



TEST REPORT

**STANDARD : FCC Part15B Class B –Scanning Receiver-
Industry Canada RSS-215 Issue 2**

Applicant	Testing Laboratory
YAESU MUSEN CO., LTD. Tennozu Parkside Building 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 JAPAN Tel. +81 3 6711 4121	Intertek Japan K.K. Kashima Laboratory URL: http://www.japan.intertek-etlsemko.com (Open area test site) 3-2 Sunayama, Kamisu, Ibaraki 314-0255 Japan Tel. +81 479 40 1097 (Anechoic chamber) 298-6 Sada, Kashima, Ibaraki 314-0027 Japan Tel. +81 299 82 8464

Equipment Type	HF/50 MHz TRANSCEIVER
Trademark	YAESU
Model(s)	FTDX1200
Serial No.	ES04
Equipment Authorization	Certification (FCC ID : K6620581X50) (IC CN and UPN : 511B-20581X50)
Test Result	Complied
Report Number	13020162JKA-003
Original Issue Date	April 03, 2013

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Approved by

Kazuo Gokita
[Manager]

Tested by

Koichi Wagatsuma



Responsible Party of Test Item (Product)

Responsible Party	:
Add.	:
Tel.	:
Fax.	:
Contact Person	:

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SECTION 1. GENERAL INFORMATION

Test Performed

EUT Received	March 14, 2013
Date of Test	From March 18, 2013 to March 26, 2013
Standard Applied	FCC Part15B Class B – Scanning Receiver – Industry Canada RSS-215 Issue 2* *It is not covered by accredited scope of VLAC.
Test methods	ANSI C63.4-2003 / RSS-GEN Issue 3 -2010
Deviation from Standard(s)	None

Note : As for the ICES-003 "Digital Apparatus", the EUT has been measured.

Refer to report No. 13020162JKA-002.

As for the FCC Part15B Class B "Peripherals", the EUT has been measured.

Refer to report No. 13020162JKA-001.

Qualifications of Testing Laboratory

Accreditation	Scope	Lab. Code	Remarks
NVLAP	EMC Testing	100290-0	USA
VLAC	EMC Testing	VLAC-008-1	JAPAN
BSMI	EMC Testing	SL2-IN-E-6008	TAIWAN
Filing			
VCCI	EMC Testing	A-0126	JAPAN
FCC	EMC Testing	Designation Number : JP0008	USA
IC	EMC Testing	2042K-1, 2042K-3, 2042Q-12	CANADA
CB-Scheme	EMC Testing	TL222	IECEE
SAUDI ARABIA	EMC Testing	N/A	

Abbreviations

EUT	Equipment Under Test	DoC	Declaration of Conformity
AMN	Artificial Mains Network	ISN	Impedance Stabilization Network
LISN	Line Impedance Stabilization Network	Q-P	Quasi-peak
AMP	Amplifier	AVG	Average
ATT	Attenuator	PK	Peak
ANT	Antenna	Cal	Calibration
BBA	Broadband Antenna	N/A	Not applicable or Not available
DIP	Dipole Antenna	LCD	Liquid-Crystal Display
AE	Associated Equipment	HDMI	High-Definition Multimedia Interface

SECTION 2. SUMMARY OF TEST RESULTS

See Section9 for the detailed result.

Emission Tests

Standard Applied	FCC Part15B Class B – Scanning Receiver – Industry Canada RSS-215 Issue 2	
Test Item	Minimum margin	Remarks
Conducted disturbance at mains terminals	23.2 dB (0.1500 MHz) [QP] RX mode(56.00MHz / ANT.1)	
Radiated disturbance	5.5 dB (168.02 MHz) RX mode(56.00MHz / ANT.1)	
Conducted power on antenna port	15.81 dB (85.4538 MHz) VFO SCAN mode(ANT.1)	

Test Item	Results	Remarks
38dB Rejection test (15.121(b))	Pass	See Note

Note : No frequency of response was detected.

SECTION 3. EQUIPMENT UNDER TEST

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

3.1 System Configuration

Symbol	Item	Model No.	Serial No.	Manufacturer	Remarks
A1	HF/50 MHz TRANSCEIVER	FTDX1200	ES04	YAESU MUSEN CO., LTD.	EUT
A2	Microphone	MH-31B8	YTS01	YAESU MUSEN CO., LTD.	ACCESSORY
A3	Speaker	SP-2000	2D060	YAESU MUSEN CO., LTD.	OPTION
A4	u-Tuning	MTU-160	6N004	YAESU MUSEN CO., LTD.	OPTION
A5	u-Tuning	MTU-80/40	6N004	YAESU MUSEN CO., LTD.	OPTION
A6	u-Tuning	MTU-30/20	6N004	YAESU MUSEN CO., LTD.	OPTION
A7	Remote Control Keypad	FH-2	YTS02	YAESU MUSEN CO., LTD.	OPTION
A8	Headphone	YH-77STA	YTS03	YAESU MUSEN CO., LTD.	OPTION
A9	Voice Memory Unit	DVS-6	YTS04	YAESU MUSEN CO., LTD.	OPTION
A10	FFT Unit	FFT-1	YTS05	YAESU MUSEN CO., LTD.	OPTION
A11	USB Interface Unit	SCU-17	ES15	YAESU MUSEN CO., LTD.	OPTION
Rated Power : DC 13.8V±10%, RX(No Signal): 1.8A, RX(Signal Presend): 2.1A, TX(100W), 23.0A					
Supplied Power : DC 13.8V					
Condition of Equipment		Preproduction			
Type		Tabletop			
Suppression Devices		No Modifications by the laboratory were made to the device			

3.2 Overview of EUT

Frequency ranges	0.030 – 56.000MHz
Receiver Type	triple-conversion Super-heterodyne
Model of operation	A1A, A3E, J3E, F3E, F1B, G1B

3.3 Intermediate Frequency

40.455 MHz/ 455 kHz /30kHz (24 kHz for AM, FM, PACKET-FM)

3.4 Highest Frequency Generated / Used

Operating Frequency	Operating mode	Remarks
235.820 MHz	RX mode / TX mode	

3.5 Port(s)/Connector(s)

Port Name	Connector Type	Connector Pin	Remarks
HF TRANSCEIVER			
ANT 1	MR-S (Coaxial)	2 pin	
ANT 2/RX	MR-S (Coaxial)	2 pin	
DC IN	VL Connector	4 pin	
μ-TUNE TO / μ-TUNE FROM	RCA	2 pin	
ROT	Mini-DIN	10 pin	
LINEAR	Mini-DIN	10 pin	
TUNER	Mini-DIN	8 pin	
RTTY / DATA	Mini-DIN	6 pin	
PTT / REC	RCA	2 pin	
REM / EXT SPKR	3.5φ mono	2 pin	
KEY	6φ stereo	3 pin	
μ-TUNE	Mini-DIN	10 pin	
CAT	D-sub	9 pin	
MIC	FM214-8SMPT-NI	8 pin	
Speaker			
PHONES	6φ stereo	3 pin	
INPUT-1	RCA	2 pin	
INPUT-2	RCA	2 pin	
LINE OUT	RCA	2 pin	
u-Tuning			
RF IN	RCA	2 pin	
RF OUT	RCA	2 pin	
CNTL-IN	Mini-DIN	10 pin	
CNTL-OUT	Mini-DIN	10 pin	
USB Interface Unit			
USB	B type	4 pin	
CAT / RS-232C	D-sub	9 pin	
PTT FSK	3.5φ stereo	3 pin	
DATA	Mini-DIN	6 pin	
AUDIO	3.5φ stereo	3 pin	

SECTION 4. SUPPORT EQUIPMENT

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

Symbol	Item	Model No.	Serial No.	Manufacturer	FCC ID
B	Power Supply	FP-1030A	1208137783	YAESU MUSEN CO., LTD.	N/A
C	Terminator	CT-03	4B336	TME	N/A
D	Terminator	UT-03NP	None	TME	N/A
E	Computer	MTC2	4BLZS1X	DELL INC.	Doc
F	LCD	E151FPb	CN-04W569-46633-363-1DLT	DELL INC.	Doc
G	Keyboard	SK-8110	CN-07N247-71616-44Q-090P	DELL INC.	Doc
H	Mouse	M071KC	412121734	DELL INC.	Doc
I	Printer	C8154A	TH571320G6	Hewlet Packard	Doc
J	AC/DC Adapter	0957-2142	E10588013501L	Hewlet Packard	N/A
Supplied Power:					
B , E, F, J	AC120 V, 60 Hz				
I	DC 31V				

SECTION 5. USED CABLE(S)

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

No.	Name	Length (m)	Shield	Metal Connector	Ferrite Core
1	Key cable	1.10	Yes	Yes	
2	PHONES cable	1.80	Yes	Yes	
3	MIC cable	0.50	Yes	Yes	
4	Speaker cable	1.00	Yes	Yes	
5	GND cable	2.00	No	No	
6	μ-TUNE (TO) cable	1.20	Yes	Yes	
7	μ-TUNE (FROM) cable	1.20	Yes	Yes	
8	ROTATOR cable	1.60	Yes	Yes	
9	LINEAR cable	2.00	Yes	Yes	
10	RTTY / DATA cable	1.60	Yes	Yes	
11	PTT cable	1.50	Yes	Yes	
12	REC cable	1.50	Yes	Yes	
13	REM cable	1.00	Yes	Yes	
14	EXT SPKR cable	1.10	Yes	Yes	
15	KEY cable	1.10	Yes	Yes	
16	μ-TUNE cable	1.40	Yes	Yes	
17	CAT cable	1.00	Yes	Yes	
18	USB cable	1.80	Yes	Yes	
19	PTT FSK cable	1.40	Yes	Yes	
20	AUDIO cable	1.60	Yes	Yes	

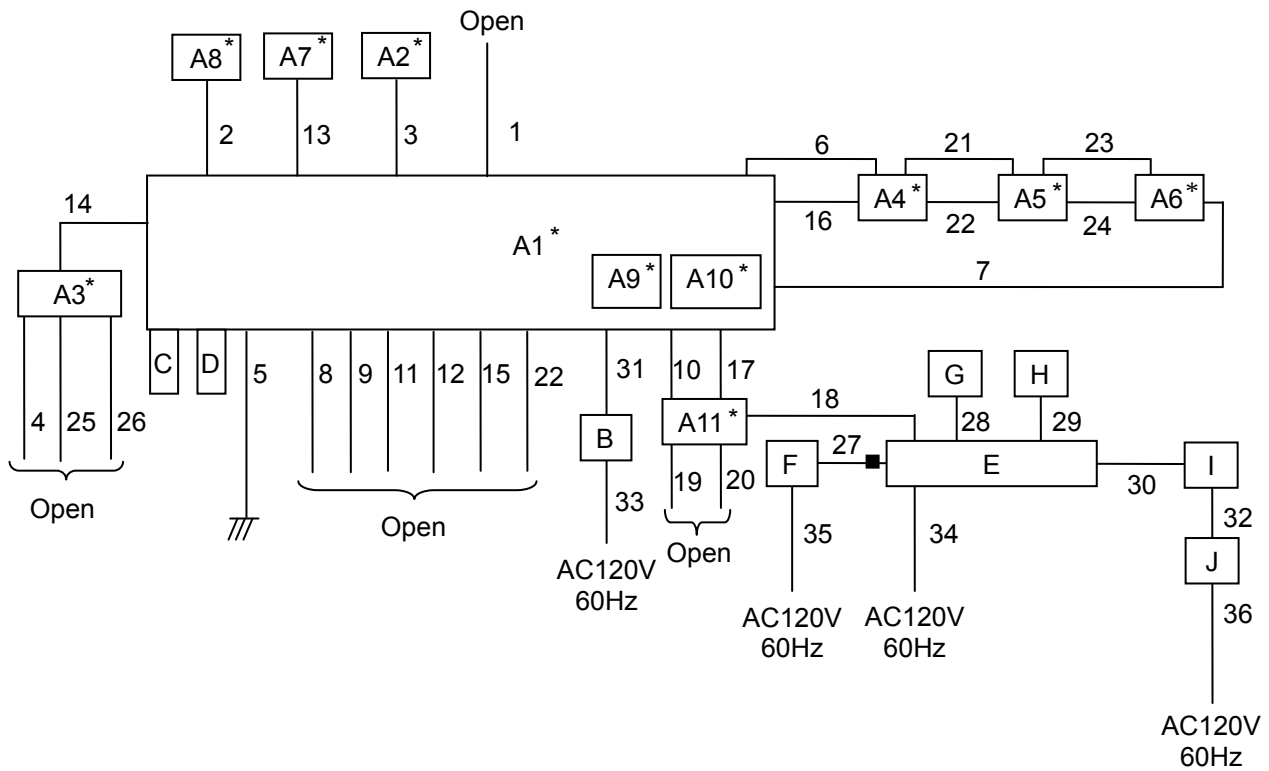
No.	Name	Length (m)	Shield	Metal Connector	Ferrite Core
21	μ-TUNE cable	1.20	Yes	Yes	
22	μ-TUNE cable	1.20	Yes	Yes	
23	μ-TUNE cable	1.20	Yes	Yes	
24	μ-TUNE cable	1.20	Yes	Yes	
25	Speaker(INPUT) cable	1.10	No	Yes	
26	Speaker(LINE OUT) cable	1.10	No	Yes	
27	Video cable	1.60	Yes	Yes	Fixed x 1
28	Keyboard cable	2.00	Yes	Yes	
29	Mouse cable	1.80	Yes	Yes	
30	Centronics cable	5.00	Yes	Yes	
31	Power cable for FTDX1200 (DC)	2.00	No	No	
32	Power cable for Printer(DC)	1.80	No	No	
33	Power cable for Power Supply	1.70	No	No	
34	Power cable for Computer	2.50	No	No	
35	Power cable for LCD	2.20	No	No	
36	Power cable for Printer(AC)	3.00	No	No	

Note : 1. No.27 cable is supplied together with LCD(F) .
2. No.31 cable is supplied together with EUT by the applicant.

