TEST REPORT

STANDARD : FCC Part15B Class B -Scanning Receiver-
RSS-215 Issue 2

Applicant	Testing Laboratory
JVC KENWOOD Corporation 1-16-2, Hakusan, Midori-ku, Yokohama-shi, Kanagawa, 226-8525 Japan Tel. +81 45 939 6254	Intertek Japan K.K. Kashima Laboratory 298-6 Sada, Kashima, Ibaraki 314-0027 Japan Tel. +81 299 82 8464 URL: http://www.japan.intertek-etlsemko.com

Equipment Type	HF/50MHz TRANSCEIVER
Trademark	KENWOOD
Model(s)	TS-890S
Serial No.	001
Equipment Authorization	Certification (FCC ID : K44512000) (ISED CN and UPN : 282F-512000)
Test Result	Complied
Report Number	18040195JKA-001
Original Issue Date	May 31, 2018

Approved by
Hideaki Kosemura
[Technical. Manager]

Tested by
Koichi Wagatsuma
[Engineer]

VLAC-008-1

Responsible Party of Test Item (Product)

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

TABLE OF CONTENTS

SECTION 1. GENERAL INFORMATION

Test Performed

EUT Received	May 14, 2018
Date of Test	From May 15, 2018 to May 19, 2018
Standard Applied	FCC Part15B -Scanning Receiver- RSS-215 Issue 2
Test methods	ANSI C63.4-2014 / RSS-GEN Issue 5
Deviation from Standard(s)	None

As for the ICES-003 “Digital Apparatus”, the EUT has been measured.
Refer to report No. 18040195JKA-003.
As for the FCC Part15B Class B “Peripherals”, the EUT has been measured.
Refer to report No. 18040195JKA-002.

Qualifications of Testing Laboratory

Accreditation	Scope	Lab. Code	Remarks
VLAC	EMC Testing	VLAC-008-1	JAPAN
Filing			
VCCI	EMC Testing	A-0126	JAPAN
FCC	EMC Testing	JP0008	USA
ISED	EMC Testing	2042Q-12	CANADA
CB-Scheme	EMC Testing	TL222	IECEE

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- RSS-215 Issue 2	
Test Item	**Minimum margin**	**Remarks**
Conducted disturbance at mains terminals	5.6 dB (24.3006 MHz) [AVG] RX mode(30.0000MHz)	
Radiated disturbance	0.2 dB (684.26 MHz) RX mode(VFO SCAN)	
Conducted power on antenna port	0.2 dB (1684.2500 MHz) RX mode(VFO SCAN:ANTRX)	

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
A	HF/50MHz TRANSCEIVER	TS-890S	001	JVC KENWOOD Corporation	
Rated Power : DC 13.8 V±15%, 3.0Amax					
Supplied Power :DC 13.8V					
Condition of Equipment	Prototype				
Type	Tabletop				
Suppression Devices	No Modifications by the laboratory were made to the device				

3.2 Overview of EUT

Frequency Ranges	0.1 – 60 MHz
Conversion Type	Double conversion

3.3 Intermediate frequency

1st	8.248 MHz
2nd	24 kHz (except FM)
3rd	36 kHz (FM)

3.4 Highest Frequency Generated / Used

Operating Frequency	Operating mode	Remarks
3633 MHz	RX mode	

3.5 Port(s)/Connector(s)

Port Name	Connector Type	Connector Pin	Remarks
MIC	Metal type	8 pin	
PHONES	Φ6.3 Phone Jack	3 pin	
PADDLE	Φ6.3 Phone Jack	3 pin	
USB	USB-A	4 pin	
Ext. AT	Square shape type	6 pin	
ANT1	M	2 pin	
ANT2	M	2 pin	
ANT OUT	RCA	2 pin	
RX IN	RCA	2 pin	(ANTRX)
RX OUT	RCA	2 pin	
DRV	RCA	2 pin	
KEY	Φ6.3 Phone Jack	3 pin	
ACC2	DIN	13 pin	
REMOTE	DIN	7 pin	
COM	D-SUB	9 pin	
LAN	RJ-45 Modular	8 pin	
DISPLAY	DVI-I	29 pin	
USB	USB-A	4 pin	
USB	USB-B	4 pin	
SP	Φ3.5 Phone Jack	3 pin	
KEYPAD	Φ3.5 Phone Jack	3 pin	
METER	Φ3.5 Phone Jack	3 pin	
REF IN	BNC	2 pin	
GND	Wing Nut type	1 pin	

SECTION 4. SUPPORT EQUIPMENT

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

Symbol	Item	Model No.	Serial No.	Manufacturer	Remarks	FCC ID
B	DC Power Supply	PS-60	11/01 00148	JVC KENWOOD		N/A
C	Speaker	SP-23	None	JVC KENWOOD		N/A
D	Keyboard	SK-8115	CN-0J4637-71616-4C5-0NL1	DELL		DoC
E	HUB	SF100D-05	J16070C87	CISCO		DoC
F	LCD(DVI)	CR22WS	CR22HVRPC00884P	SAMSUNG		DoC
G	Microphone	MC-47	0019048155894	JVC KENWOOD		N/A
H	Headphone	HS-6	TS-K023	JVC KENWOOD		N/A
I	Computer	D05D	2X3MYBX	DELL		DoC
J	Keyboard	SK-8120	CN-03C8WD-71616-295-0EEN-A0	DELL		DoC
K	Mouse	MS-111L	CN-09RRC7-48723-291-0KWX	DELL		DoC
L	AC Adapter	MU06-6120050-A1	0432-011X000	CISCO		N/A
M	Terminator	CT-01	EM117	TME		N/A
N	Terminator	CT-01	EM120	TME		N/A
O	Terminator	None	None	JVC KENWOOD		N/A
P	Terminator	None	None	JVC KENWOOD		N/A
Q	Terminator	None	None	JVC KENWOOD		N/A
R	USB Memory	U273	95121270079086	pq1		DoC
S	LCD(VGA)	L1506	CNK6020V8H	HP		DoC
T	Printer	C8154A	TH571320G6	HP		DoC
U	AC Adapter	0957-2142	E10588013501L	HP		N/A

