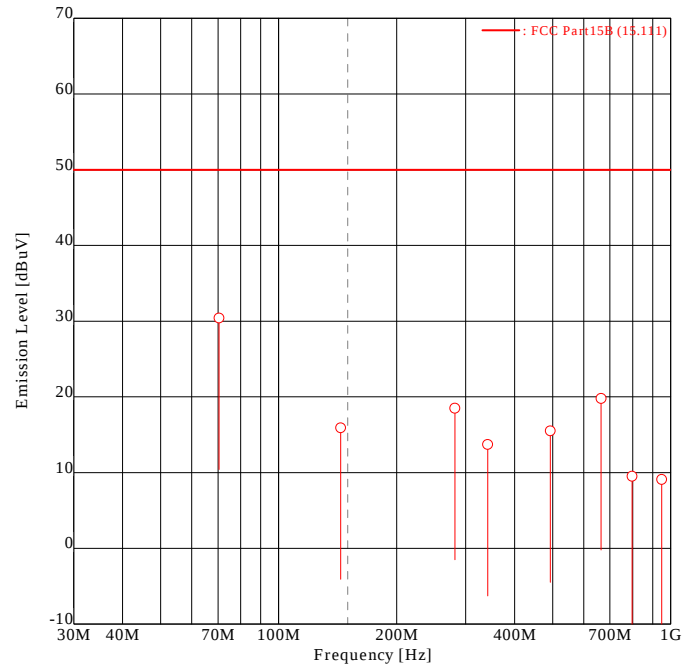
Test mode : VFO Scan (ANT1)
Power source : AC120V/60Hz
File number : ANKK-105041
Engineer : Kazuo Masuda
Note : Band : 0.030 - 60.000MHz



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

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT2)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

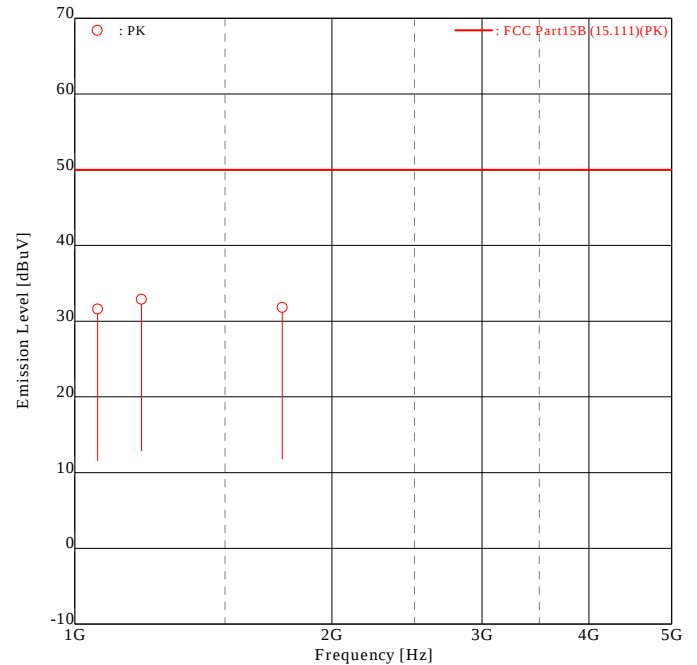
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	70.4500	<u>46.6</u>	-16.2	<u>30.4</u>	50.0	<u>19.6</u>
2	144.0100	<u>31.9</u>	-16.0	<u>15.9</u>	50.0	<u>34.1</u>
3	281.7000	<u>34.0</u>	-15.5	<u>18.5</u>	50.0	<u>31.5</u>
4	341.4600	<u>29.2</u>	-15.5	<u>13.7</u>	50.0	<u>36.3</u>
5	493.2200	<u>30.4</u>	-14.9	<u>15.5</u>	50.0	<u>34.5</u>
6	664.9200	<u>34.1</u>	-14.3	<u>19.8</u>	50.0	<u>30.2</u>
7	797.9100	24.3	-14.8	9.5	50.0	40.5
8	948.5000	23.2	-14.1	9.1	50.0	40.9

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

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

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT2)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1063.7800	<u>51.2</u>	-19.6	<u>31.6</u>	50.0	<u>18.4</u>
2	1196.8400	<u>52.2</u>	-19.3	<u>32.9</u>	50.0	<u>17.1</u>
3	1749.8300	<u>50.1</u>	-18.3	<u>31.8</u>	50.0	<u>18.2</u>