SECTION 6. TEST CONFIGURATION

6.1 Conducted disturbance at mains port ,Radiated disturbance and Conducted power on antenna port RX mode and VFO Scan mode

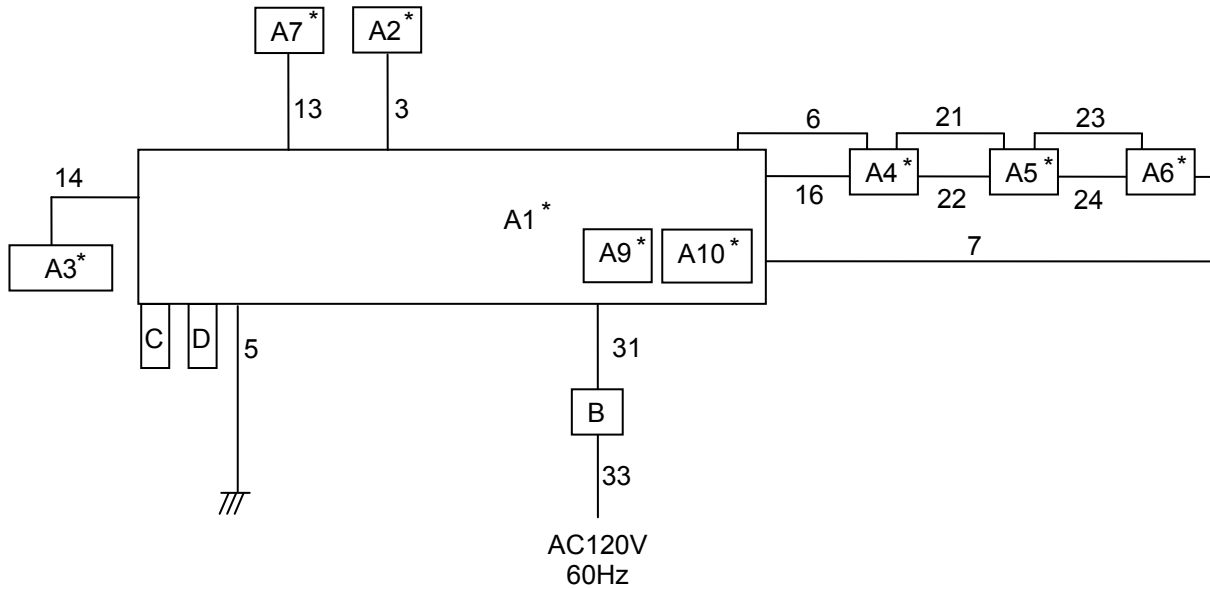
* : EUT
■ : Ferrite core



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

6.2 38dB Rejection test
VFO Scan mode

□ : EUT
■ : Ferrite core

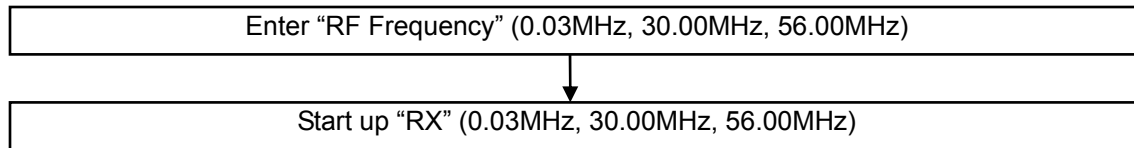


The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

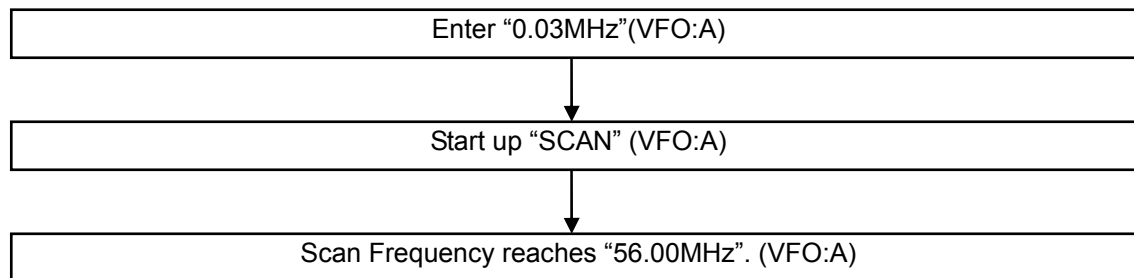
SECTION 7. OPERATING CONDITION

The test was carried out under the following mode.

7.1 RX mode



7.2 VFO SCAN mode



SECTION 8. UNCERTAINTY

Traceability to national standard in SI units is ensured with these values.
Compliance with the limits in this standard are determined without in consideration of the measurement uncertainty of the measurement instrumentation.

8.1 Emission tests

Radiated disturbance at 3m	U _{lab} [k = 2]	U _{cispr}
30 MHz – 1000 MHz	+/- 4.48 dB	5.19 dB
CISPR22	+/- 4.30 dB	
Above 1 GHz ANSI 63.4	+/- 4.84 dB	
Radiated disturbance at 10m		
30 MHz – 1000 MHz	+/- 5.00 dB	5.06 dB
Above 1 GHz	+/- 5.23 dB	
Radiated disturbance at 30m		
	N/A	5.02 dB
Conducted disturbance at mains terminals		
9 kHz – 150 kHz	+/- 3.25 dB	3.97 dB
150 kHz – 30 MHz	+/- 2.86 dB	3.60 dB
Conducted disturbance at telecommunication ports (ISN)		
150 kHz – 30 MHz	+/- 4.92 dB	Nil
Conducted disturbance at telecommunication ports (Capacitive Voltage Probe)		
150 kHz – 30 MHz	+/- 3.85 dB	Nil
Conducted disturbance at telecommunication ports (Current Probe)		
150 kHz – 30 MHz	+/- 3.03 dB	Nil
Conducted disturbance at terminals		
150 kHz – 30 MHz	+/- 2.94 dB	Nil
Disturbance power		
30 MHz – 300 MHz	+/- 3.61 dB	4.45 dB
Conducted power on antenna port		
30 MHz – 1000 MHz	+/- 2.90 dB	Nil
Above 1 GHz	+/- 1.60 dB	
38dB Rejection		
30 kHz – 60 MHz	+/- 0.56 dB	Nil

The above expanded instrumentation uncertainty, U_{lab} , is estimated in accordance with CISPR 16-4-2.

SECTION 9. EVALUATION OF TEST RESULTS

9.1 Emission tests

9.1.1 Conducted disturbance at mains terminals

Location	Kashima No.3 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Required Measurement Frequency Range	Measured Frequency Range
0.15 – 30 MHz	0.15 – 30 MHz

Test Procedure

Item	Document number
Conducted disturbance at mains terminals	RJP-EM001

Setting for the Measuring instruments

Instrument	Detector	Resolution Bandwidth	Video Bandwidth
Receiver	Quasi Peak	10 kHz	N/A
	Average	10 kHz	N/A

< Measurement data correction >

* Conducted disturbance at mains terminals

Emission Level [dBμV] = Meter Reading [dBμV] + Factor [dB]

Margin [dB] = Limit [dBμV] - Emission Level [dBμV]

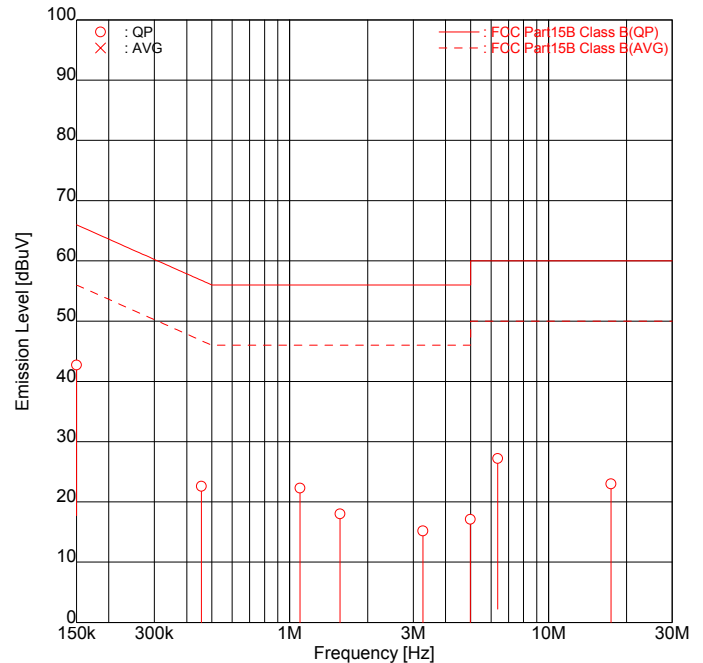
* Factor = LISN Factor + Cable Loss + ATT

Result of Conducted disturbance at mains terminals

9.1.1.1 RX mode (0.03MHz / ANT.1)

Intertek Japan K.K. Kashima No.3 Test Site Conducted Voltages on Mains Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (0.03MHz / ANT. 1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 20 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 18.0 [degC]
HUMIDITY : 60.0 [%]
NOTE : Power cable for Power Supply(FP-1030A)



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	32.3	<u>32.5</u>	10.2	10.2	42.5	<u>42.7</u>	66.0	23.5	<u>23.3</u>
2	0.4557	QP	<u>12.4</u>	12.4	10.2	10.2	<u>22.6</u>	22.6	56.8	<u>34.2</u>	34.2
3	1.0967	QP	<u>12.0</u>	11.9	10.3	10.3	<u>22.3</u>	22.2	56.0	<u>33.7</u>	33.8
4	1.5647	QP	<u>7.6</u>	7.5	10.4	10.4	<u>18.0</u>	17.9	56.0	<u>38.0</u>	38.1
5	3.2681	QP	4.6	4.8	10.4	10.4	15.0	15.2	56.0	41.0	40.8
6	4.9828	QP	4.8	6.6	10.5	10.5	15.3	17.1	56.0	40.7	38.9
7	6.3627	QP	16.5	<u>16.6</u>	10.6	10.6	27.1	<u>27.2</u>	60.0	32.9	<u>32.8</u>
8	17.4188	QP	10.1	<u>12.1</u>	10.9	10.9	21.0	<u>23.0</u>	60.0	39.0	<u>37.0</u>

Higher six points are underlined.

Other frequencies : Below the FCC Part15B Class B limit

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

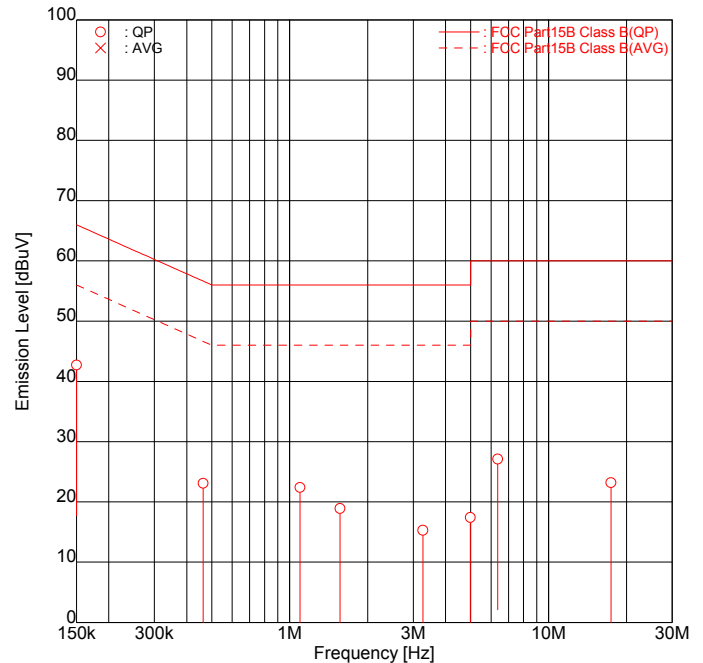
9.1.1.2 RX mode (30.00MHz / ANT.1)

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Voltages on Mains Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (30.00MHz / ANT. 1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 20 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 18.0 [degC]
HUMIDITY : 60.0 [%]
NOTE : Power cable for Power Supply(FP-1030A)



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	<u>32.5</u>	32.5	10.2	10.2	<u>42.7</u>	42.7	66.0	<u>23.3</u>	23.3
2	0.4633	QP	<u>12.9</u>	12.4	10.2	10.2	<u>23.1</u>	22.6	56.6	<u>33.5</u>	34.0
3	1.0955	QP	<u>12.1</u>	12.1	10.3	10.3	<u>22.4</u>	22.4	56.0	<u>33.6</u>	33.6
4	1.5647	QP	8.0	<u>8.5</u>	10.4	10.4	18.4	<u>18.9</u>	56.0	37.6	<u>37.1</u>
5	3.2668	QP	4.7	4.9	10.4	10.4	15.1	15.3	56.0	40.9	40.7
6	4.9841	QP	5.3	6.9	10.5	10.5	15.8	17.4	56.0	40.2	38.6
7	6.3603	QP	16.3	<u>16.5</u>	10.6	10.6	26.9	<u>27.1</u>	60.0	33.1	<u>32.9</u>
8	17.4188	QP	10.2	<u>12.3</u>	10.9	10.9	21.1	<u>23.2</u>	60.0	38.9	<u>36.8</u>