Supplied Power:	
F, I, L, S, U	AC120 V, 60 Hz

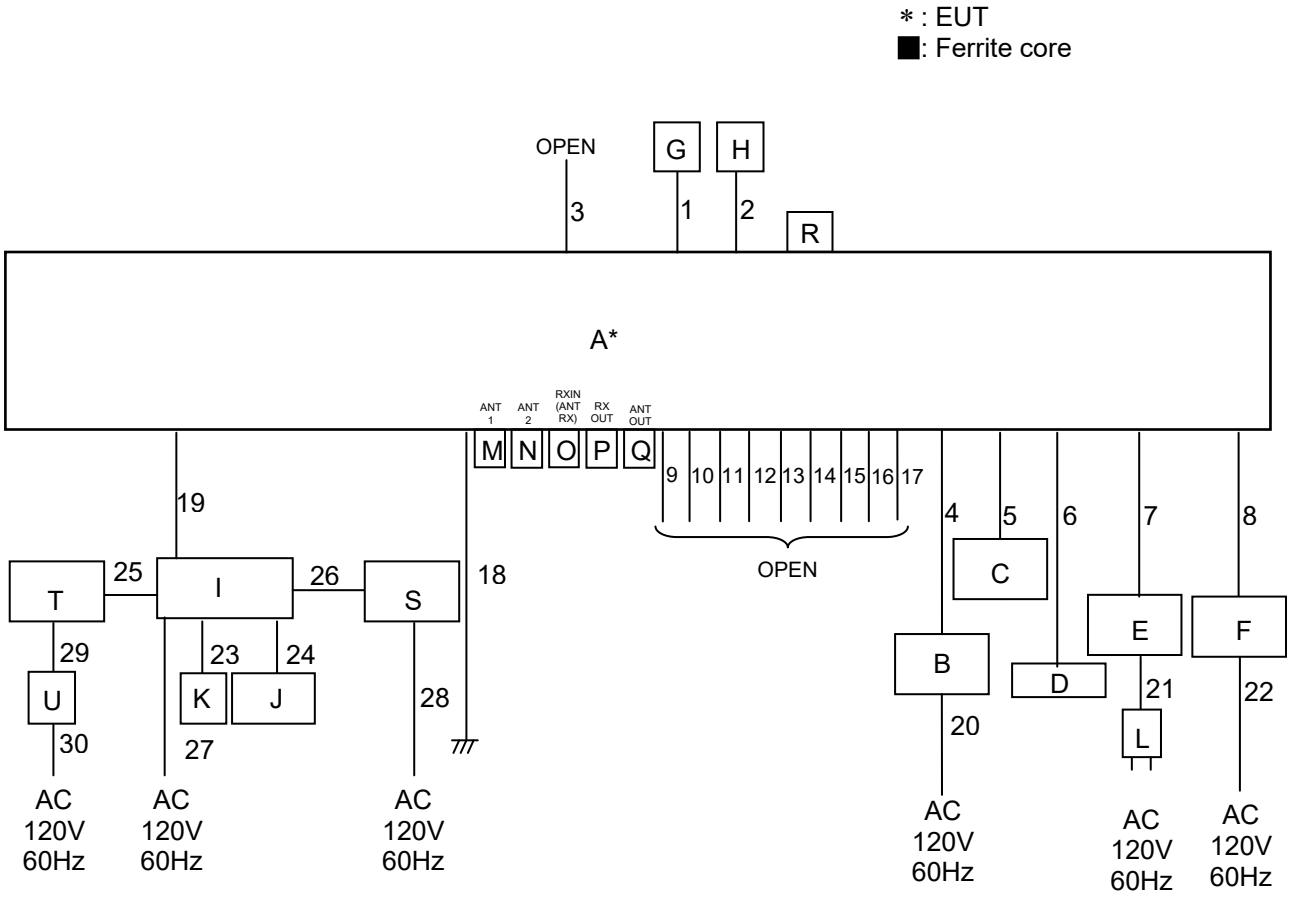
SECTION 5. USED CABLE(S)

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

No.	Name	Length (m)	Shield	Metal Connector	Ferrite Core
1	MIC cable	0.45	No	Yes	
2	HEAD PHONE cable	1.50	No	No	
3	PADDLE cable	1.00	No	No	
4	Power cable for EUT (DC)	1.80	No	No	
5	Speaker cable	1.00	No	No	
6	USB Keyboard cable	2.00	Yes	Yes	
7	LAN cable	1.00	No	No	
8	DVI-D cable	1.10	Yes	Yes	
9	REF cable	1.00	Yes	Yes	
10	KEYPAD cable	1.00	No	No	
11	DRV cable	1.00	No	No	
12	ACC cable	1.00	No	No	
13	REMOTE cable	1.00	No	No	
14	METER cable	1.00	No	No	
15	KEY cable	1.00	No	No	
16	COM cable	1.50	Yes	Yes	
17	AT cable	1.00	No	No	
18	GND cable	1.20	No	No	
19	USB cable	1.50	Yes	Yes	
20	Power cable for DC Power Supply (AC)	2.00	No	No	
21	Power cable for Hub (DC)	1.50	No	No	
22	Power cable for LCD(DVI)	2.00	No	No	
23	Mouse cable	1.80	Yes	Yes	
24	Keyboard cable	2.10	Yes	Yes	
25	Centronics cable	2.50	Yes	Yes	
26	VGA cable	1.50	Yes	Yes	
27	Power cable for Computer	1.80	No	No	
28	Power cable for LCD(VGA)	2.00	No	No	
29	Power cable for Printer(DC)	1.70	No	No	
30	Power cable for Printer(AC)	2.20	No	No	

SECTION 6. TEST CONFIGURATION

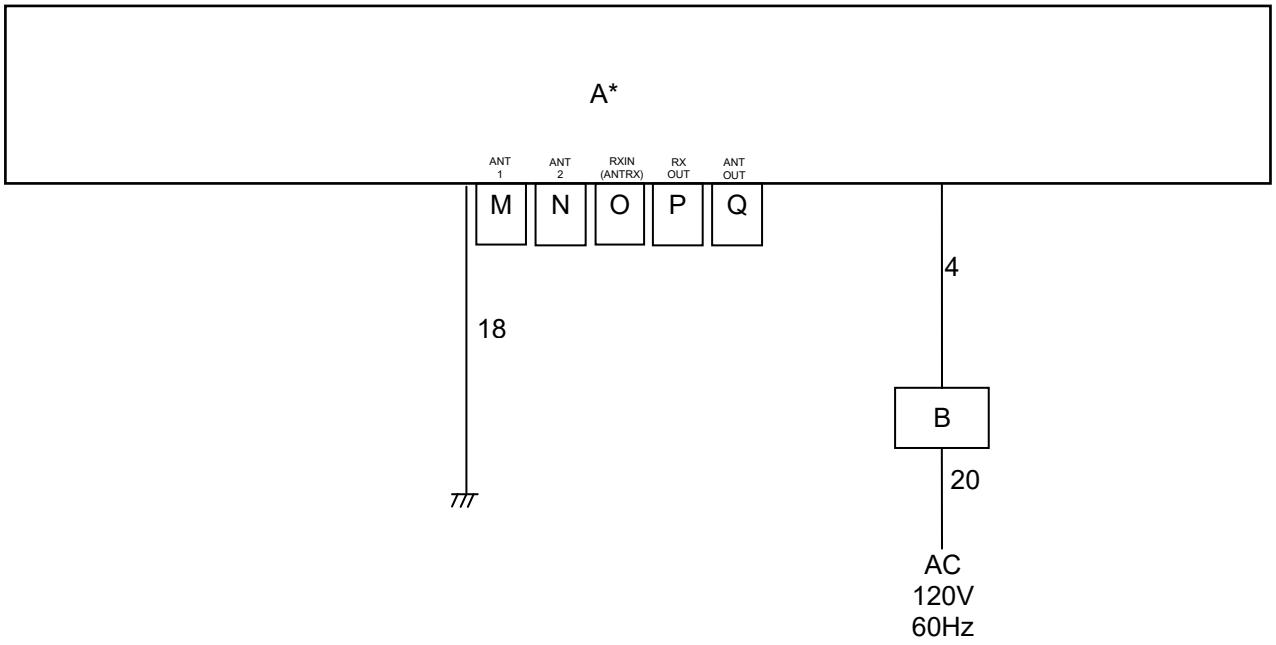
6.1 Conducted disturbance at mains terminals Tests, Radiated disturbance tests and Conducted power on antenna port