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

9.3.6 VFO Scan mode (ANT2)

< Graph number #2 >

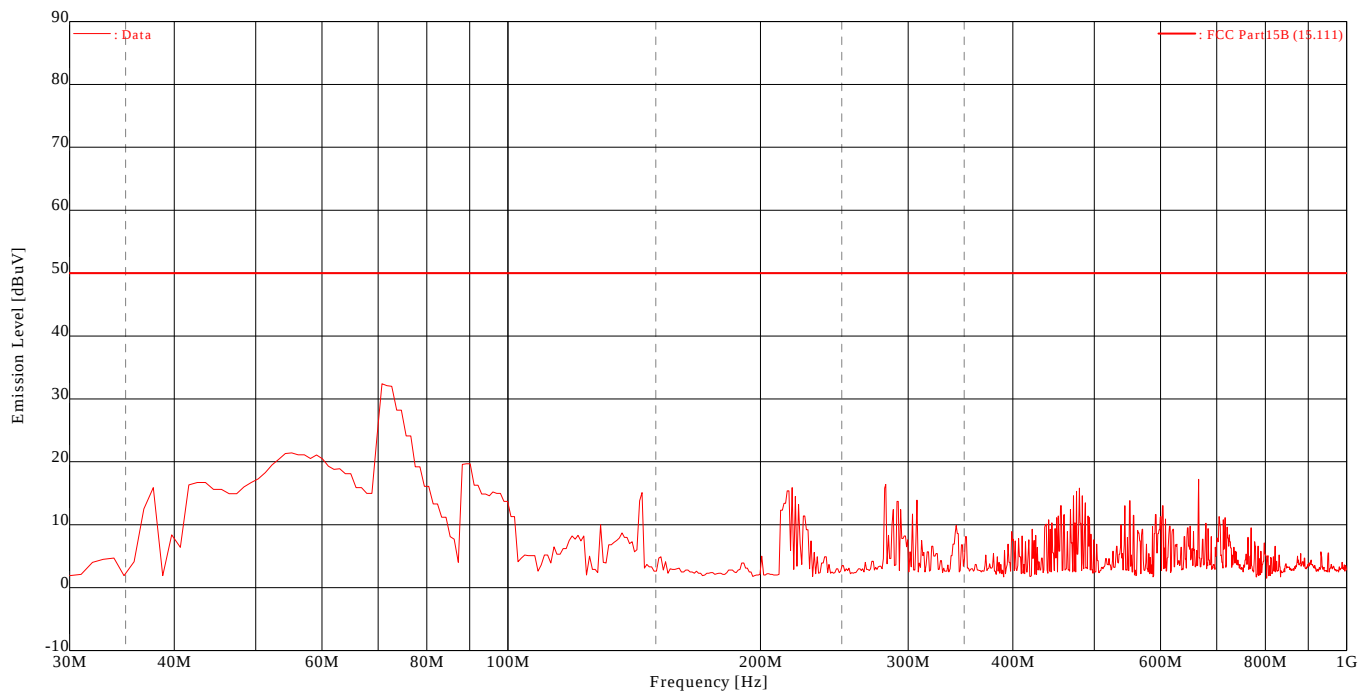
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/33.0%

Date tested : Feb 15 2005
Company : Vertex Standard Co., Ltd.
EUT Name : HF Transceiver
Model number : FT DX9000D
Serial number : 5D000001

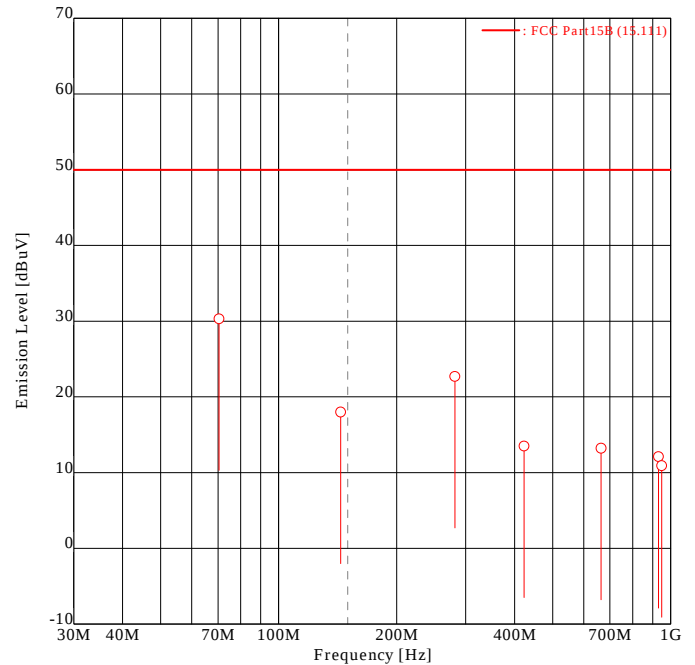
Test mode : VFO Scan (ANT2)
Power source : AC120V/60Hz
File number : ANKK-105041
Engineer : Kazuo Masuda
Note : Band : 0.030 - 60.000MHz



9.3.7 RX 30MHz mode (30 – 1000MHz) : ANT3

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT3)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