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

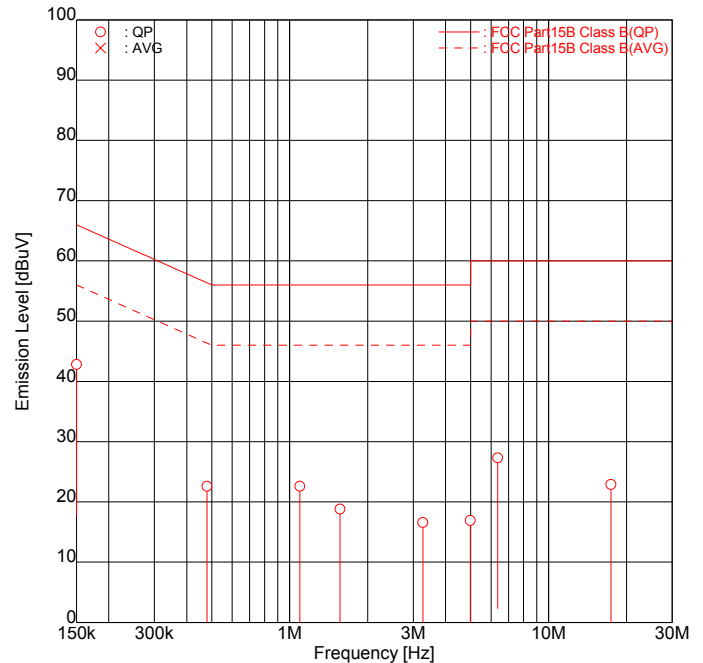
9.1.1.3 RX mode (56.00MHz / ANT.1)

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Voltages on Mains Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (56.00MHz / ANT. 1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 20 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 18.0 [degC]
HUMIDITY : 60.0 [%]
NOTE : Power cable for Power Supply(FP-1030A)



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	32.3	<u>32.6</u>	10.2	10.2	42.5	<u>42.8</u>	66.0	23.5	<u>23.2</u>
2	0.4787	QP	<u>12.4</u>	12.4	10.2	10.2	<u>22.6</u>	22.6	56.4	<u>33.8</u>	33.8
3	1.0943	QP	<u>12.3</u>	12.1	10.3	10.3	<u>22.6</u>	22.4	56.0	<u>33.4</u>	33.6
4	1.5647	QP	<u>8.4</u>	8.0	10.4	10.4	<u>18.8</u>	18.4	56.0	<u>37.2</u>	37.6
5	3.2666	QP	6.2	4.8	10.4	10.4	16.6	15.2	56.0	39.4	40.8
6	4.9879	QP	4.6	6.4	10.5	10.5	15.1	16.9	56.0	40.9	39.1
7	6.3603	QP	16.3	<u>16.7</u>	10.6	10.6	26.9	<u>27.3</u>	60.0	33.1	<u>32.7</u>
8	17.4175	QP	10.0	<u>12.0</u>	10.9	10.9	20.9	<u>22.9</u>	60.0	39.1	<u>37.1</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 Field Strength Emission and Spurious Emission (Radiated disturbance)

Location	Kashima No.12 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Field Strength Emission

Operating mode	Required Frequency Range	Measured Frequency Range
RX mode (0.03MHz / ANT.1) RX mode (30.00MHz / ANT.1) RX mode (56.00MHz / ANT.1) VFO SCAN mode (ANT.1)	30 – 2000 MHz	30 – 2000 MHz

Test Procedure

Item	Document number
Radiated disturbance	RJP-EM003

Setting for the Measuring instruments

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

< Measurement data correction >

* Radiated disturbance

Emission Level [dBμV/m] = Meter Reading [dBμV] + Factor [dB/m]

Margin [dB] = Limit [dBμV/m] - Emission Level [dBμV/m]

* Factor = Antenna Factor + Cable Loss - Amplifier Gain + ATT
(– Distance Conversion Factor)

Specification of Radiated disturbance

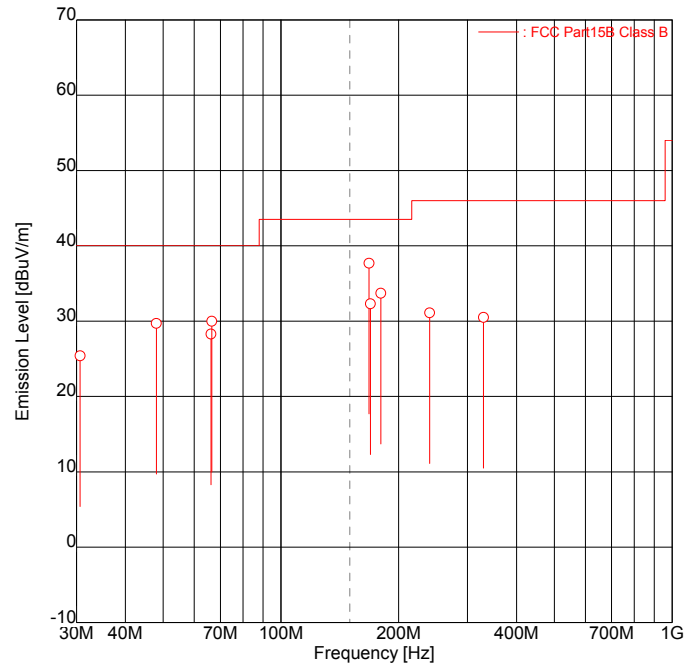
Operating Condition	Frequency Range	Measurement distance	Antenna height
RX mode (0.03MHz / ANT.1) RX mode (30.00MHz / ANT.1) RX mode (56.00MHz / ANT.1) VFO SCAN mode (ANT.1)	30 – 2000 MHz	3.0 m	Scanned 1 to 4 m

Result of Radiated disturbances

9.1.2.1 RX mode (0.03MHz / ANT.1) 30 - 1000MHz

Intertek Japan K.K. Kashima No.12 Test Site Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (0.03MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 18 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 42.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

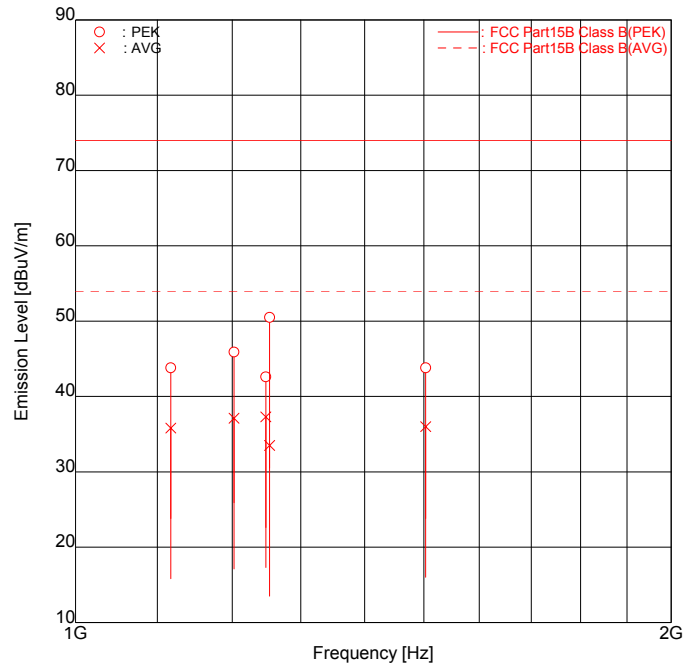
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	30.65	-	23.0	2.4	2.4	-	25.4	40.0	-	14.6
2	48.01	-	<u>29.3</u>	0.4	0.4	-	<u>29.7</u>	40.0	-	<u>10.3</u>
3	66.21	<u>33.4</u>	-	-5.1	-5.1	<u>28.3</u>	-	40.0	<u>11.7</u>	-
4	66.59	-	<u>35.2</u>	-5.2	-5.2	-	<u>30.0</u>	40.0	-	<u>10.0</u>
5	168.02	-	<u>41.7</u>	-4.0	-4.0	-	<u>37.7</u>	43.5	-	<u>5.8</u>
6	169.40	-	<u>36.4</u>	-4.1	-4.1	-	<u>32.3</u>	43.5	-	<u>11.2</u>
7	180.02	-	<u>37.0</u>	-3.3	-3.3	-	<u>33.7</u>	43.5	-	<u>9.8</u>
8	240.10	-	<u>31.7</u>	-0.6	-0.6	-	<u>31.1</u>	46.0	-	<u>14.9</u>
9	329.35	27.9	-	2.6	2.6	30.5	-	46.0	15.5	-

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)

1000 - 2000 MHz

Intertek Japan K.K. Kashima No.12 Test Site Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (0.03MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 19 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 59.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

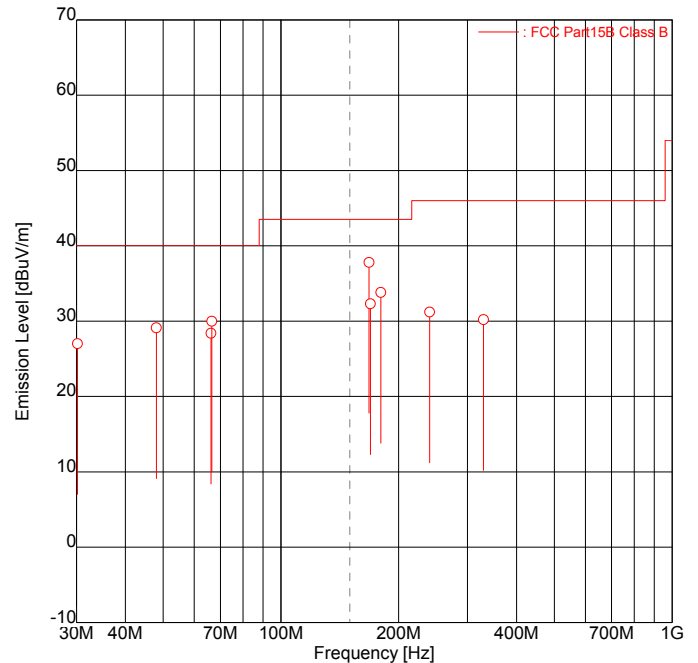
FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1117.39	PEK	49.0	-	-5.2	43.8	-	74.0	30.2	-
2	1117.39	AVG	<u>41.0</u>	-	-5.2	<u>35.8</u>	-	54.0	<u>18.2</u>	-
3	1202.69	PEK	-	50.8	-4.9	-	45.9	74.0	-	28.1
4	1202.69	AVG	-	<u>42.0</u>	-4.9	-	<u>37.1</u>	54.0	-	<u>16.9</u>
5	1248.06	PEK	-	47.5	-4.9	-	42.6	74.0	-	31.4
6	1248.06	AVG	-	<u>42.2</u>	-4.9	-	<u>37.3</u>	54.0	-	<u>16.7</u>
7	1253.40	PEK	<u>55.3</u>	52.6	-4.8	<u>50.5</u>	47.8	74.0	<u>23.5</u>	26.2
8	1253.40	AVG	<u>38.3</u>	36.6	-4.8	<u>33.5</u>	31.8	54.0	<u>20.5</u>	22.2
9	1503.05	PEK	-	47.8	-4.0	-	43.8	74.0	-	30.2
10	1503.05	AVG	-	<u>40.0</u>	-4.0	-	<u>36.0</u>	54.0	-	<u>18.0</u>

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)

9.1.2.2 RX mode (30.00MHz / ANT.1)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (30.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 18 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 42.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

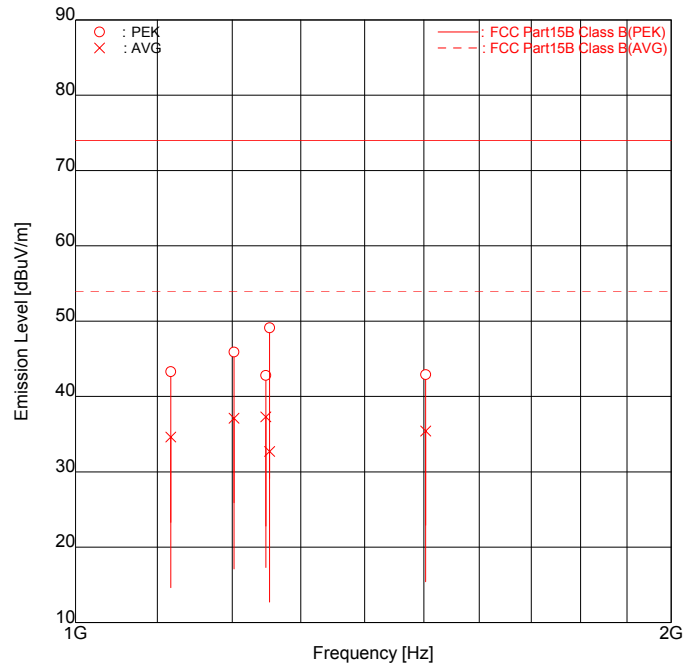
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	30.20	-	24.5	2.5	2.5	-	27.0	40.0	-	13.0
2	48.01	-	<u>28.7</u>	0.4	0.4	-	<u>29.1</u>	40.0	-	<u>10.9</u>
3	66.21	<u>33.5</u>	-	-5.1	-5.1	<u>28.4</u>	-	40.0	<u>11.6</u>	-
4	66.59	-	<u>35.2</u>	-5.2	-5.2	-	<u>30.0</u>	40.0	-	<u>10.0</u>
5	168.02	-	<u>41.8</u>	-4.0	-4.0	-	<u>37.8</u>	43.5	-	<u>5.7</u>
6	169.40	-	<u>36.4</u>	-4.1	-4.1	-	<u>32.3</u>	43.5	-	<u>11.2</u>
7	180.02	-	<u>37.1</u>	-3.3	-3.3	-	<u>33.8</u>	43.5	-	<u>9.7</u>
8	240.10	-	31.8	-0.6	-0.6	-	31.2	46.0	-	14.8
9	329.35	27.6	-	2.6	2.6	30.2	-	46.0	15.8	-

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)

1000 - 2000 MHz

Intertek Japan K.K. Kashima No.12 Test Site Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (30.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 19 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 59.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