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 Tests

＊: EUT
■: Ferrite core



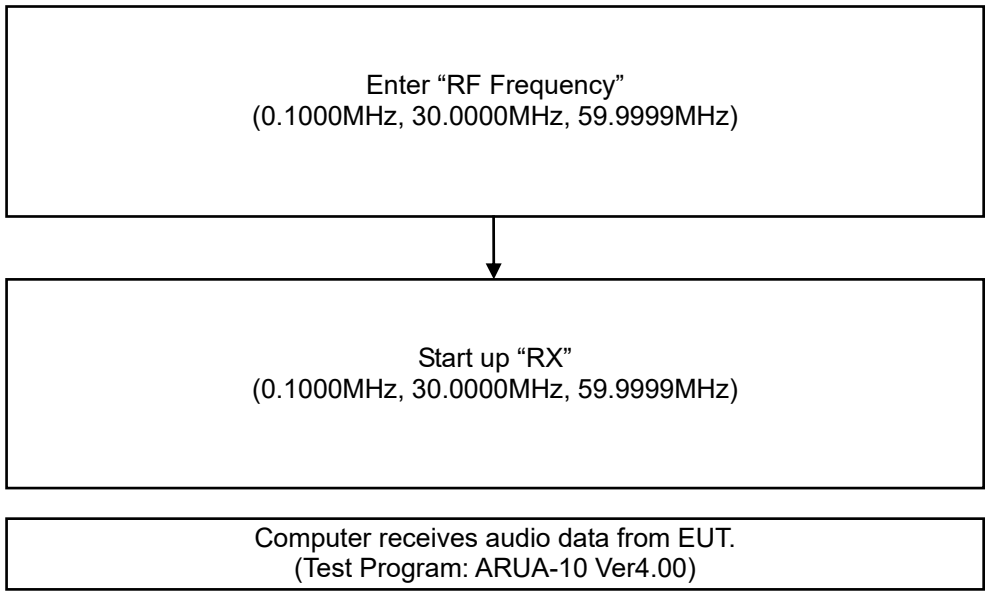
The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

SECTION 7. OPERATING CONDITION

The test was carried out under the following mode.

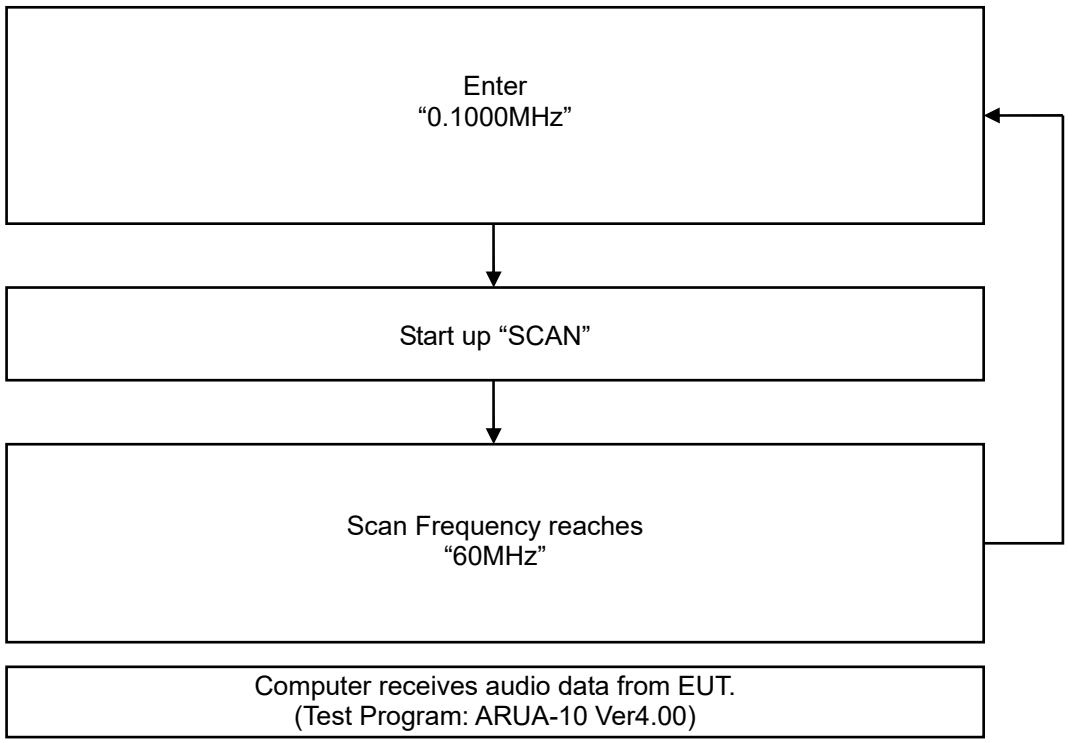
7.1 RX mode

Cycle time for operation: Continuity



7.2 RX mode (VFO SCAN)

Cycle time for operation: Continuity



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 3 m	**U_{lab} [*k* = 2]**	**U_{cispr}**
30 MHz – 1000 MHz	+/- 4.83 dB	6.3 dB
Above 1 GHz	+/- 4.33 dB	5.2 dB
Radiated disturbance at 10 m		
30 MHz – 1000 MHz	+/- 5.00 dB	6.3 dB
Above 1 GHz	+/- 4.95 dB	Nil
Conducted disturbance at mains terminals		
9 kHz – 150 kHz	+/- 2.82 dB	3.8 dB
150 kHz – 30 MHz	+/- 2.80 dB	3.4 dB
Conducted disturbance at terminals (High Voltage Probe)		
150 kHz – 30 MHz	+/- 2.80 dB	2.9 dB
Conducted disturbance at telecommunication ports (ISN)		
150 kHz – 30 MHz	+/- 3.85 dB	5.0 dB
Conducted disturbance at telecommunication ports (Capacitive Voltage Probe)		
150 kHz – 30 MHz	+/- 3.77 dB	3.9 dB
Conducted disturbance at telecommunication ports (Current Probe)		
150 kHz – 30 MHz	+/- 2.37 dB	2.9 dB
Disturbance power		
30 MHz – 300 MHz	+/- 3.34 dB	4.5 dB
Conducted power on antenna port		
30 MHz – 1000 MHz	+/- 3.01 dB	Nil
Above 1 GHz	+/- 2.06 dB	
38dB Rejection		
0.1 MHz – 600 MHz	+/- 0.56 dB	Nil

The above expanded instrumentation uncertainty, $U_{lab.}$, is estimated in accordance with CISPR 16-4-2:2011.