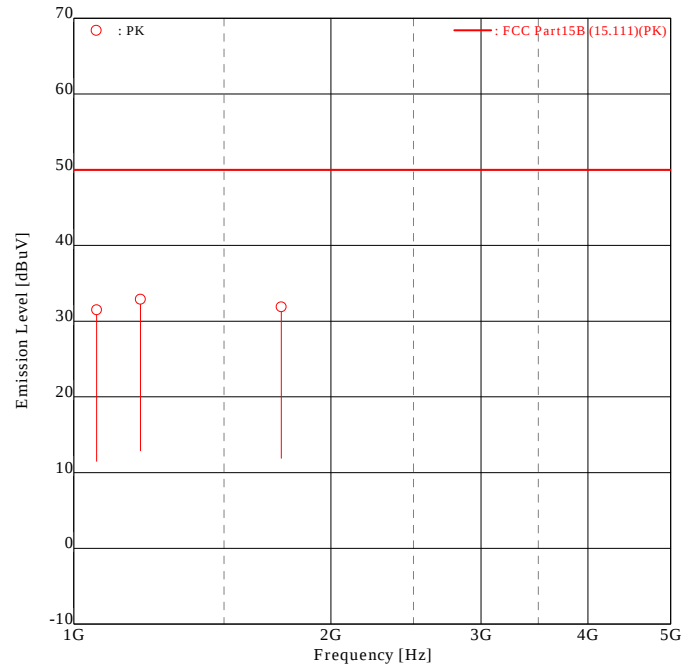
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	70.4500	<u>46.5</u>	-16.2	<u>30.3</u>	50.0	<u>19.7</u>
2	144.0100	<u>34.0</u>	-16.0	<u>18.0</u>	50.0	<u>32.0</u>
3	281.6800	<u>38.2</u>	-15.5	<u>22.7</u>	50.0	<u>27.3</u>
4	422.7300	<u>28.9</u>	-15.4	<u>13.5</u>	50.0	<u>36.5</u>
5	664.9100	<u>27.5</u>	-14.3	<u>13.2</u>	50.0	<u>36.8</u>
6	930.8800	<u>26.0</u>	-13.9	<u>12.1</u>	50.0	<u>37.9</u>
7	948.5000	25.0	-14.1	10.9	50.0	39.1

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

9.3.8 RX 30MHz mode (1000 – 5000MHz) : ANT3

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT3)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1063.7800	<u>51.1</u>	-19.6	<u>31.5</u>	50.0	<u>18.5</u>
2	1196.8400	<u>52.2</u>	-19.3	<u>32.9</u>	50.0	<u>17.1</u>
3	1749.8300	<u>50.2</u>	-18.3	<u>31.9</u>	50.0	<u>18.1</u>

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

9.3.9 VFO Scan mode (ANT3)

< Graph number #3 >

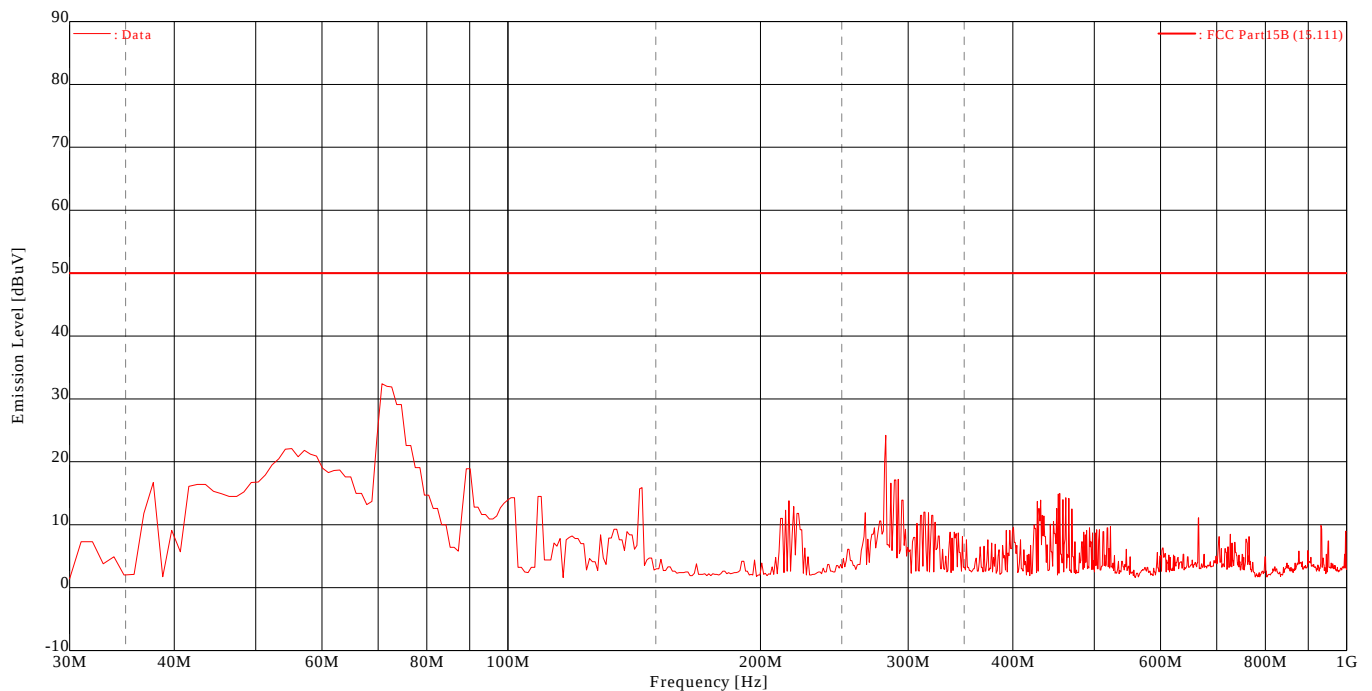
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/33.0%