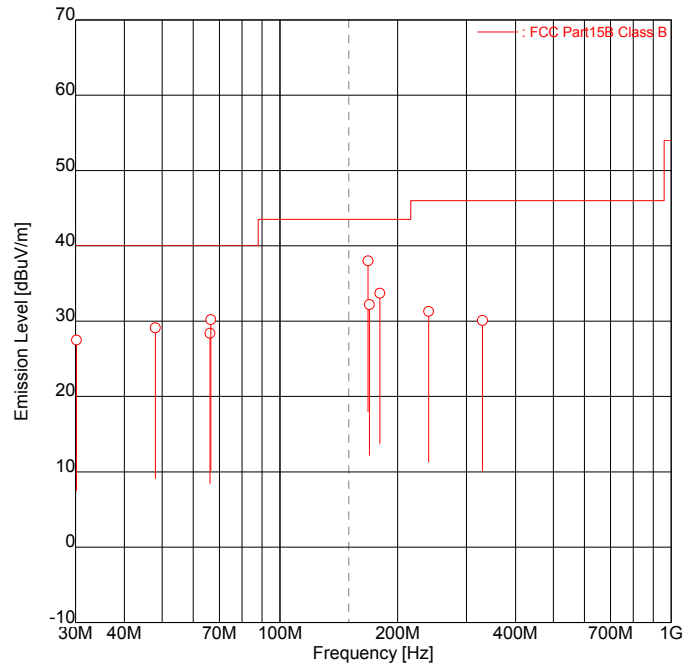
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1117.39	PEK	48.5	-	-5.2	-5.2	43.3	-	74.0	30.7	-
2	1117.39	AVG	<u>39.8</u>	-	-5.2	-5.2	<u>34.6</u>	-	54.0	<u>19.4</u>	-
3	1202.69	PEK	-	50.8	-4.9	-4.9	-	45.9	74.0	-	28.1
4	1202.69	AVG	-	<u>42.0</u>	-4.9	-4.9	-	<u>37.1</u>	54.0	-	<u>16.9</u>
5	1248.06	PEK	-	47.7	-4.9	-4.9	-	42.8	74.0	-	31.2
6	1248.06	AVG	-	<u>42.2</u>	-4.9	-4.9	-	<u>37.3</u>	54.0	-	<u>16.7</u>
7	1253.40	PEK	<u>53.9</u>	53.7	-4.8	-4.8	<u>49.1</u>	48.9	74.0	<u>24.9</u>	25.1
8	1253.40	AVG	37.3	<u>37.5</u>	-4.8	-4.8	32.5	<u>32.7</u>	54.0	21.5	<u>21.3</u>
9	1503.05	PEK	-	46.9	-4.0	-4.0	-	42.9	74.0	-	31.1
10	1503.05	AVG	-	<u>39.4</u>	-4.0	-4.0	-	<u>35.4</u>	54.0	-	<u>18.6</u>

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)

**9.1.2.3 RX mode (56.00MHz / ANT.1)
30 - 1000MHz**

**Intertek Japan K.K.
Kashima No.12 Test Site
Radiated Electric Field**

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (56.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 18 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 42.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

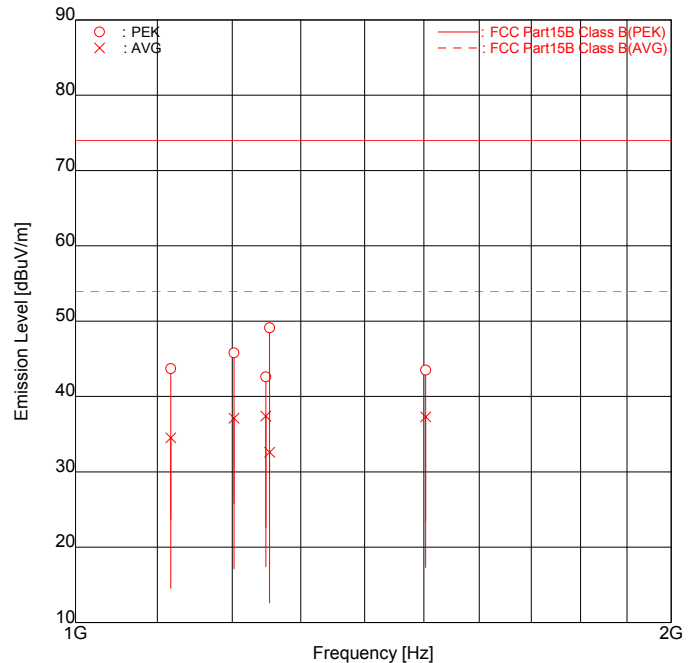
FREQUENCY [No]	[MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	30.20	-	25.0	2.5	2.5	-	27.5	40.0	-	12.5
2	48.01	-	<u>28.7</u>	0.4	0.4	-	<u>29.1</u>	40.0	-	<u>10.9</u>
3	66.21	<u>33.5</u>	-	-5.1	-5.1	<u>28.4</u>	-	40.0	<u>11.6</u>	-
4	66.59	-	<u>35.4</u>	-5.2	-5.2	-	<u>30.2</u>	40.0	-	<u>9.8</u>
5	168.02	-	<u>42.0</u>	-4.0	-4.0	-	<u>38.0</u>	43.5	-	<u>5.5</u>
6	169.40	-	<u>36.3</u>	-4.1	-4.1	-	<u>32.2</u>	43.5	-	<u>11.3</u>
7	180.02	-	<u>37.0</u>	-3.3	-3.3	-	<u>33.7</u>	43.5	-	<u>9.8</u>
8	240.10	-	31.9	-0.6	-0.6	-	31.3	46.0	-	14.7
9	329.35	27.5	-	2.6	2.6	30.1	-	46.0	15.9	-

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)

1000 - 2000 MHz

Intertek Japan K.K. Kashima No.12 Test Site Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (56.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 19 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 59.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

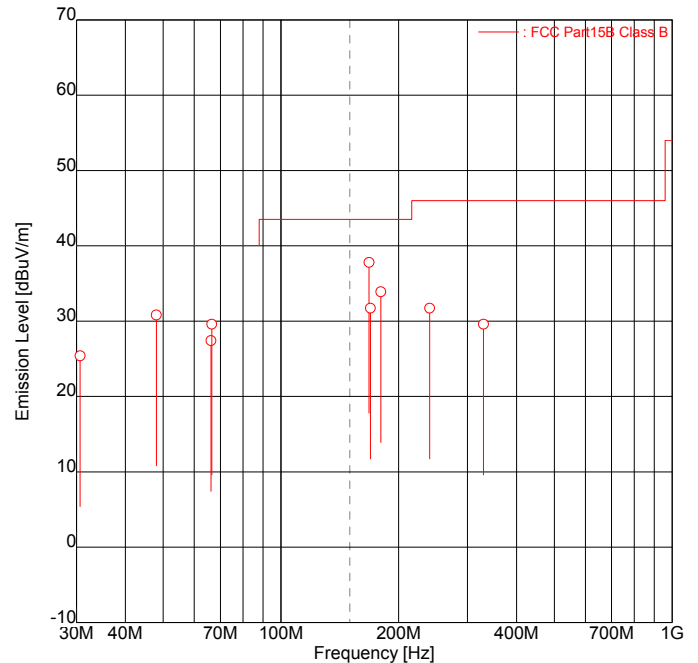
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1117.39	PEK	48.9	-	-5.2	-5.2	43.7	-	74.0	30.3	-
2	1117.39	AVG	<u>39.7</u>	-	-5.2	-5.2	<u>34.5</u>	-	54.0	<u>19.5</u>	-
3	1202.69	PEK	-	50.7	-4.9	-4.9	-	45.8	74.0	-	28.2
4	1202.69	AVG	-	<u>42.0</u>	-4.9	-4.9	-	<u>37.1</u>	54.0	-	<u>16.9</u>
5	1248.06	PEK	-	47.5	-4.9	-4.9	-	42.6	74.0	-	31.4
6	1248.06	AVG	-	<u>42.3</u>	-4.9	-4.9	-	<u>37.4</u>	54.0	-	<u>16.6</u>
7	1253.40	PEK	<u>53.9</u>	53.4	-4.8	-4.8	<u>49.1</u>	48.6	74.0	<u>24.9</u>	25.4
8	1253.40	AVG	<u>37.4</u>	37.4	-4.8	-4.8	<u>32.6</u>	32.6	54.0	<u>21.4</u>	21.4
9	1503.05	PEK	-	47.5	-4.0	-4.0	-	43.5	74.0	-	30.5
10	1503.05	AVG	-	<u>41.3</u>	-4.0	-4.0	-	<u>37.3</u>	54.0	-	<u>16.7</u>

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)

9.1.2.4 VFO SCAN mode (ANT.1)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : VFO Scan mode (ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 18 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 42.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

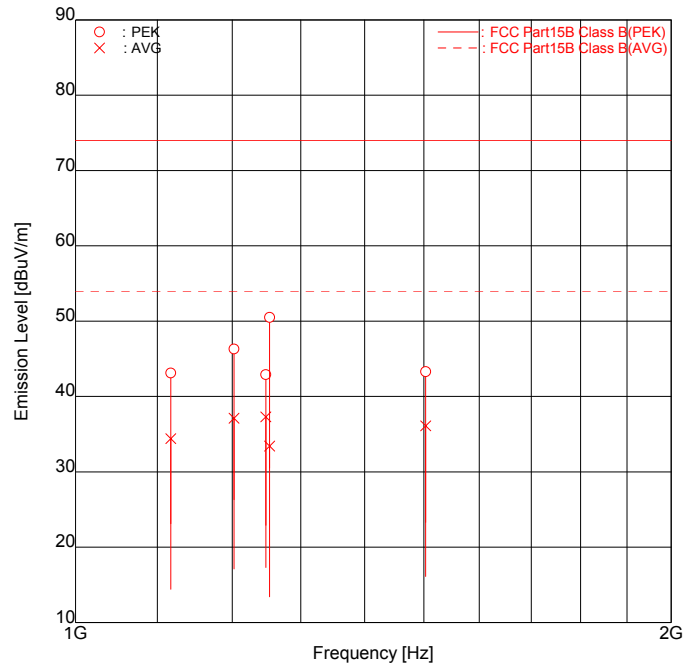
FREQUENCY [No]	[MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	30.65	-	23.0	2.4	2.4	-	25.4	40.0	-	14.6
2	48.01	-	<u>30.4</u>	0.4	0.4	-	<u>30.8</u>	40.0	-	<u>9.2</u>
3	66.21	<u>32.5</u>	-	-5.1	-5.1	<u>27.4</u>	-	40.0	<u>12.6</u>	-
4	66.59	-	<u>34.8</u>	-5.2	-5.2	-	<u>29.6</u>	40.0	-	<u>10.4</u>
5	168.02	-	<u>41.8</u>	-4.0	-4.0	-	<u>37.8</u>	43.5	-	<u>5.7</u>
6	169.40	-	<u>35.8</u>	-4.1	-4.1	-	<u>31.7</u>	43.5	-	<u>11.8</u>
7	180.02	-	<u>37.2</u>	-3.3	-3.3	-	<u>33.9</u>	43.5	-	<u>9.6</u>
8	240.10	-	<u>32.3</u>	-0.6	-0.6	-	<u>31.7</u>	46.0	-	<u>14.3</u>
9	329.35	27.0	-	2.6	2.6	29.6	-	46.0	16.4	-

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)

1000 - 2000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Radiated Electric Field

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50 MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : VFO Scan mode (ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 19 2013
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 18.0 [degC]
HUMIDITY : 59.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

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	1117.39	PEK	48.3	-	-5.2	-5.2	43.1	-	74.0	30.9	-
2	1117.39	AVG	<u>39.6</u>	-	-5.2	-5.2	<u>34.4</u>	-	54.0	<u>19.6</u>	-
3	1202.69	PEK	-	51.2	-4.9	-4.9	-	46.3	74.0	-	27.7
4	1202.69	AVG	-	<u>42.0</u>	-4.9	-4.9	-	<u>37.1</u>	54.0	-	<u>16.9</u>
5	1248.06	PEK	-	47.8	-4.9	-4.9	-	42.9	74.0	-	31.1
6	1248.06	AVG	-	<u>42.2</u>	-4.9	-4.9	-	<u>37.3</u>	54.0	-	<u>16.7</u>
7	1253.40	PEK	<u>55.3</u>	53.8	-4.8	-4.8	<u>50.5</u>	49.0	74.0	<u>23.5</u>	25.0
8	1253.40	AVG	<u>38.2</u>	37.8	-4.8	-4.8	<u>33.4</u>	33.0	54.0	<u>20.6</u>	21.0
9	1503.05	PEK	-	47.3	-4.0	-4.0	-	43.3	74.0	-	30.7
10	1503.05	AVG	-	<u>40.1</u>	-4.0	-4.0	-	<u>36.1</u>	54.0	-	<u>17.9</u>

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)

9.1.3 Conducted power on antenna port

Location	Kashima No.3 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Field Strength Emission

Operating mode	Required Frequency Range	Measured Frequency Range
RX mode (0.03MHz / ANT.1) RX mode (30.00MHz / ANT.1) RX mode (56.00MHz / ANT.1) VFO SCAN mode (ANT.1) RX mode (0.03MHz / ANT.2/RX) RX mode (30.00MHz / ANT. 2/RX) RX mode (56.00MHz / ANT. 2/RX) VFO SCAN mode (ANT. 2/RX)	30 – 2000 MHz	30 – 2000 MHz