SECTION 9. EVALUATION OF TEST RESULTS

9.1 Emission tests

9.1.1 Conducted disturbance at mains terminals

Location	Kashima No.12 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	LEN-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 >

Emission Level = Meter Reading + Factor

Margin = Limit- Emission Level

Factor = LISN Factor + Cable Loss + Attenuator

< Sample Calculations >

Sample @0.1500 MHz (RX mode(0.1000MHz))

Emission Level = 17.7 [dBuV] + 10.2 [dB] = 27.9 [dBuV]

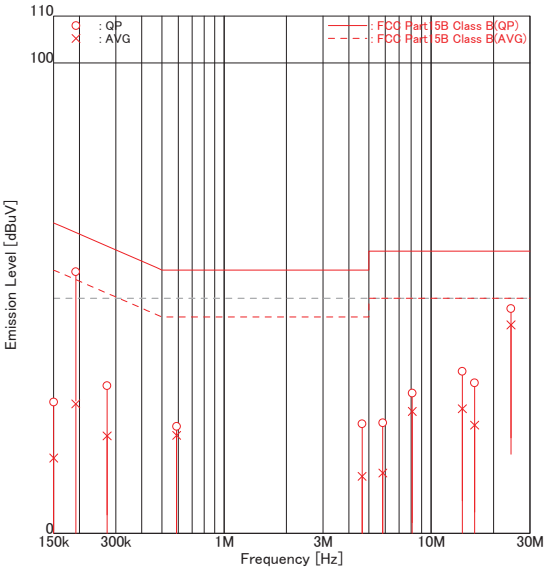
Result of Conducted disturbance at mains terminals
9.1.1.1 RX mode (0.1000MHz)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 23.2 [degC]
HUMIDITY	: 49.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	17.7	17.0	10.2	10.2	27.9	27.2	66.0	38.1	38.8
2	0.1500	AVG	4.4	5.8	10.2	10.2	14.6	16.0	56.0	41.4	40.0
3	0.1918	QP	45.4	45.2	10.2	10.2	55.6	55.4	64.0	8.4	8.6
4	0.1918	AVG	17.3	16.0	10.2	10.2	27.5	26.2	54.0	26.5	27.8
5	0.2720	QP	21.2	21.2	10.2	10.2	31.4	31.4	61.1	29.7	29.7
6	0.2720	AVG	10.3	10.5	10.2	10.2	20.5	20.7	51.1	30.6	30.4
7	0.5896	QP	9.7	12.4	10.3	10.3	20.0	22.7	56.0	36.0	33.3
8	0.5896	AVG	2.9	10.5	10.3	10.3	13.2	20.8	46.0	32.8	25.2
9	4.6408	QP	8.2	12.7	10.6	10.6	18.8	23.3	56.0	37.2	32.7
10	4.6408	AVG	0.5	1.5	10.6	10.6	11.1	12.1	46.0	34.9	33.9
11	5.8342	QP	12.8	7.5	10.7	10.7	23.5	18.2	60.0	36.5	41.8
12	5.8342	AVG	2.1	0.5	10.7	10.7	12.8	11.2	50.0	37.2	38.8
13	8.1012	QP	18.9	18.6	10.9	10.9	29.8	29.5	60.0	30.2	30.5
14	8.1012	AVG	15.0	15.0	10.9	10.9	25.9	25.9	50.0	24.1	24.1
15	14.1407	QP	23.1	22.5	11.3	11.5	34.4	34.0	60.0	25.6	26.0
16	14.1407	AVG	7.4	15.0	11.3	11.5	18.7	26.5	50.0	31.3	23.5
17	16.2070	QP	20.6	20.4	11.3	11.6	31.9	32.0	60.0	28.1	28.0
18	16.2070	AVG	11.4	11.4	11.3	11.6	22.7	23.0	50.0	27.3	27.0
19	24.3006	QP	35.9	36.0	11.7	11.8	47.6	47.8	60.0	12.4	12.2
20	24.3006	AVG	32.3	32.5	11.7	11.8	44.0	44.3	50.0	6.0	**5.7**

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

emiT 3, 0, 0, 0

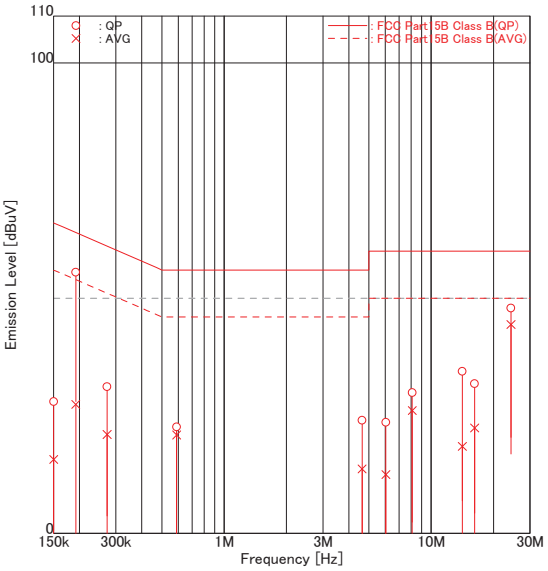
9.1.1.2 RX mode (30.0000MHz)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 23.2 [degC]
HUMIDITY	: 49.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	17.8	17.4	10.2	10.2	28.0	27.6	66.0	38.0	38.4
2	0.1500	AVG	4.2	5.5	10.2	10.2	14.4	15.7	56.0	41.6	40.3
3	0.1918	QP	45.3	45.2	10.2	10.2	55.5	55.4	64.0	8.5	8.6
4	0.1918	AVG	17.2	17.1	10.2	10.2	27.4	27.3	54.0	26.6	26.7
5	0.2720	QP	20.8	21.0	10.2	10.2	31.0	31.2	61.1	30.1	29.9
6	0.2720	AVG	10.5	10.8	10.2	10.2	20.7	21.0	51.1	30.4	30.1
7	0.5896	QP	9.5	12.3	10.3	10.3	19.8	22.6	56.0	36.2	33.4
8	0.5896	AVG	2.8	10.6	10.3	10.3	13.1	20.9	46.0	32.9	25.1
9	4.6408	QP	8.3	13.4	10.6	10.6	18.9	24.0	56.0	37.1	32.0
10	4.6408	AVG	0.5	3.1	10.6	10.6	11.1	13.7	46.0	34.9	32.3
11	6.0424	QP	12.9	7.9	10.7	10.7	23.6	18.6	60.0	36.4	41.4
12	6.0424	AVG	1.8	0.5	10.7	10.7	12.5	11.2	50.0	37.5	38.8
13	8.1012	QP	19.0	18.5	10.9	10.9	29.9	29.4	60.0	30.1	30.6
14	8.1012	AVG	15.2	15.0	10.9	10.9	26.1	25.9	50.0	23.9	24.1
15	14.1407	QP	23.1	22.6	11.3	11.5	34.4	34.1	60.0	25.6	25.9
16	14.1407	AVG	7.2	7.0	11.3	11.5	18.5	18.5	50.0	31.5	31.5
17	16.2070	QP	20.5	20.0	11.3	11.6	31.8	31.6	60.0	28.2	28.4
18	16.2070	AVG	11.1	10.5	11.3	11.6	22.4	22.1	50.0	27.6	27.9
19	24.3006	QP	35.9	36.1	11.7	11.8	47.6	47.9	60.0	12.4	12.1
20	24.3006	AVG	32.3	32.6	11.7	11.8	44.0	44.4	50.0	6.0	5.6