Date tested : Feb 15 2005
Company : Vertex Standard Co., Ltd.
EUT Name : HF Transceiver
Model number : FT DX9000D
Serial number : 5D000001

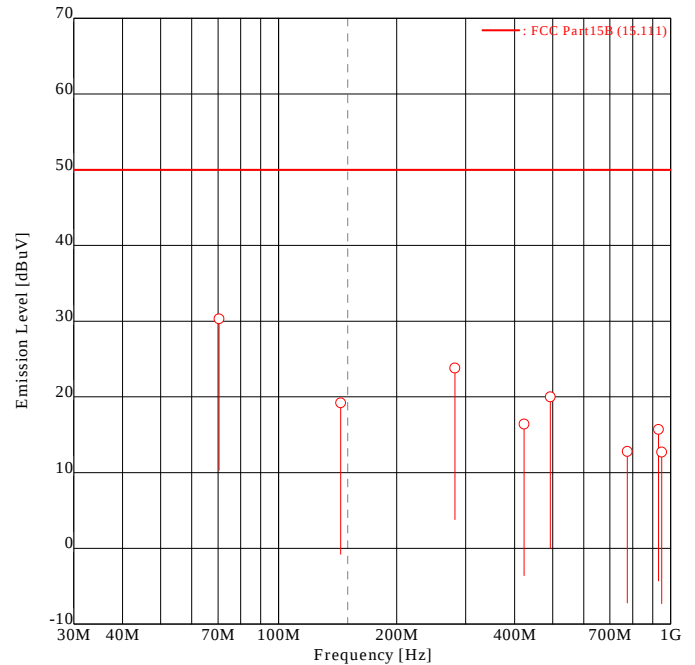
Test mode : VFO Scan (ANT3)
Power source : AC120V/60Hz
File number : ANKK-105041
Engineer : Kazuo Masuda
Note : Band : 0.030 - 60.000MHz



9.3.10 RX 30MHz mode (30 – 1000MHz) : ANT4

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT4)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

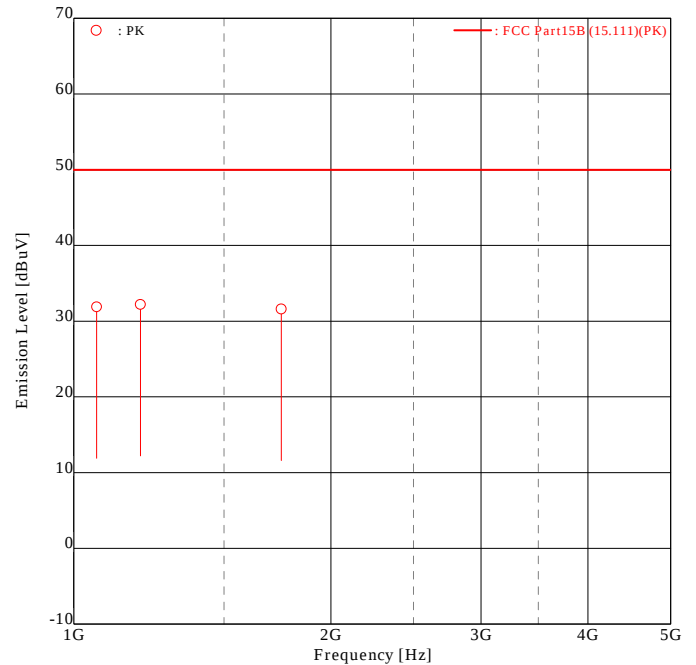
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	70.4500	<u>46.5</u>	-16.2	<u>30.3</u>	50.0	<u>19.7</u>
2	144.0100	<u>35.2</u>	-16.0	<u>19.2</u>	50.0	<u>30.8</u>
3	281.6700	<u>39.3</u>	-15.5	<u>23.8</u>	50.0	<u>26.2</u>
4	422.7300	<u>31.8</u>	-15.4	<u>16.4</u>	50.0	<u>33.6</u>
5	493.1800	<u>34.9</u>	-14.9	<u>20.0</u>	50.0	<u>30.0</u>
6	775.0000	27.5	-14.7	12.8	50.0	37.2
7	930.8800	<u>29.6</u>	-13.9	<u>15.7</u>	50.0	<u>34.3</u>
8	948.5000	<u>26.8</u>	-14.1	<u>12.7</u>	50.0	<u>37.3</u>