Test Procedure

Item	Document number
Radiated disturbance	RJP-TE101

Setting for the Measuring instruments

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

< Measurement data correction >

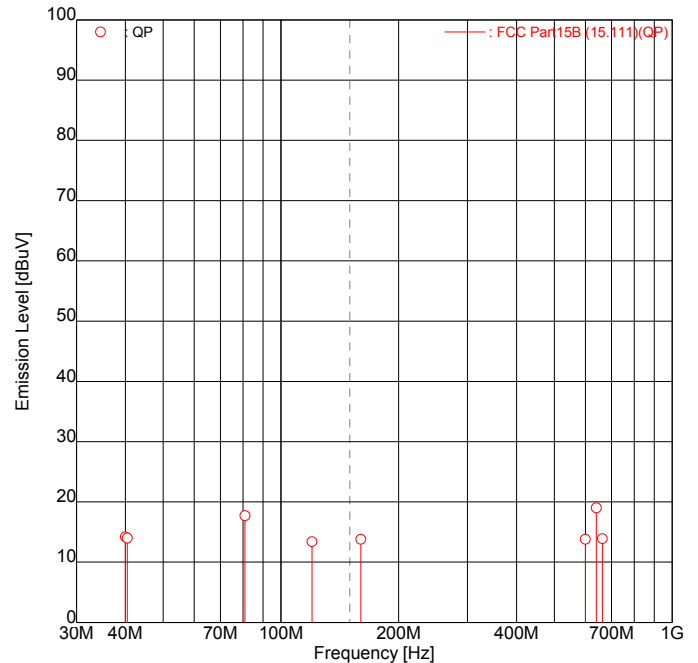
- * Radiated disturbance
- * Conducted power on antenna port
 - Emission Level [dBμV] = Meter Reading [dBμV] + Factor [dB]
 - Margin [dB] = Limit [dBμV] - Emission Level [dBμV]
 - * Factor = Pad + Cable Loss – Amplifier Gain

Result of Conducted power on antenna port

9.1.3.1 RX mode (0.03MHz / ANT.1) 30 - 1000MHz

Intertek Japan K.K. Kashima No.3 Test Site Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(0.03MHz/ANT.1)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	39.9919	<u>25.1</u>	-10.9	<u>14.2</u>	50.0	<u>35.8</u>
2	40.5039	<u>24.9</u>	-10.9	<u>14.0</u>	50.0	<u>36.0</u>
3	80.9596	<u>28.4</u>	-10.7	<u>17.7</u>	50.0	<u>32.3</u>
4	120.0255	<u>23.8</u>	-10.4	<u>13.4</u>	50.0	<u>36.6</u>
5	160.0136	<u>23.9</u>	-10.1	<u>13.8</u>	50.0	<u>36.2</u>
6	599.9987	<u>21.2</u>	-7.4	<u>13.8</u>	50.0	<u>36.2</u>
7	640.0060	<u>26.2</u>	-7.2	<u>19.0</u>	50.0	<u>31.0</u>
8	663.5556	<u>21.0</u>	-7.1	<u>13.9</u>	50.0	<u>36.1</u>

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

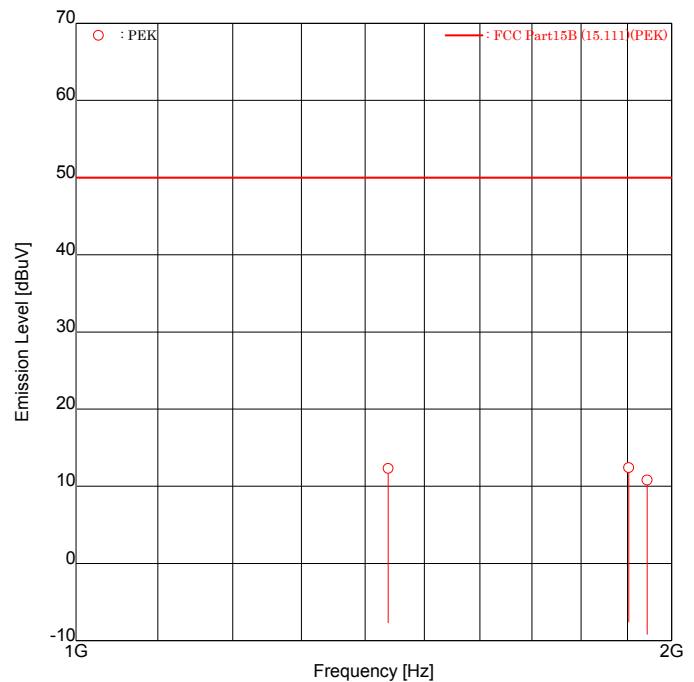
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (0.03MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

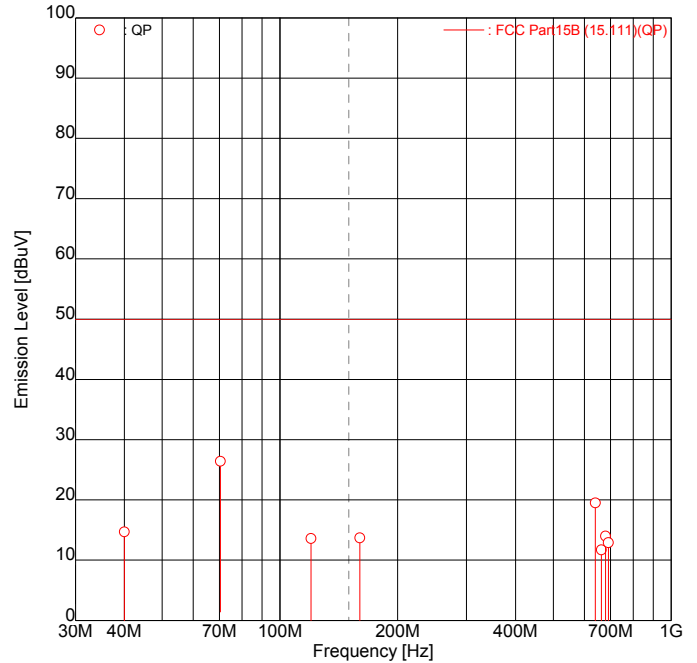
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1438.0740	<u>42.3</u>	-30.0	<u>12.3</u>	50.0	<u>37.7</u>
2	1902.7480	<u>41.9</u>	-29.5	<u>12.4</u>	50.0	<u>37.6</u>
3	1943.6510	<u>40.3</u>	-29.5	<u>10.8</u>	50.0	<u>39.2</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

9.1.3.2 RX mode (30.00MHz / ANT.1)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.3 Test Site
Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(30.00MHz/ANT.1)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	40.0133	<u>25.6</u>	-10.9	<u>14.7</u>	50.0	<u>35.3</u>
2	70.4660	<u>37.1</u>	-10.7	<u>26.4</u>	50.0	<u>23.6</u>
3	120.0131	<u>24.0</u>	-10.4	<u>13.6</u>	50.0	<u>36.4</u>
4	160.0094	<u>23.8</u>	-10.1	<u>13.7</u>	50.0	<u>36.3</u>
5	640.0053	<u>26.7</u>	-7.2	<u>19.5</u>	50.0	<u>30.5</u>
6	663.5503	18.8	-7.1	11.7	50.0	38.3
7	680.0139	<u>20.9</u>	-6.9	<u>14.0</u>	50.0	<u>36.0</u>
8	691.2103	19.8	-6.9	12.9	50.0	37.1

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

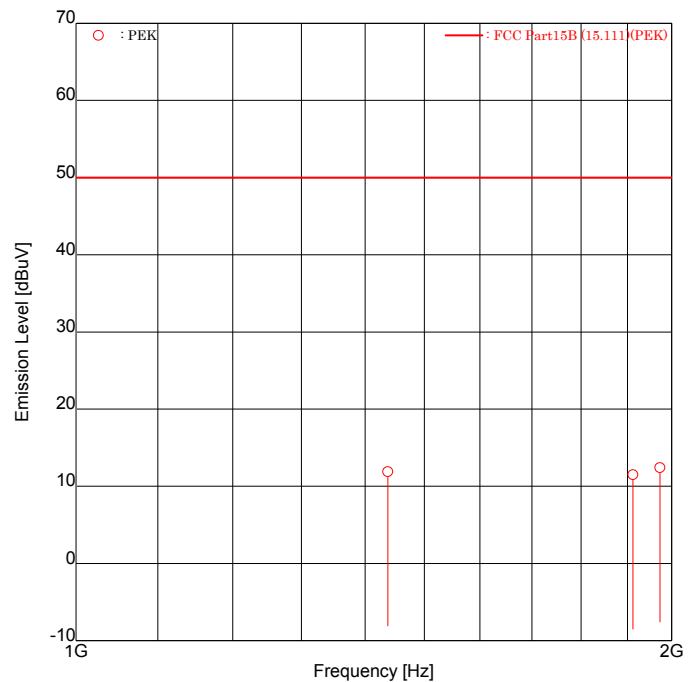
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (30.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

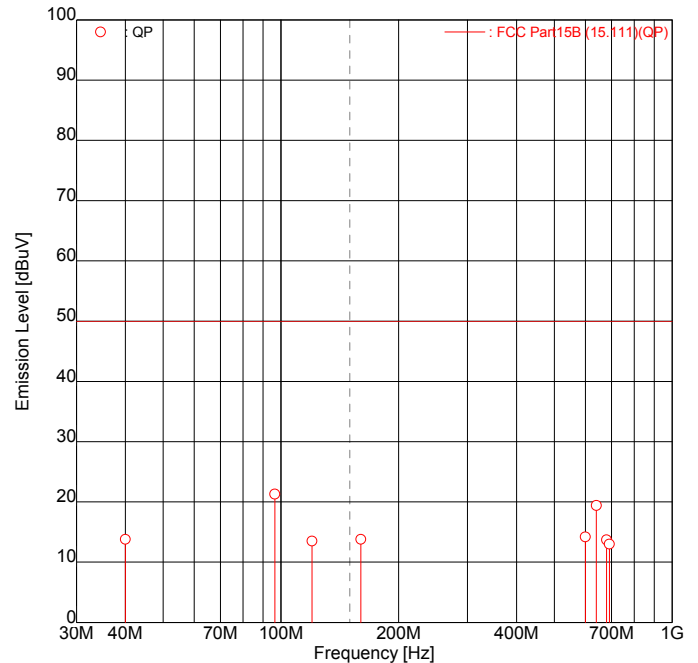
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1437.3890	<u>41.9</u>	-30.0	<u>11.9</u>	50.0	<u>38.1</u>
2	1911.9920	<u>41.0</u>	-29.5	<u>11.5</u>	50.0	<u>38.5</u>
3	1972.9500	<u>41.8</u>	-29.4	<u>12.4</u>	50.0	<u>37.6</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

**9.1.3.3 RX mode (56.00MHz / ANT.1)
30 - 1000MHz**

**Intertek Japan K.K.
Kashima No.3 Test Site
Conducted Power on Antenna Port**

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(56.00MHz/ANT.1)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	40.0209	<u>24.7</u>	-10.9	<u>13.8</u>	50.0	<u>36.2</u>
2	96.4609	<u>31.8</u>	-10.5	<u>21.3</u>	50.0	<u>28.7</u>
3	120.0093	<u>23.9</u>	-10.4	<u>13.5</u>	50.0	<u>36.5</u>
4	160.0156	<u>23.9</u>	-10.1	<u>13.8</u>	50.0	<u>36.2</u>
5	600.0160	<u>21.6</u>	-7.4	<u>14.2</u>	50.0	<u>35.8</u>
6	640.0150	<u>26.6</u>	-7.2	<u>19.4</u>	50.0	<u>30.6</u>
7	680.0209	<u>20.6</u>	-6.9	<u>13.7</u>	50.0	<u>36.3</u>
8	691.2110	<u>19.9</u>	-6.9	<u>13.0</u>	50.0	<u>37.0</u>

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

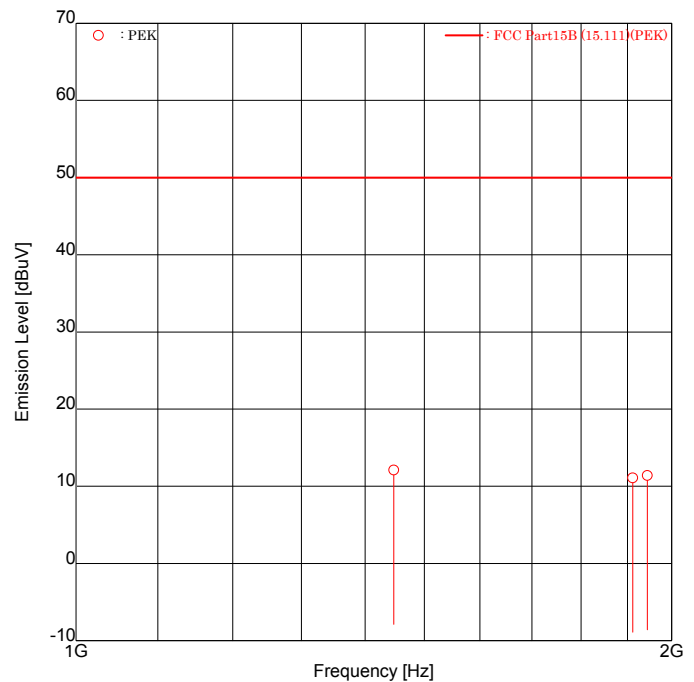
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (56.00MHz/ANT.1)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1447.3790	<u>42.1</u>	-30.0	<u>12.1</u>	50.0	<u>37.9</u>
2	1911.5420	<u>40.6</u>	-29.5	<u>11.1</u>	50.0	<u>38.9</u>
3	1944.1560	<u>40.9</u>	-29.5	<u>11.4</u>	50.0	<u>38.6</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