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

emiT 3, 0, 0, 0

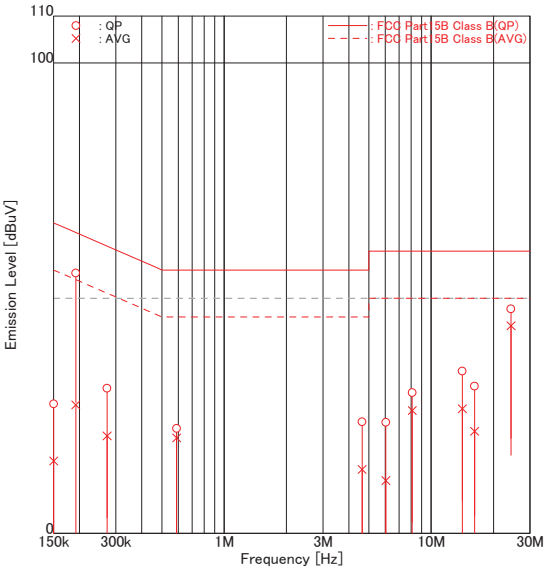
9.1.1.3 RX mode (59.9999MHz)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 23.2 [degC]
HUMIDITY	: 49.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Line1	READING [dBuV] Line2	FACTOR [dB] Line1	FACTOR [dB] Line2	EMISSION [dBuV] Line1	EMISSION [dBuV] Line2	LIMIT [dBuV]	MARGIN [dB] Line1	MARGIN [dB] Line2
1	0.1500	QP	17.3	16.8	10.2	10.2	27.5	27.0	66.0	38.5	39.0
2	0.1500	AVG	4.2	5.2	10.2	10.2	14.4	15.4	56.0	41.6	40.6
3	0.1918	QP	45.1	44.4	10.2	10.2	55.3	54.6	64.0	8.7	9.4
4	0.1918	AVG	17.1	16.5	10.2	10.2	27.3	26.7	54.0	26.7	27.3
5	0.2720	QP	20.5	20.6	10.2	10.2	30.7	30.8	61.1	30.4	30.3
6	0.2720	AVG	10.5	10.5	10.2	10.2	20.7	20.7	51.1	30.4	30.4
7	0.5896	QP	9.6	12.0	10.3	10.3	19.9	22.3	56.0	36.1	33.7
8	0.5896	AVG	1.7	10.0	10.3	10.3	12.0	20.3	46.0	34.0	25.7
9	4.6408	QP	8.5	13.1	10.6	10.6	19.1	23.7	56.0	36.9	32.3
10	4.6408	AVG	0.5	3.0	10.6	10.6	11.1	13.6	46.0	34.9	32.4
11	6.0424	QP	12.9	8.7	10.7	10.7	23.6	19.4	60.0	36.4	40.6
12	6.0424	AVG	0.4	0.5	10.7	10.7	11.1	11.2	50.0	38.9	38.8
13	8.1012	QP	19.0	18.3	10.9	10.9	29.9	29.2	60.0	30.1	30.8
14	8.1012	AVG	15.2	14.7	10.9	10.9	26.1	25.6	50.0	23.9	24.4
15	14.1407	QP	23.2	22.6	11.3	11.5	34.5	34.1	60.0	25.5	25.9
16	14.1407	AVG	15.2	14.7	11.3	11.5	26.5	26.2	50.0	23.5	23.8
17	16.2070	QP	20.0	19.7	11.3	11.6	31.3	31.3	60.0	28.7	28.7
18	16.2070	AVG	10.4	10.0	11.3	11.6	21.7	21.6	50.0	28.3	28.4
19	24.3006	QP	36.0	35.7	11.7	11.8	47.7	47.5	60.0	12.3	12.5
20	24.3006	AVG	32.4	32.2	11.7	11.8	44.1	44.0	50.0	5.9	6.0

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

emiT 3, 0, 0, 0

9.1.2 Radiated disturbance

Location	Kashima No.12 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Operating mode	Required Frequency Range	Measured Frequency Range
RX mode(0.1000MHz) RX mode(30.0000MHz) RX mode(59.9999MHz) RX mode(VFO SCAN)	30 – 19000 MHz	30 – 19000 MHz

Test Procedure

Item	Document number
Radiated disturbance	LEN-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 >

Emission Level = Meter Reading + Factor

Margin = Limit - Emission Level

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

* For other than Standard distance:
Distance Conversion Factor = 20 log (Measurement distance / Standard distance)

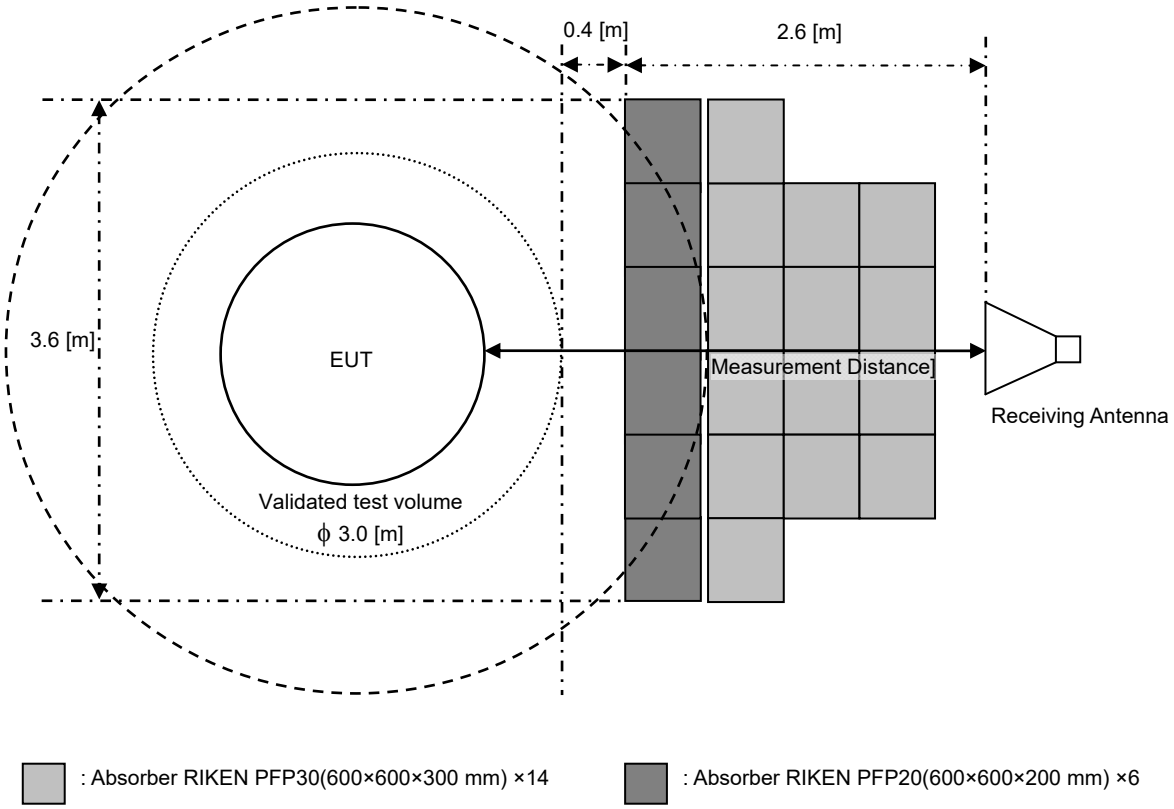
< Sample Calculations >

Sample @39.29 MHz (RX mode(0.1000MHz))