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

9.3.11 RX 30MHz mode (1000 – 5000MHz) : ANT4

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT4)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1063.7800	<u>51.5</u>	-19.6	<u>31.9</u>	50.0	<u>18.1</u>
2	1196.8400	<u>51.5</u>	-19.3	<u>32.2</u>	50.0	<u>17.8</u>
3	1749.8300	<u>49.9</u>	-18.3	<u>31.6</u>	50.0	<u>18.4</u>

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

9.3.12 VFO Scan mode (ANT4)

< Graph number #4 >

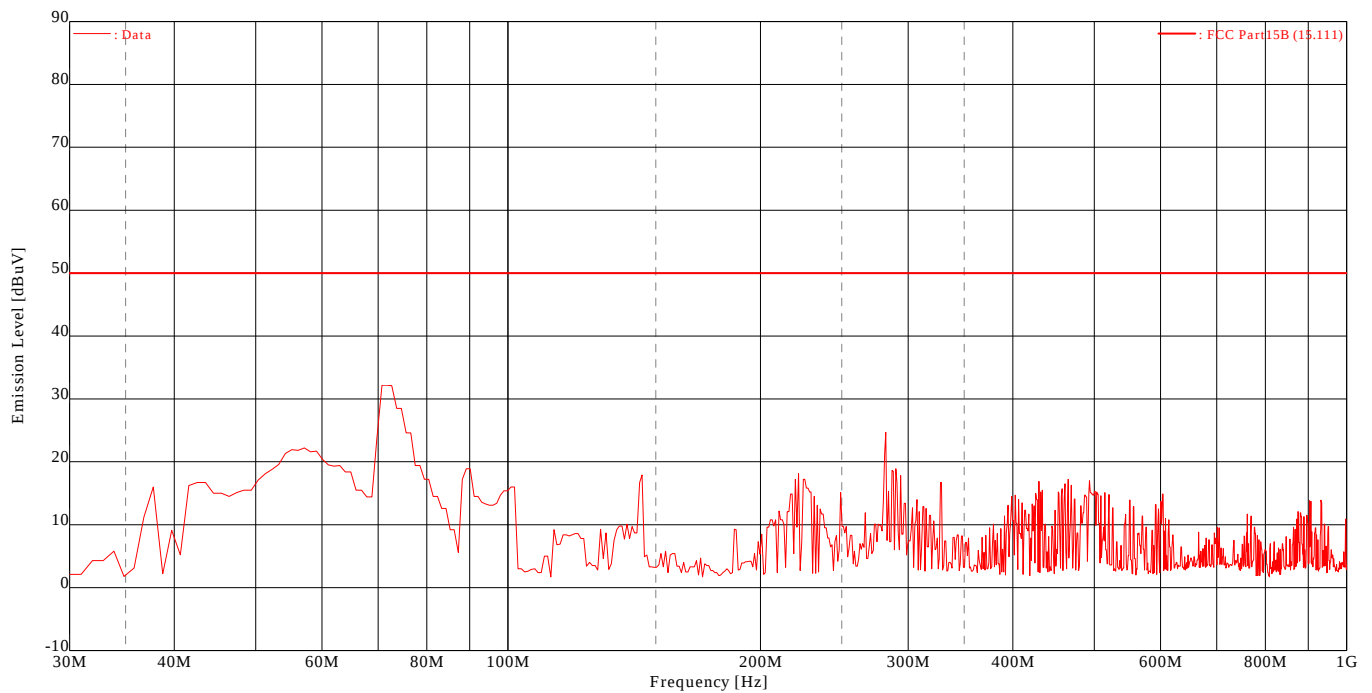
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/33.0%

Date tested : Feb 15 2005
Company : Vertex Standard Co., Ltd.
EUT Name : HF Transceiver
Model number : FT DX9000D
Serial number : 5D000001

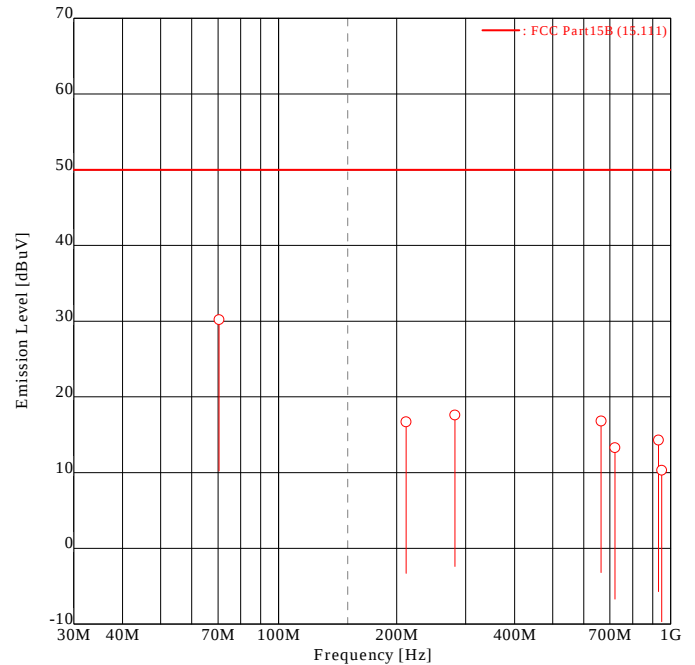
Test mode : VFO Scan (ANT4)
Power source : AC120V/60Hz
File number : ANKK-105041
Engineer : Kazuo Masuda
Note : Band : 0.030 - 60.000MHz