9.1.3.4 VFO SCAN mode (ANT.1) 30 - 1000MHz

< Graph number #1 >

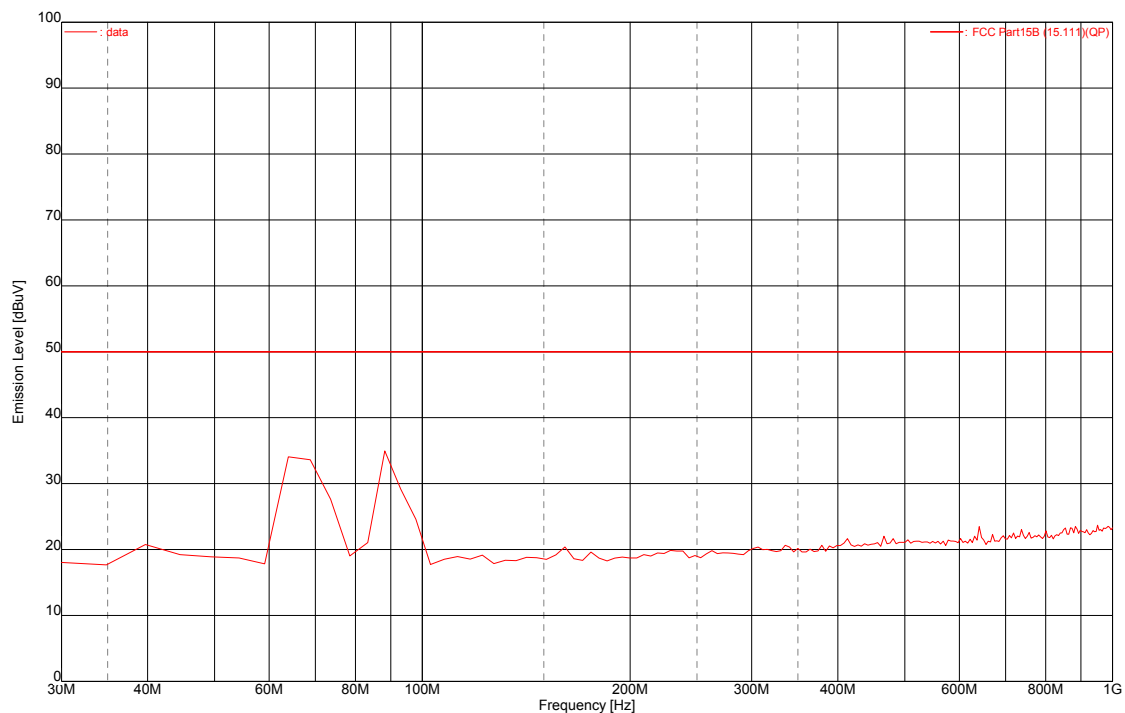
SPECTRUM ANALYSIS

Kashima No.3 Test Site

Date tested : Mar 25 2013
Company : YAESU MUSEN CO.,LTD.
EUT Name : HF/50MHz TRANSCEIVER
Model number : FTDX1200
Serial number : ES04

Test mode : VFO SCAN mode(ANT.1)
Power source : DC13.8V
File number : -
Engineer : Koichi Wagatsuma
Note :

23.0degC /40.0%



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
39.9995	<u>28.5</u>	-10.9	<u>17.6</u>	50.0	<u>32.4</u>
42.1601	<u>27.5</u>	-10.9	<u>16.6</u>	50.0	<u>33.4</u>
63.9836	<u>43.8</u>	-10.8	<u>33.0</u>	50.0	<u>17.0</u>
85.4538	<u>44.8</u>	-10.6	<u>34.2</u>	50.0	<u>15.8</u>
96.4507	<u>31.6</u>	-10.5	<u>21.1</u>	50.0	<u>28.9</u>
120.0010	23.7	-10.4	13.3	50.0	36.7
160.0172	23.8	-10.1	13.7	50.0	36.3
640.0050	<u>25.8</u>	-7.2	<u>18.6</u>	50.0	<u>31.4</u>

Higher six points are underlined.

Other frequencies : Below the FCC Part15B (15.111) limit

Emission Level = Read + Factor (Attenuator, Cable, Preamp)

Limit : 2nW = 50dBuV (50ohm impedance)

1000 - 2000 MHz

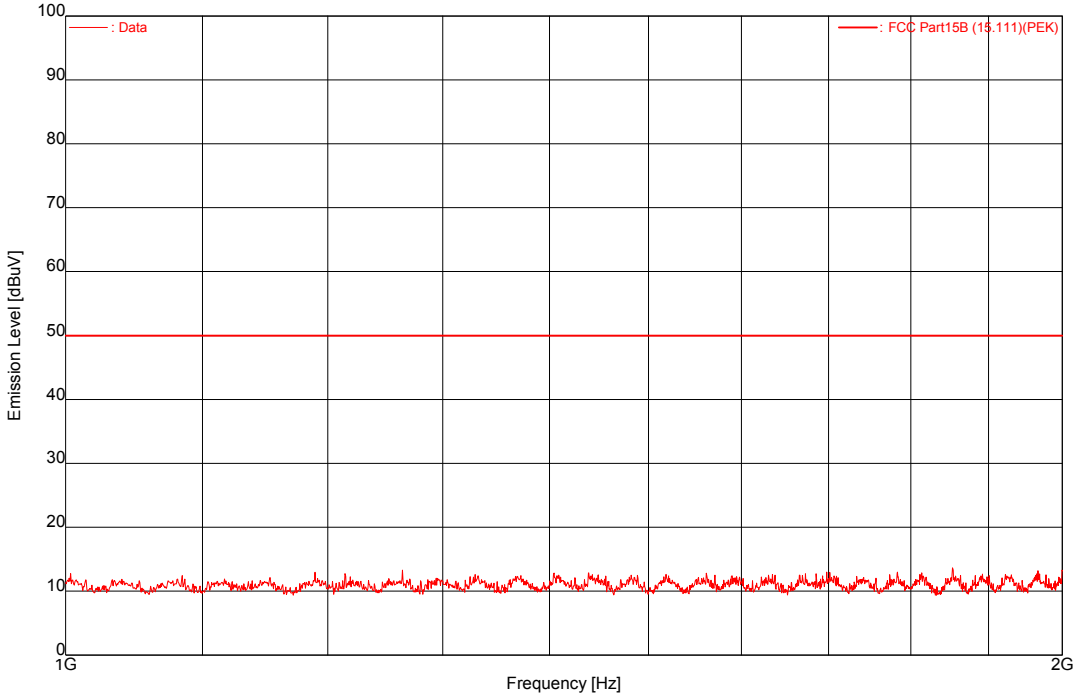
< Graph number #1 >

SPECTRUM ANALYSIS

Kashima No.3 Test Site

Date tested : Mar 25 2013
Company : YAESU MUSEN CO., LTD.
EUT Name : HF/50MHz TRANSCEIVER
Model number : FTDX1200
Serial number : ES04

23.0degC /40.0%
Test mode : VFO SCAN mode (ANT.1)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatsuma
Note :



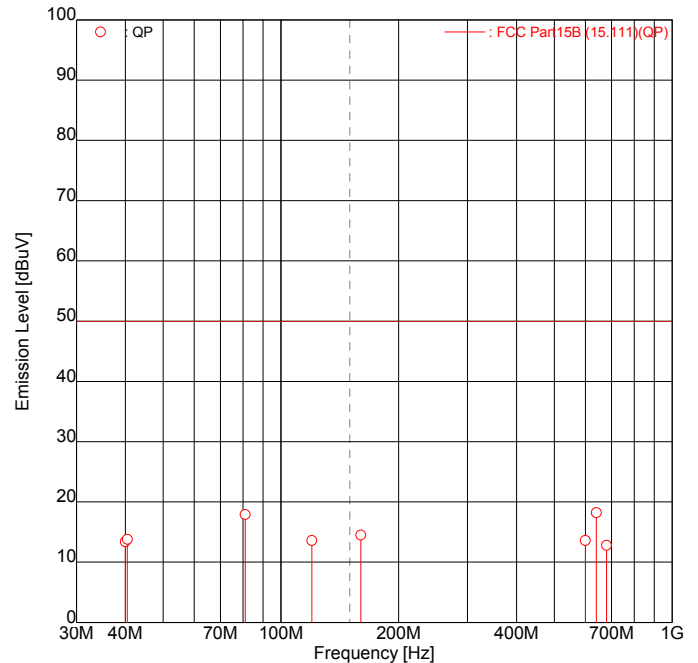
Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1852.4910	<u>43.5</u>	-29.6	<u>13.9</u>	50.0	<u>36.1</u>
1876.0520	<u>41.2</u>	-29.5	<u>11.7</u>	50.0	<u>38.3</u>
1944.1250	<u>42.1</u>	-29.5	<u>12.6</u>	50.0	<u>37.4</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor (Attenuator, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)

9.1.3.5 RX mode (0.03MHz / ANT.2/RX)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.3 Test Site
Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(0.03MHz/ANT.2/RX)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	39.9919	24.3	-10.9	13.4	50.0	36.6
2	40.4755	<u>24.7</u>	-10.9	<u>13.8</u>	50.0	<u>36.2</u>
3	80.9841	<u>28.6</u>	-10.7	<u>17.9</u>	50.0	<u>32.1</u>
4	120.0010	<u>24.0</u>	-10.4	<u>13.6</u>	50.0	<u>36.4</u>
5	160.0036	<u>24.6</u>	-10.1	<u>14.5</u>	50.0	<u>35.5</u>
6	600.0096	<u>21.0</u>	-7.4	<u>13.6</u>	50.0	<u>36.4</u>
7	640.0045	<u>25.4</u>	-7.2	<u>18.2</u>	50.0	<u>31.8</u>
8	680.0034	19.7	-6.9	12.8	50.0	37.2

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

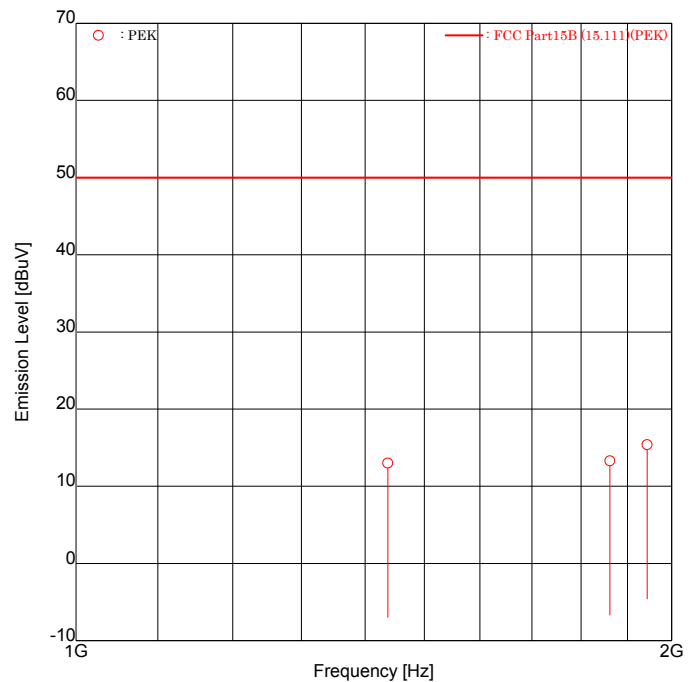
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (0.03MHz/ANT.2/RX)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

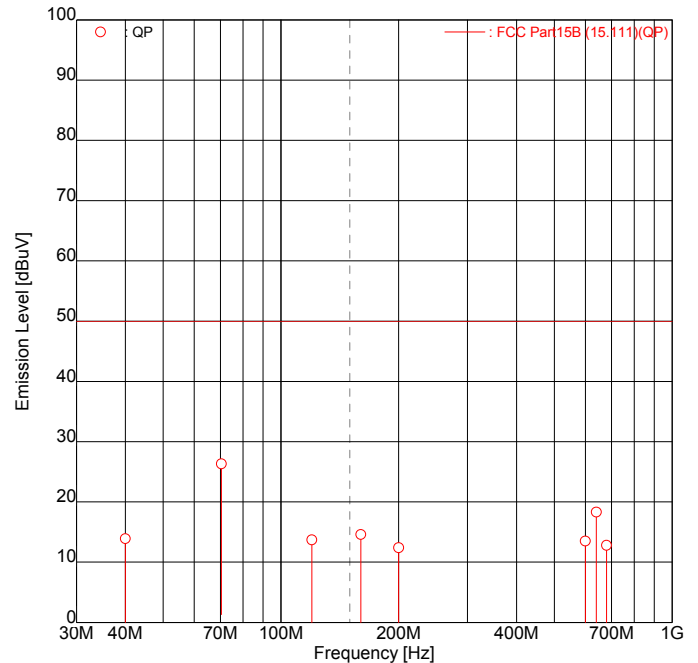
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1437.5490	<u>43.0</u>	-30.0	<u>13.0</u>	50.0	<u>37.0</u>
2	1861.5600	<u>42.8</u>	-29.5	<u>13.3</u>	50.0	<u>36.7</u>
3	1943.9350	<u>44.9</u>	-29.5	<u>15.4</u>	50.0	<u>34.6</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

9.1.3.6 RX mode (30.00MHz / ANT.2/RX)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.3 Test Site
Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(30.00MHz/ANT.2/RX)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	40.0060	<u>24.8</u>	-10.9	<u>13.9</u>	50.0	<u>36.1</u>
2	70.4614	<u>37.0</u>	-10.7	<u>26.3</u>	50.0	<u>23.7</u>
3	120.0053	<u>24.1</u>	-10.4	<u>13.7</u>	50.0	<u>36.3</u>
4	160.0109	<u>24.7</u>	-10.1	<u>14.6</u>	50.0	<u>35.4</u>
5	200.0047	22.3	-9.9	12.4	50.0	37.6
6	600.0087	<u>20.9</u>	-7.4	<u>13.5</u>	50.0	<u>36.5</u>
7	640.0082	<u>25.5</u>	-7.2	<u>18.3</u>	50.0	<u>31.7</u>
8	680.0124	19.7	-6.9	12.8	50.0	37.2