Emission Level = 35.6 [dBuV] – 1.0 [dB/m] = 34.6 [dBuV/m]

Operating Condition	Frequency Range	Measurement distance
RX mode(0.1000MHz) RX mode(30.0000MHz) RX mode(59.9999MHz) RX mode(VFO SCAN)	30-1000 MHz	3 m
	Above 1 GHz	3.10 m

Absorber placement and Receive Antenna location in Radiated disturbance above 1 GHz



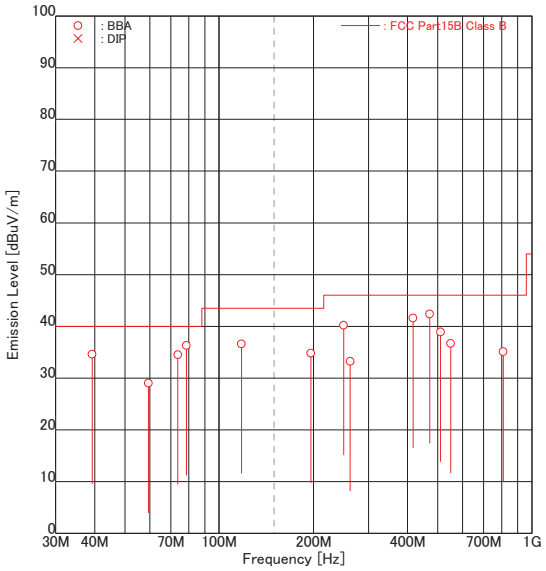
Result of Radiated disturbances
9.1.2.1 RX mode(0.1000MHz)
30 – 1000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 15 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.00 [m]
TEMPERATURE	: 21.0 [degC]
HUMIDITY	: 50.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	39.29	BBA	-	35.6	-1.0	-1.0	-	34.6	40.0	-	5.4
2	59.44	BBA	-	29.4	-0.4	-0.4	-	29.0	40.0	-	11.0
3	73.72	BBA	37.0	-	-2.5	-2.5	34.5	-	40.0	5.5	-
4	78.65	BBA	39.8	40.0	-3.7	-3.7	36.1	36.3	40.0	3.9	3.7
5	117.83	BBA	38.9	35.7	-2.3	-2.3	36.6	33.4	43.5	6.9	10.1
6	196.37	BBA	36.4	34.2	-1.6	-1.6	34.8	32.6	43.5	8.7	10.9
7	250.01	BBA	39.6	37.3	0.6	0.6	40.2	37.9	46.0	5.8	8.1
8	262.40	BBA	32.0	-	1.2	1.2	33.2	-	46.0	12.8	-
9	416.74	BBA	-	34.9	6.7	6.7	-	41.6	46.0	-	4.4
10	471.28	BBA	34.1	-	8.3	8.3	42.4	-	46.0	3.6	-
11	510.55	BBA	29.6	-	9.3	9.3	38.9	-	46.0	7.1	-
12	549.82	BBA	26.3	26.1	10.4	10.4	36.7	36.5	46.0	9.3	9.5
13	809.76	BBA	-	19.2	15.9	15.9	-	35.1	46.0	-	10.9

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

emiT 3, 0, 0, 0

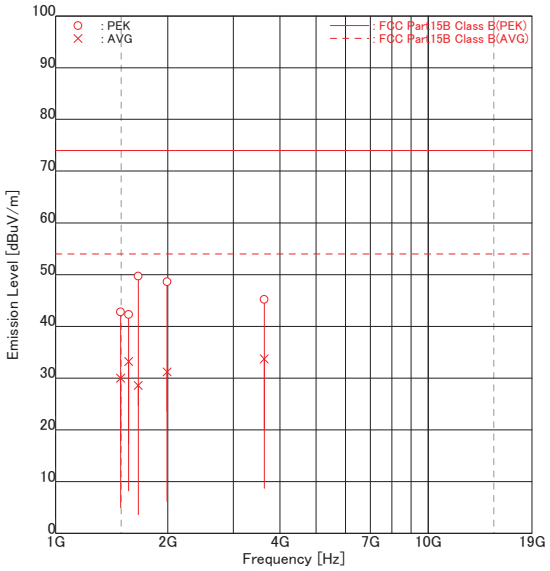
1000 – 19000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 19 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.10 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1495.05	PEK	-	45.8	-3.0	-3.0	-	42.8	74.0	-	31.2
2	1495.05	AVG	-	33.0	-3.0	-3.0	-	30.0	54.0	-	24.0
3	1570.80	PEK	44.8	44.9	-2.6	-2.6	42.2	42.3	74.0	31.8	31.7
4	1570.80	AVG	35.8	34.9	-2.6	-2.6	33.2	32.3	54.0	20.8	21.7
5	1666.51	PEK	-	51.9	-2.2	-2.2	-	49.7	74.0	-	24.3
6	1666.51	AVG	-	30.8	-2.2	-2.2	-	28.6	54.0	-	25.4
7	1991.72	PEK	46.0	49.5	-0.9	-0.9	45.1	48.6	74.0	28.9	25.4
8	1991.72	AVG	31.9	32.1	-0.9	-0.9	31.0	31.2	54.0	23.0	22.8
9	3633.00	PEK	41.0	40.7	4.2	4.2	45.2	44.9	74.0	28.8	29.1
10	3633.00	AVG	29.2	29.5	4.2	4.2	33.4	33.7	54.0	20.6	**20.3**

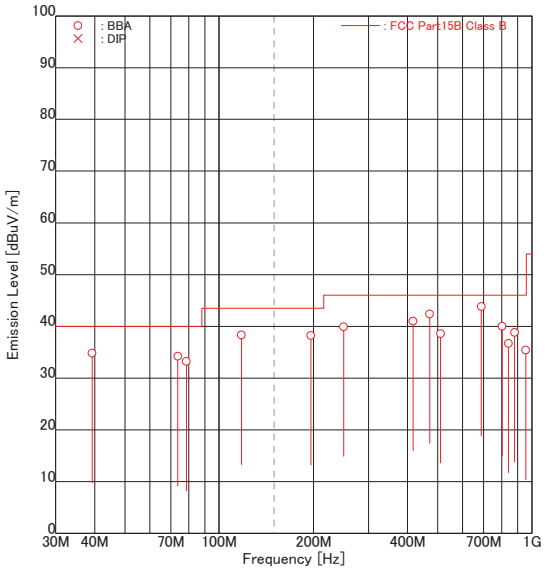
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor
Factor = Ant.Factor + Cable Loss - Amp. Gain + ATT - Dist. Conversion