9.3.13 RX 30MHz mode (30 – 1000MHz) : ANT_RX

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT_RX)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

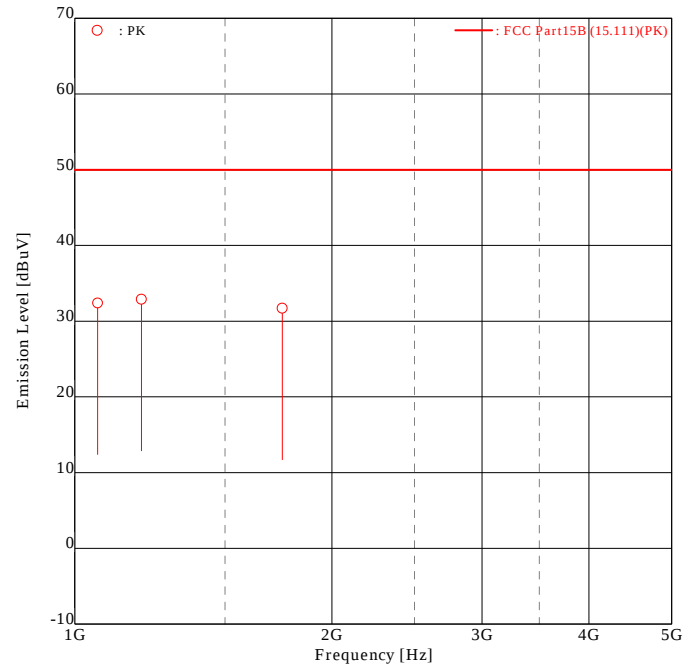
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	70.4500	<u>46.4</u>	-16.2	<u>30.2</u>	50.0	<u>19.8</u>
2	211.3600	<u>32.5</u>	-15.8	<u>16.7</u>	50.0	<u>33.3</u>
3	281.7000	<u>33.1</u>	-15.5	<u>17.6</u>	50.0	<u>32.4</u>
4	664.9100	<u>31.1</u>	-14.3	<u>16.8</u>	50.0	<u>33.2</u>
5	720.8600	<u>27.3</u>	-14.0	<u>13.3</u>	50.0	<u>36.7</u>
6	930.8800	<u>28.2</u>	-13.9	<u>14.3</u>	50.0	<u>35.7</u>
7	948.5000	24.4	-14.1	10.3	50.0	39.7

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

9.3.14 RX 30MHz mode (1000 – 5000MHz) : ANT_RX

Akzo Nobel K. K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Vertex Standard Co., Ltd.
 EUT NAME : HF Transceiver
 MODEL NO. : FT DX9000D
 SERIAL NO. : 5D000001
 TEST MODE : RX 30MHz (ANT_RX)
 POWER SOURCE : AC120V/60Hz
 DATE TESTED : Feb 15 2005
 FILE NO. : ANKK-105041
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1063.7800	<u>52.0</u>	-19.6	<u>32.4</u>	50.0	<u>17.6</u>
2	1196.8400	<u>52.2</u>	-19.3	<u>32.9</u>	50.0	<u>17.1</u>
3	1749.8300	<u>50.0</u>	-18.3	<u>31.7</u>	50.0	<u>18.3</u>