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

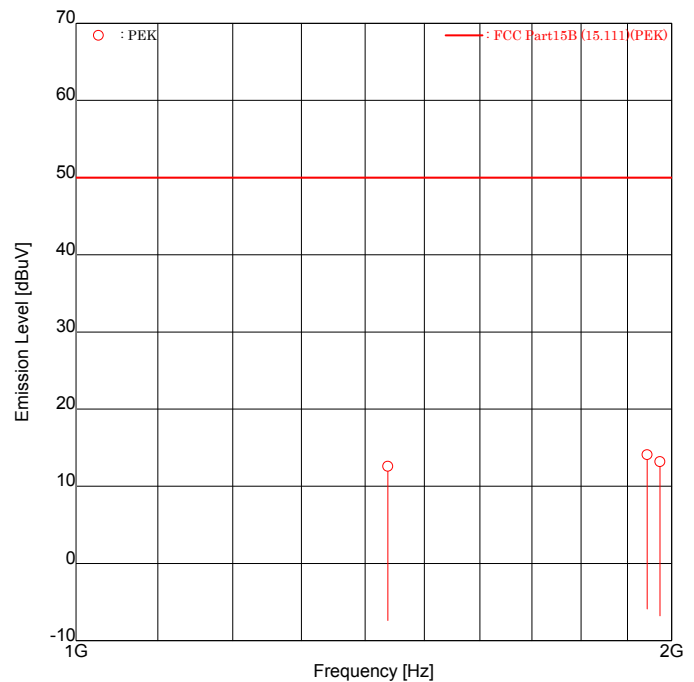
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (30.00MHz/ANT.2/RX)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

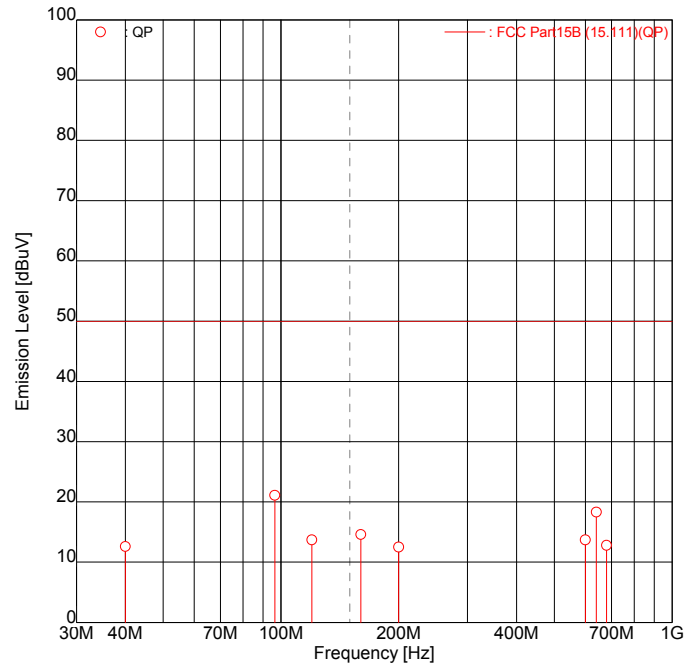
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1437.5450	<u>42.6</u>	-30.0	<u>12.6</u>	50.0	<u>37.4</u>
2	1943.8370	<u>43.6</u>	-29.5	<u>14.1</u>	50.0	<u>35.9</u>
3	1972.9170	<u>42.6</u>	-29.4	<u>13.2</u>	50.0	<u>36.8</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

9.1.3.7 RX mode (56.00MHz / ANT.2/RX)
30 - 1000MHz

Intertek Japan K.K.
Kashima No.3 Test Site
Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO.,LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode(56.00MHz/ANT.2/RX)
POWER SOURCE : DC13.8V
DATE TESTED : Mar 21 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 16.5 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	40.0044	23.5	-10.9	12.6	50.0	37.4
2	96.4588	<u>31.6</u>	-10.5	<u>21.1</u>	50.0	<u>28.9</u>
3	120.0078	<u>24.1</u>	-10.4	<u>13.7</u>	50.0	<u>36.3</u>
4	160.0031	<u>24.7</u>	-10.1	<u>14.6</u>	50.0	<u>35.4</u>
5	200.0097	22.4	-9.9	12.5	50.0	37.5
6	600.0056	<u>21.1</u>	-7.4	<u>13.7</u>	50.0	<u>36.3</u>
7	640.0037	<u>25.5</u>	-7.2	<u>18.3</u>	50.0	<u>31.7</u>
8	680.0039	<u>19.7</u>	-6.9	<u>12.8</u>	50.0	<u>37.2</u>

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

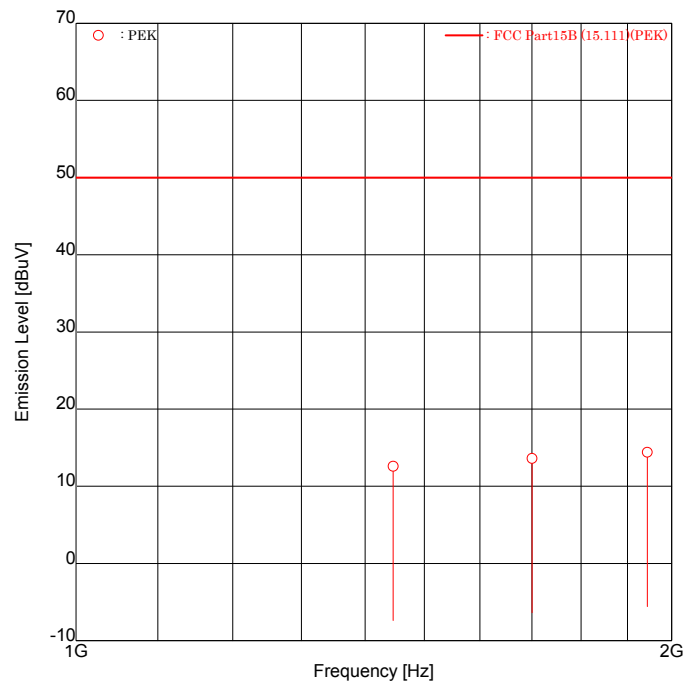
1000 - 2000 MHz

Intertek Japan K.K.

Kashima No.3 Test Site

Conducted Power on Antenna Port

APPLICANT : YAESU MUSEN CO., LTD.
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : FTDX1200
SERIAL NO. : ES04
TEST MODE : RX mode (56.00MHz/ANT.2/RX)
POWER SOURCE : DC 13.8V
DATE TESTED : Mar 25 2013
FILE NO. : -
REGULATION : FCC Part15B (15.111)
TEST METHOD : ANSI C63.4-2003
TEMPERATURE : 23.0 [degC]
HUMIDITY : 40.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1446.5280	<u>42.6</u>	-30.0	<u>12.6</u>	50.0	<u>37.4</u>
2	1700.0975	<u>43.3</u>	-29.7	<u>13.6</u>	50.0	<u>36.4</u>
3	1944.0550	<u>43.9</u>	-29.5	<u>14.4</u>	50.0	<u>35.6</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

9.1.3.8 VFO SCAN mode (ANT.2/RX) 30 - 1000MHz

< Graph number #1 >

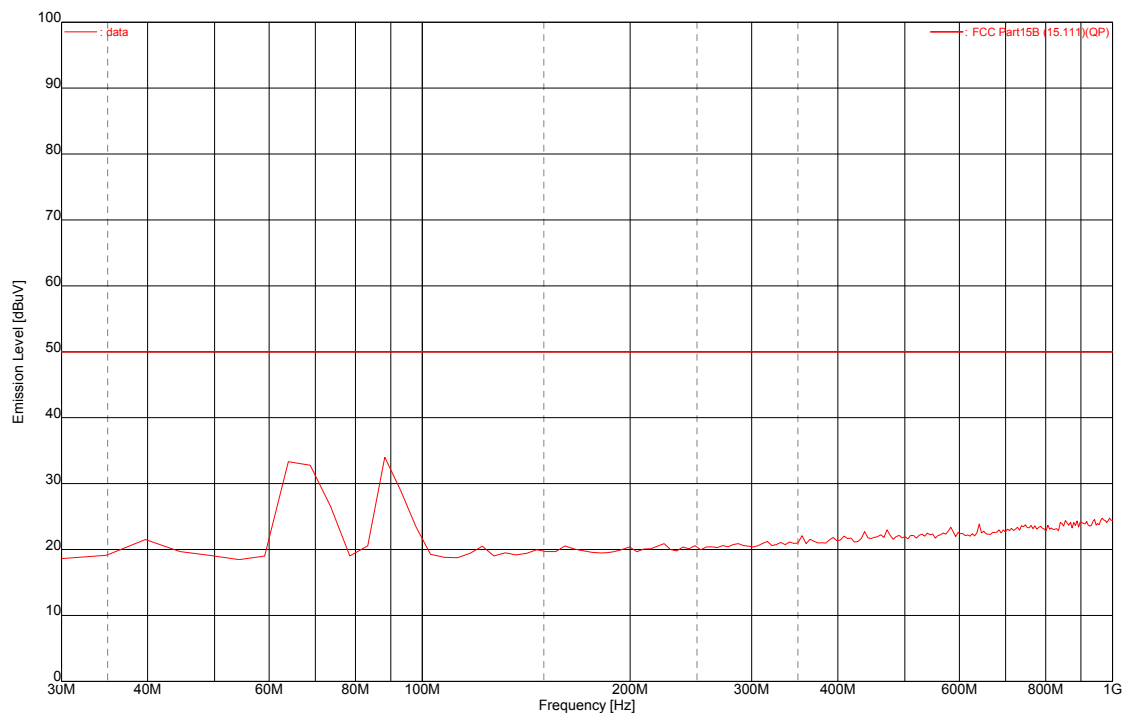
SPECTRUM ANALYSIS

Kashima No.3 Test Site

Date tested : Mar 25 2013
Company : YAESU MUSEN CO.,LTD.
EUT Name : HF/50MHz TRANSCEIVER
Model number : FTDX1200
Serial number : ES04

Test mode : VFO SCAN mode(ANT.2/RX)
Power source : DC13.8V
File number : -
Engineer : Koichi Wagatsuma
Note :

23.0degC /40.0%



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
40.0000	<u>27.6</u>	-10.9	<u>16.7</u>	50.0	<u>33.3</u>
42.1601	<u>27.3</u>	-10.9	<u>16.4</u>	50.0	<u>33.6</u>
63.9647	<u>43.6</u>	-10.8	<u>32.8</u>	50.0	<u>17.2</u>
85.4624	<u>44.7</u>	-10.6	<u>34.1</u>	50.0	<u>15.9</u>
96.4623	<u>31.4</u>	-10.5	<u>20.9</u>	50.0	<u>29.1</u>
120.0067	23.9	-10.4	13.5	50.0	36.5
160.0079	24.5	-10.1	14.4	50.0	35.6
640.0118	<u>24.1</u>	-7.2	<u>16.9</u>	50.0	<u>33.1</u>

Higher six points are underlined.

Other frequencies : Below the FCC Part15B (15.111) limit

Emission Level = Read + Factor (Attenuator, Cable, Preamp)

Limit : 2nW = 50dBuV (50ohm impedance)

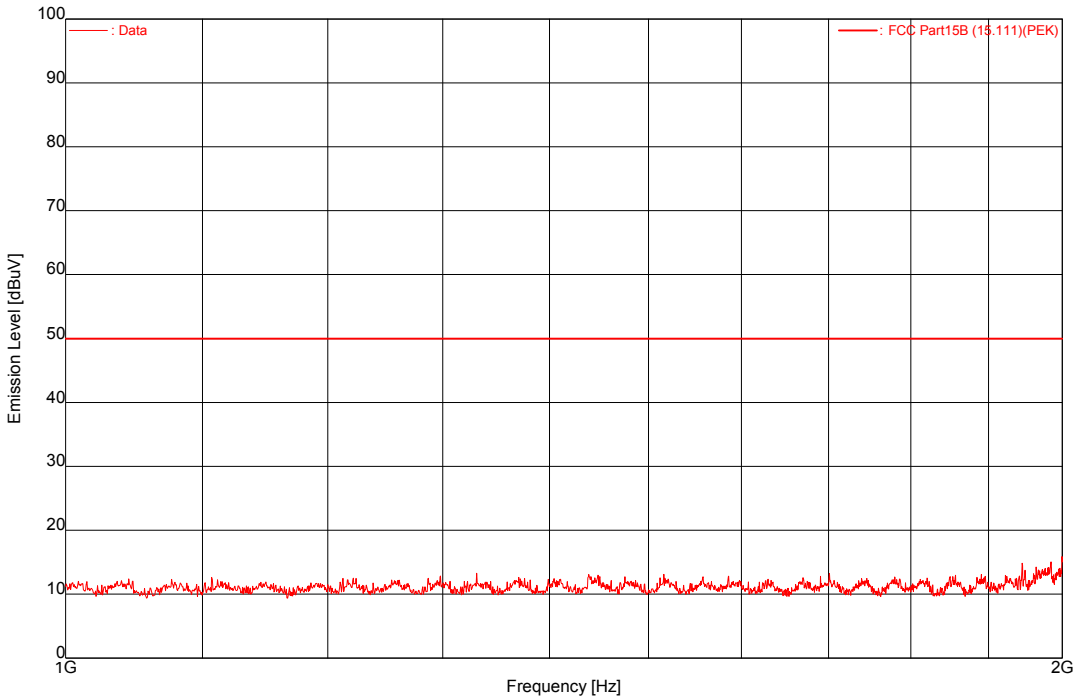
1000 - 2000 MHz
< Graph number #1 >

SPECTRUM ANALYSIS

Kashima No.3 Test Site

Date tested : Mar 25 2013
Company : YAESU MUSEN CO., LTD.
EUT Name : HF/50MHz TRANSCEIVER
Model number : FTDX1200
Serial number : ES04

23.0degC /40.0%
Test mode : VFO SCAN mode (ANT.2/RX)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatsuma
Note :



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1447.7700	<u>43.0</u>	-30.0	<u>13.0</u>	50.0	<u>37.0</u>
1857.7200	<u>43.3</u>	-29.5	<u>13.8</u>	50.0	<u>36.2</u>
1944.0520	<u>44.0</u>	-29.5	<u>14.5</u>	50.0	<u>35.5</u>

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor (Attenuator, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)

9.1.3 38dB Rejection Test

Location	Kashima No.3 Test Site
Date Tested	March 26, 2013
Temperature	16 [degC]
Humidity	36 [%]
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Field Strength Emission

Operating mode	Required Frequency Range	Measured Frequency Range
VFO SCAN mode (ANT.1) VFO SCAN mode (ANT. 2/RX)	0.03 – 56.00 MHz	0.03 – 56.00 MHz

Test Procedure

Item	Document number
Radiated disturbance	RJP-TE102

Result of 38dB Rejection Test

9.1.3.1 VFO SCAN mode (ANT.1)

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Reading Injected Frequency [dBm]	12dB SINAD Reading Detected Frequency	Rejection Level [dB]	Margin [dB]
824.040	No Point Detected	See Note	See Note	-	-
836.505	No Point Detected	See Note	See Note	-	-
848.970	No Point Detected	See Note	See Note	-	-
869.040	No Point Detected	See Note	See Note	-	-
881.505	No Point Detected	See Note	See Note	-	-
893.970	No Point Detected	See Note	See Note	-	-

Note : There was no need to carry out the measurements because no point was detected.