emiT 3, 0, 0, 0

9.1.2.2 RX mode(30.0000MHz)
30 – 1000 MHz

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

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 15 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.00 [m]
TEMPERATURE	: 21.0 [degC]
HUMIDITY	: 50.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	39.29	BBA	-	35.8	-1.0	-1.0	-	34.8	40.0	-	5.2
2	73.72	BBA	36.7	-	-2.5	-2.5	34.2	-	40.0	5.8	-
3	78.65	BBA	36.9	36.3	-3.7	-3.7	33.2	32.6	40.0	6.8	7.4
4	117.83	BBA	40.6	39.2	-2.3	-2.3	38.3	36.9	43.5	5.2	6.6
5	196.37	BBA	39.8	35.0	-1.6	-1.6	38.2	33.4	43.5	5.3	10.1
6	250.01	BBA	39.3	37.0	0.6	0.6	39.9	37.6	46.0	6.1	8.4
7	416.74	BBA	-	34.3	6.7	6.7	-	41.0	46.0	-	5.0
8	471.28	BBA	34.1	-	8.3	8.3	42.4	-	46.0	3.6	-
9	510.55	BBA	29.3	-	9.3	9.3	38.6	-	46.0	7.4	-
10	688.46	BBA	26.9	30.5	13.3	13.3	40.2	43.8	46.0	5.8	2.2
11	803.21	BBA	-	24.1	15.9	15.9	-	40.0	46.0	-	6.0
12	841.46	BBA	-	20.3	16.4	16.4	-	36.7	46.0	-	9.3
13	879.70	BBA	-	21.8	17.0	17.0	-	38.8	46.0	-	7.2
14	956.20	BBA	-	17.3	18.1	18.1	-	35.4	46.0	-	10.6

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

emiT 3, 0, 0, 0

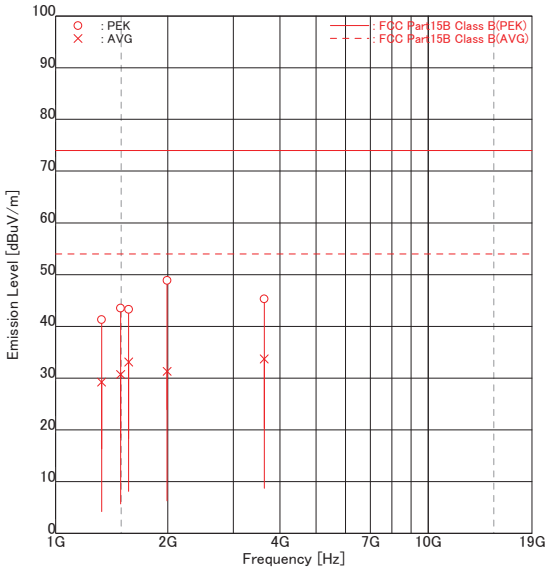
1000 – 19000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 19 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.10 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1328.48	PEK	-	44.9	-3.6	-3.6	-	41.3	74.0	-	32.7
2	1328.48	AVG	-	32.8	-3.6	-3.6	-	29.2	54.0	-	24.8
3	1495.05	PEK	-	46.5	-3.0	-3.0	-	43.5	74.0	-	30.5
4	1495.05	AVG	-	33.7	-3.0	-3.0	-	30.7	54.0	-	23.3
5	1570.80	PEK	45.9	45.2	-2.6	-2.6	43.3	42.6	74.0	30.7	31.4
6	1570.80	AVG	35.7	35.0	-2.6	-2.6	33.1	32.4	54.0	20.9	21.6
7	1991.72	PEK	45.6	49.8	-0.9	-0.9	44.7	48.9	74.0	29.3	25.1
8	1991.72	AVG	32.2	32.2	-0.9	-0.9	31.3	31.3	54.0	22.7	22.7
9	3633.00	PEK	41.1	40.9	4.2	4.2	45.3	45.1	74.0	28.7	28.9
10	3633.00	AVG	29.5	29.1	4.2	4.2	33.7	33.3	54.0	20.3	20.7

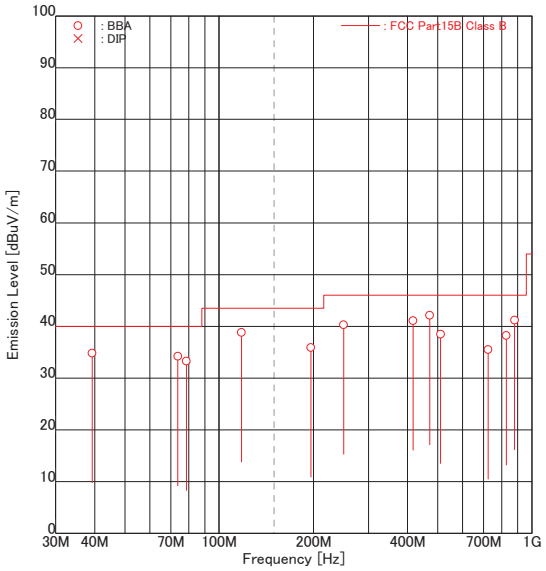
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor
Factor = Ant.Factor + Cable Loss - Amp. Gain + ATT - Dist. Conversion

emiT 3, 0, 0, 0

9.1.2.3 RX mode(59.9999MHz)
30 – 1000 MHz

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

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 15 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.00 [m]
TEMPERATURE	: 21.0 [degC]
HUMIDITY	: 50.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	39.29	BBA	-	35.8	-1.0	-1.0	-	34.8	40.0	-	5.2
2	73.72	BBA	36.7	-	-2.5	-2.5	34.2	-	40.0	5.8	-
3	78.65	BBA	37.0	36.3	-3.7	-3.7	33.3	32.6	40.0	6.7	7.4
4	117.83	BBA	41.1	40.5	-2.3	-2.3	38.8	38.2	43.5	4.7	5.3
5	196.37	BBA	37.5	33.0	-1.6	-1.6	35.9	31.4	43.5	7.6	12.1
6	250.01	BBA	39.7	37.1	0.6	0.6	40.3	37.7	46.0	5.7	8.3
7	416.74	BBA	-	34.4	6.7	6.7	-	41.1	46.0	-	4.9
8	471.28	BBA	33.8	-	8.3	8.3	42.1	-	46.0	3.9	-
9	510.55	BBA	29.2	-	9.3	9.3	38.5	-	46.0	7.5	-
10	724.53	BBA	-	21.5	14.0	14.0	-	35.5	46.0	-	10.5
11	828.04	BBA	-	21.9	16.3	16.3	-	38.2	46.0	-	7.8
12	879.79	BBA	24.0	24.2	17.0	17.0	41.0	41.2	46.0	5.0	4.8