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

9.3.15 VFO Scan mode (ANT RX)

< Graph number #5 >

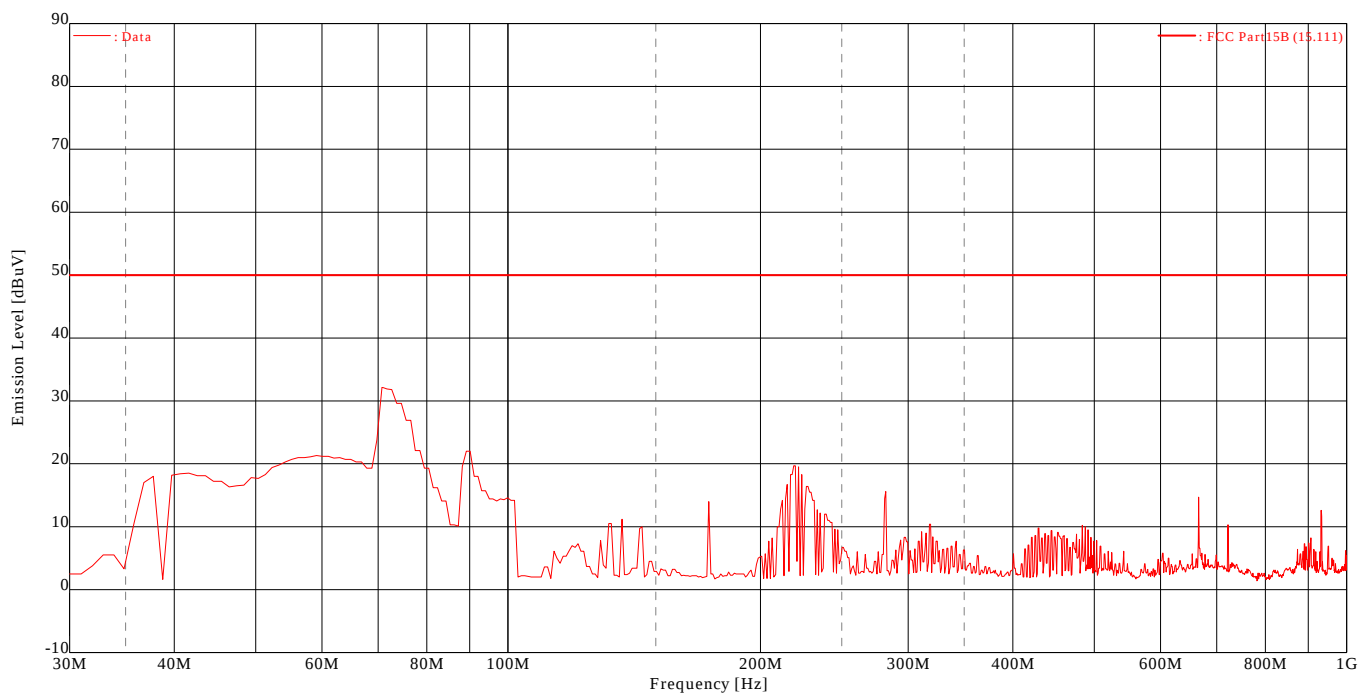
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/33.0%

Date tested : Feb 15 2005
Company : Vertex Standard Co., Ltd.
EUT Name : HF Transceiver
Model number : FT DX9000D
Serial number : 5D000001

Test mode : VFO Scan (ANT_RX)
Power source : AC120V/60Hz
File number : ANKK-105041
Engineer : Kazuo Masuda
Note : Band : 0.030 - 60.000MHz



9.4 38dB Rejection Test

9.4.1 VFO Scan mode (ANT1)

Location : Kashima No.1 Test Site
 Date Tested : Feb. 16, 2005
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 190mW.

9.4.2 VFO Scan mode (ANT2)

Location : Kashima No.1 Test Site
 Date Tested : Feb. 16, 2005
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 190mW.

9.4.3 VFO Scan mode (ANT3)

Location : Kashima No.1 Test Site
 Date Tested : Feb. 16, 2005
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 190mW.

9.4.4 VFO Scan mode (ANT4)

Location : Kashima No.1 Test Site
 Date Tested : Feb. 16, 2005
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 190mW.

9.4.5 VFO Scan mode (ANT RX)

Location : Kashima No.1 Test Site
 Date Tested : Feb. 16, 2005
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 190mW.

9.5 Sample Calculations

9.5.1 Conducted Voltages on Mains Port

Example @ 20.2800MHz (AV)

Emission Level	=	Meter Reading		35.2	dBuV
	+	Factor		7.1	dB
				=	42.3 dBuV
Margin	=	Limit		50.0	dBuV
	-	Emission Level		42.3	dBuV
				=	7.7 dB

Factor = LISN Factor + Cable Loss + Pad Loss

9.5.2 Radiated Electric Field

Example @ 422.72MHz

Emission Level	=	Meter Reading		44.6	dBuV
	+	Factor		1.1	dB/m
				=	43.5 dBuV/m
Margin	=	Limit		46.0	dBuV/m
	-	Emission Level		43.5	dBuV/m
				=	2.5 dB

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

9.5.3 Conducted Power on Antenna Port

Example @ 1196.84MHz

Output Power Level	=	Meter Reading	52.5	dBuV
	+	Factor	–	19.3 dB
			=	33.2 dBuV
Margin	=	Limit (:2.0nW)	50.0	dBuV
	–	Output Power Level	–	33.2 dBuV
			=	16.8 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. INSTRUMENTS USED FOR FINAL TEST