SG Input Level = 66dBuV

SG Reference Level = 14.0dBuV (the worst case sensitivity)

9.1.3.2 VFO SCAN mode (ANT.2)

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Reading Injected Frequency [dBm]	12dB SINAD Reading Detected Frequency	Rejection Level [dB]	Margin [dB]
824.040	No Point Detected	See Note	See Note	-	-
836.505	No Point Detected	See Note	See Note	-	-
848.970	No Point Detected	See Note	See Note	-	-
869.040	No Point Detected	See Note	See Note	-	-
881.505	No Point Detected	See Note	See Note	-	-
893.970	No Point Detected	See Note	See Note	-	-

Note : There was no need to carry out the measurements because no point was detected.

SG Input Level = 66dBuV

SG Reference Level = 14.0dBuV (the worst case sensitivity)

SECTION 10. LIST OF MEASURING INSTRUMENTS

Test instruments are calibrated according to Quality Manual and Calibration Rules of Intertek Japan K.K.

10.1 Emission tests

Instrument	Model No.	Serial No.	Manufacturer	Cal. Interval	Effective period
Conducted disturbance at mains terminals					
LISN(EUT)	ESH2-Z5	890484/001	Rohde & Schwarz	1 Y	Nov. 30, 2013
LISN(Peripheral)	ESH2-Z5	882395/022	Rohde & Schwarz	1 Y	Oct 31, 2013
10dB LISN Pad	CFA-01	KSR00240	TME	1 Y	Nov. 30, 2013
10dB LISN Pad	CFA-01	KSR00249	TME	1 Y	Oct 31, 2013
50Ω Termination	CT-01	A001CON50	TME	1 Y	Oct. 31, 2013
Coaxial Cable	RG-5A/U(7.2m)	C1	Intertek Japan	1 Y	Mar. 31, 2013
Coaxial Cable	RG-5A/U(4.0m)	C2	Intertek Japan	1 Y	Mar. 31, 2013
Coaxial Cable	RG-5A/U(1.1m)	R11	Intertek Japan	1 Y	Mar. 31, 2013
RF Switch	ACX-150	None	Intertek Japan	1 Y	Mar. 31, 2013
Radiated disturbance					
Antenna	Bi-cog LPB-2513/A	1103	ARA	1 Y	Oct. 31, 2013
Amplifier	ZX60-3018G	005	Intertek Japan	1 Y	Jan. 31, 2014
6dB Attenuator	UFA-01	None	TME	1 Y	Jan. 31, 2014
Coaxial cable(R1)	RG-5A/U (14.0m)	None	Intertek Japan	1 Y	Jan. 31, 2014
Coaxial cable(R3)	RG-5A/U (7.0m)	None	Intertek Japan	1 Y	Jan. 31, 2014
Coaxial cable(R5)	RG-5A/U (4.0m)	None	Intertek Japan	1 Y	Jan. 31, 2014
Coaxial cable(R7)	5D-2W (0.7m)	None	Intertek Japan	1 Y	Jan. 31, 2014
Coaxial cable(R10)	5D-2W (1.2m)	None	Intertek Japan	1 Y	Jan. 31, 2014
Double Ridged Antenna	3115	5044	EMCO	1 Y	Jul. 31, 2013
3dB Attenuator	6803.17.B	None	SUHNER	1 Y	Oct. 31, 2013
Coaxial cable(R14)	R286401343(1.0m)	03 23 104	RADIAL	1 Y	Oct. 31, 2013
Coaxial cable(R15)	R286401344(8.0m)	03 23 72	RADIAL	1 Y	Oct. 31, 2013
Amplifier	TPA0118-30	0402	TOYO	1 Y	Oct. 31, 2013
RF Switch	ACX-150-1	-	Intertek Japan	1 Y	Jan. 31, 2014
Spectrum Analyzer	N9030A(Rev.A.08.54)	US51350220	Agilent	1 Y	Feb. 28, 2014
Site Attenuation	-	-	-	1 Y	Feb. 28, 2014
Common					
Test receiver	ESS (Firmware Version 1.07)	842886/011	Rohde & Schwarz	1 Y	Aug. 31, 2013
Test receiver	ESS (Firmware Version 1.07)	847151/012	Rohde & Schwarz	1 Y	Mar. 31, 2013
Testing Software	emiT (Version 3,0,0,0)				

Instrument	Model No.	Serial No.	Manufacturer	Cal. Interval	Effective period
Conducted power on antenna port					
3dB Attenuator	779	None	narda	1 Y	Oct. 31, 2013
10dB Attenuator	CFA-05NPJ-10	262856	TME	1 Y	Dec. 31, 2013
Step Attenuator	8494B	2406A09036	Hewlett Packard	1 Y	Jun. 30, 2013
Amplifier	TPA0118-30	0303	TOYO	1 Y	Oct. 31, 2013
Amplifier	ZX60-3018G	003	Intertek	1 Y	Jun. 30, 2013
Spectrum Analyzer	N9030A(Rev.A.08.54)	US51350220	Agilent	1 Y	Feb. 28, 2014
Coaxial Cable (C1)	5D-2W(7.0m)	None	Intertek	1 Y	Jun. 30, 2013
Coaxial Cable (R9)	RG-5A/U(0.2m)	None	Intertek	1 Y	Jun. 30, 2013
Coaxial Cable (R10)	RG-5A/U(0.4m)	None	Intertek	1 Y	Jun. 30, 2013
Coaxial Cable (R11)	RG-5A/U(1.1m)	None	Intertek	1 Y	Jun. 30, 2013
Coaxial Cable (R14)	SUCOFLEX104(1.0m)	229603/4	SUHNER	1 Y	Oct. 31, 2013
Coaxial Cable (R15)	SUCOFLEX104(3.0m)	39677/4	SUHNER	1 Y	Oct. 31, 2013
RF Switch	ACX-150-1	-	Intertek Japan	1 Y	Jun. 30, 2013
Test receiver	ESS (Firmware Version 1.07)	842886/011	Rohde & Schwarz	1 Y	Aug. 31, 2013
38dB rejection test					
Signal Generator	SMB100A	105709	Rohde & Schwarz	1 Y	Dec. 31, 2013
Audio Analyzer	8903B	2818A04372	Hewlett Packard	1 Y	May 31, 2013
Coaxial Cable	SUCOFLEX 104	237767/4	SUHNER	1 Y	May 31, 2013

ANNEX

Radiated disturbance

Test setup as per standard

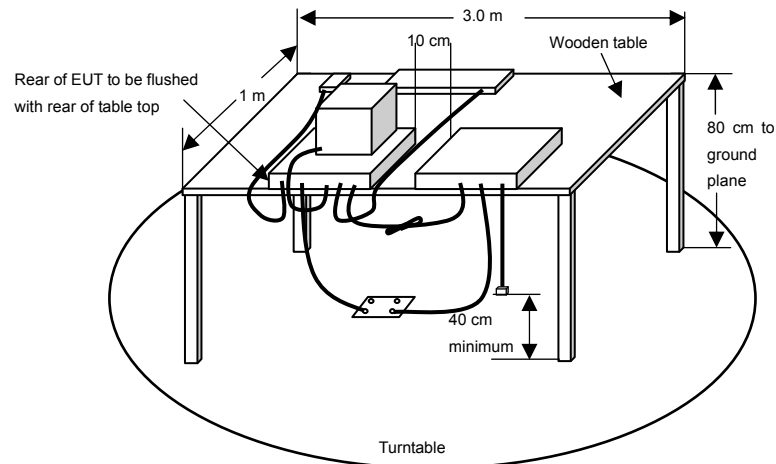
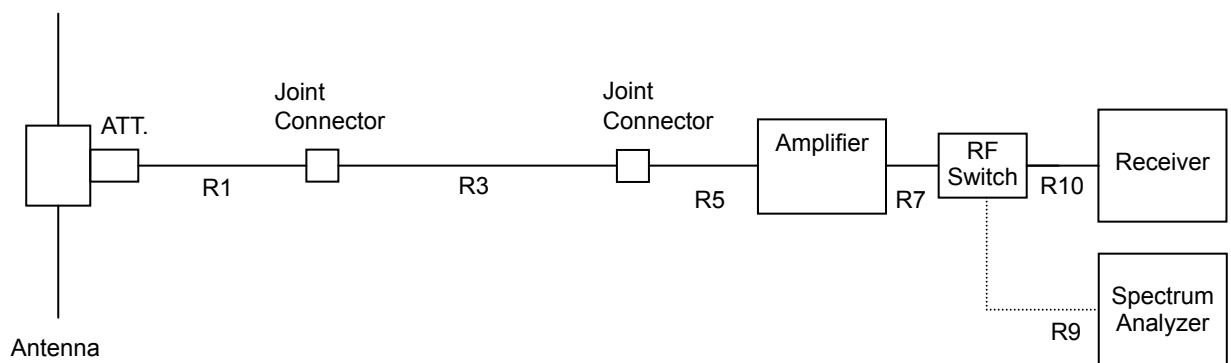
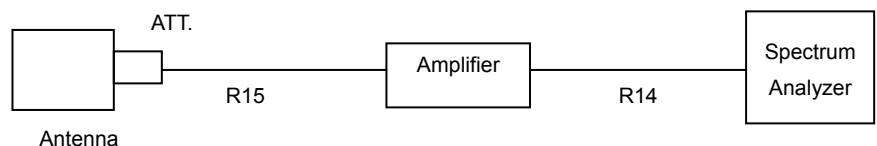


Diagram of the measuring instruments (30-1000MHz)



Above 1GHz



[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, And 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.

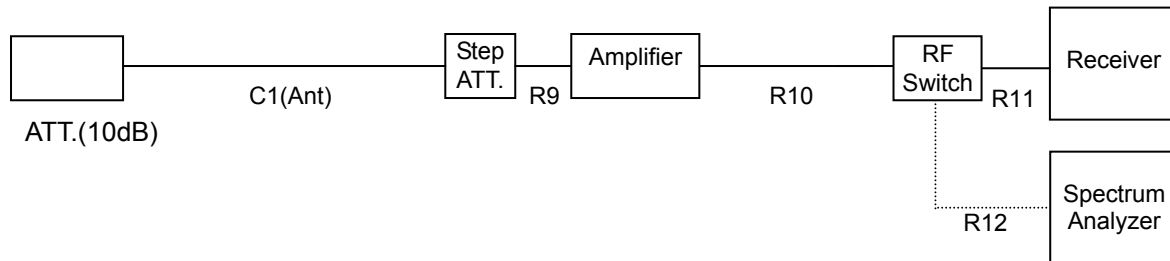
The turntable azimuth (EUT direction) and antenna height are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.

The equipment and cables are arranged or manipulated within the range of the test standard in the above condition. At least six highest spectrums are measured by the test receiver (quasi-peak) and spectrum analyzer (peak and average). When the uncertain result was obtained (30 – 1000 MHz), the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

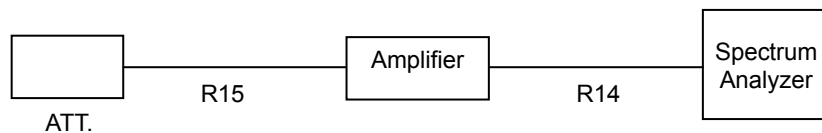
Conducted Power on Antenna port (15.111)

Schema for the conducted power on antenna port measurement

Diagram of the measuring instruments (30 - 1000MHz)



Above 1GHz



[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]

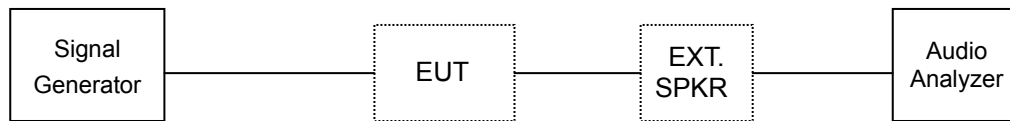
The EUT is operated in the worst emission condition found by the preliminary test.

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 by the test receiver (quasi-peak) and spectrum analyzer (peak).

38dB Rejection test

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 – 56.00 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 Section 15.121(b) of the Rule.

Injected 12dB SINAD Reading – Detected 12dB SINAD Reading = 38 dB or more.