Instrument	Model No.	Serial No.	Manufacturer	Cal.expired
LISN (EUT)	ESH2-Z5	881492/014	ROHDE & SCHWARZ	Oct. 31, 05
6dB Attenuator	CFA-01	None	TME	Oct. 31, 05
LISN (Peripheral)	KNW-242	8-851-22	KYORITSU	Oct. 31, 05
50Ω Termination	CT-01	A010CON50	TME	Jul. 31, 05
Coaxial cable	5D-2W (7.0 m)	C1	AKZO	Oct. 31, 05
	5D-2W (2.0 m)	C2	AKZO	Oct. 31, 05
	5D-2W (1.0 m)	R6	AKZO	Oct. 31, 05
	5D-2W (1.0 m)	R7	AKZO	Oct. 31, 05
Broad Band antenna	VULB9168	106	Schwarzbeck	Feb. 30, 05
Double Ridged antenna	3115	5044	EMCO	Jun. 30, 05
6dB Attenuator	MP721B	M57593	ANRITSU	Oct. 31, 05
3dB Attenuator	4768-3	79	NARDA	Sep. 30, 05
Step Attenuator	8494B	2726A14513	HEWLETT PACKARD	Oct. 31, 05
Amplifier	8447D	1937A03130	HEWLETT PACKARD	Oct. 31, 05
	83051A	3332A00329	HEWLETT PACKARD	Sep. 30, 05
Coaxial cable	5D-2W (9.0 m)	R1	AKZO	Oct. 31, 05
	10D-2W (5.5 m)	R2	AKZO	Oct. 31, 05
	5D-2W (2.0 m)	R3	AKZO	Oct. 31, 05
	5D-2W (0.2 m)	R4	AKZO	Oct. 31, 05
	5D-2W (1.0 m)	R5	AKZO	Oct. 31, 05
	5D-2W (1.0 m)	R6	AKZO	Oct. 31, 05
	5D-2W (1.0 m)	R7	AKZO	Oct. 31, 05
	SUCOFLEX102 (1.0 m)	R14	SUHNER	Sep. 30, 05
	KPS-1501-1969-KPS (5.0 m)	R15	INSULATED WIRE	Sep. 30, 05
Test receiver	ESS (Firmware Version 1.08)	842123/005	ROHDE & SCHWARZ	Oct. 31, 05
Spectrum Analyzer	8564E	3643A00665	HEWLETT PACKARD	Aug. 31, 05
RF Switch	ACX-150	None	AKZO	Oct. 31, 05
Site Attenuation				Apr. 30, 05

Instrument	Model No.	Serial No.	Manufacturer	Cal.expired
Attenuator (10dB)	CFA05NP-10	262843	TME	Jul. 31, 05
RF Signal Generator	SMG	860289/011	ROHDE & SCHWARZ	May 31, 05
Audio Analyzer	8903B	2472A03633	HEWLETT PACKERD	Feb. 28, 05
ANT Termination	M1426	9C3425	WEINSCHEL	–
	MP752A	M65225	ANRITSU	–
	11593A	None	AGILENT	– (× 5)

Note : Test instruments are calibrated according to Quality Manual and Calibration Rules of EMC division.

SECTION 11. MEASUREMENT UNCERTAINTY

The uncertainty of the measurements performed for this report lies:

Radiated Electric Field at 3m

30 MHz – 1000 MHz	+/- 4.07 dB
Above 1 GHz	+/- 3.90 dB

Conducted Voltages on Mains Port

9 kHz – 30 MHz	+/- 2.45 dB
----------------------	-------------

Conducted Power on Antenna Port

30 MHz – 1000 MHz	+/- 2.50 dB
Above 1 GHz	+/- 3.00 dB

38dB Rejection

30 kHz – 60 MHz	+/- 0.71 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 judgement of the test results in this report.

SECTION 12. DESCRIPTION OF TEST LABORATORY

12.1 Outline of Akzo Nobel K. K. (formerly Akzo Kashima Limited), EMC Division

Akzo Nobel K. K., the country organization in Japan for Akzo Nobel NV, was established in 1968. The shares are owned by Akzo Nobel NV (100%). Akzo Nobel NV, headquartered in the Netherlands, is one of the world's leading companies in selected areas of chemicals, coatings, healthcare products and fibers with work force of approximately 70,000 people in over 50 countries.

In 1984, in order to respond to the growing testing demand, in particular, for FCC filing, Akzo Nobel K. K. started EMI testing business, installing the first open air test site in Kashima, Ibaraki prefecture. Further the business has been expanded by installing additional testing facilities not only in Ibaraki but also in other areas such as Shizuoka, Nagano, Kanagawa and Tochigi. As results, Akzo Nobel K. K. has now 16 open air test sites and 4 anechoic chambers for EMI/EMC testing. As the largest EMC testing laboratory in number of testing facilities and staffs, EMC Division has been organized separately in the company and independently operated in conformity with the requirements of ISO/IEC17025 for its competency as a testing laboratory.

Akzo Nobel K. K. EMC Division is the first foreign private laboratory accredited by NVLAP, National Voluntary Laboratory Accreditation Program-NIST, USA. The division has been certified, authorized and/or filed as a competent testing laboratory by various testing organizations/authorities as described below.

12.2 Filing, certification, authorization and accreditation list

<u>EMI/EMC testing</u>		<u>Telecommunications terminal testing</u>	
FCC	(USA)	FCC	(USA)
NVLAP	(USA)	NVLAP	(USA)
NEMKO	(Norway)	NATA	(Australia)
VCCI	(Japan)	IC	(Canada)
VLAC	(Japan)		
ETL SEMKO	(Sweden)		
TÜV PRODUCT SERVICE	(Germany)		
BSMI	(Taiwan)		

Note 1 : NVLAP accreditation does not constitute any product endorsement by NVLAP or any agent of the U.S. Government.