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

emiT 3, 0, 0, 0

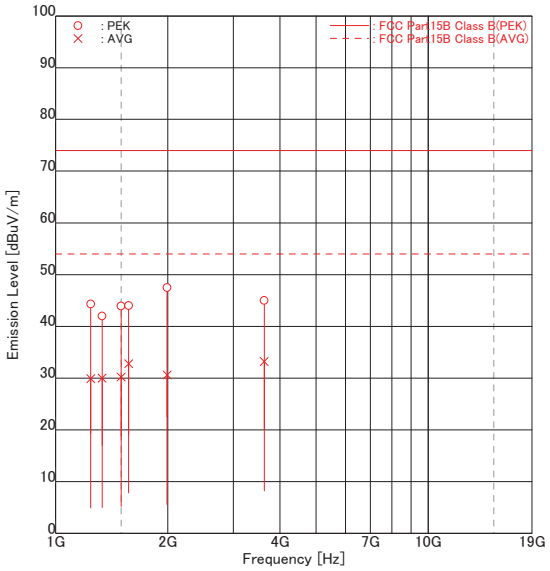
1000 – 19000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 19 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.10 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1242.05	PEK	-	48.3	-4.0	-4.0	-	44.3	74.0	-	29.7
2	1242.05	AVG	-	33.9	-4.0	-4.0	-	29.9	54.0	-	24.1
3	1333.04	PEK	-	45.6	-3.6	-3.6	-	42.0	74.0	-	32.0
4	1333.04	AVG	-	33.6	-3.6	-3.6	-	30.0	54.0	-	24.0
5	1499.06	PEK	-	46.9	-3.0	-3.0	-	43.9	74.0	-	30.1
6	1499.06	AVG	-	33.2	-3.0	-3.0	-	30.2	54.0	-	23.8
7	1570.80	PEK	46.6	44.2	-2.6	-2.6	44.0	41.6	74.0	30.0	32.4
8	1570.80	AVG	35.4	34.4	-2.6	-2.6	32.8	31.8	54.0	21.2	22.2
9	1991.72	PEK	45.5	48.4	-0.9	-0.9	44.6	47.5	74.0	29.4	26.5
10	1991.72	AVG	31.2	31.5	-0.9	-0.9	30.3	30.6	54.0	23.7	23.4
11	3633.00	PEK	40.5	40.8	4.2	4.2	44.7	45.0	74.0	29.3	29.0
12	3633.00	AVG	28.9	29.0	4.2	4.2	33.1	33.2	54.0	20.9	20.8

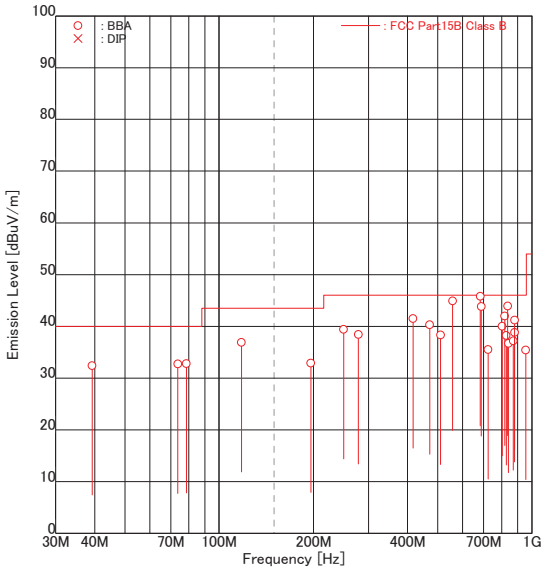
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor
Factor = Ant.Factor + Cable Loss - Amp. Gain + ATT - Dist. Conversion

emiT 3, 0, 0, 0

9.1.2.4 RX mode(VFO SCAN)
30 – 1000 MHz

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

APPLICANT : JVC KENWOOD Corporation
EUT NAME : HF/50MHz TRANSCEIVER
MODEL NO. : TS-890S
SERIAL NO. : 001
TEST MODE : RX mode(VFO SCAN)
POWER SOURCE : DC 13.8V (AC 120V 60Hz)
DATE TESTED : May 15 2018
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2014
DISTANCE : 3.00 [m]
TEMPERATURE : 21.0 [degC]
HUMIDITY : 50.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	ANT.	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	39.29	BBA	-	33.4	-1.0	-1.0	-	32.4	40.0	-	7.6
2	73.72	BBA	35.2	-	-2.5	-2.5	32.7	-	40.0	7.3	-
3	78.65	BBA	34.2	36.5	-3.7	-3.7	30.5	32.8	40.0	9.5	7.2
4	117.83	BBA	39.2	38.8	-2.3	-2.3	36.9	36.5	43.5	6.6	7.0
5	196.37	BBA	34.5	34.5	-1.6	-1.6	32.9	32.9	43.5	10.6	10.6
6	250.01	BBA	38.8	34.5	0.6	0.6	39.4	35.1	46.0	6.6	10.9
7	278.72	BBA	-	36.5	1.9	1.9	-	38.4	46.0	-	7.6
8	416.74	BBA	-	34.8	6.7	6.7	-	41.5	46.0	-	4.5
9	471.28	BBA	32.0	-	8.3	8.3	40.3	-	46.0	5.7	-
10	510.55	BBA	29.0	-	9.3	9.3	38.3	-	46.0	7.7	-
11	557.73	BBA	34.2	27.2	10.7	10.7	44.9	37.9	46.0	1.1	8.1
12	684.26	BBA	30.1	32.6	13.2	13.2	43.3	45.8	46.0	2.7	0.2
13	688.46	BBA	26.9	30.5	13.3	13.3	40.2	43.8	46.0	5.8	2.2
14	724.53	BBA	-	21.5	14.0	14.0	-	35.5	46.0	-	10.5
15	803.21	BBA	-	24.1	15.9	15.9	-	40.0	46.0	-	6.0
16	818.97	BBA	-	25.9	16.1	16.1	-	42.0	46.0	-	4.0
17	828.04	BBA	-	21.9	16.3	16.3	-	38.2	46.0	-	7.8
18	836.05	BBA	-	27.5	16.4	16.4	-	43.9	46.0	-	2.1
19	841.46	BBA	-	20.3	16.4	16.4	-	36.7	46.0	-	9.3
20	871.55	BBA	-	20.3	16.9	16.9	-	37.2	46.0	-	8.8
21	879.70	BBA	-	21.8	17.0	17.0	-	38.8	46.0	-	7.2
22	879.79	BBA	24.0	24.2	17.0	17.0	41.0	41.2	46.0	5.0	4.8
23	956.20	BBA	-	17.3	18.1	18.1	-	35.4	46.0	-	10.6

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

emiT 3, 0, 0, 0

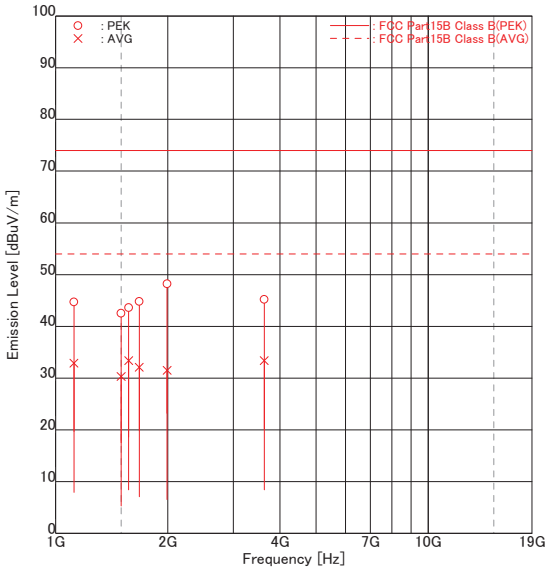
1000 – 19000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(VFO SCAN)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 19 2018
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2014
DISTANCE	: 3.10 [m]
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 56.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	MODE	READING [dBuV] Hori	READING [dBuV] Vert	FACTOR [dB/m] Hori	FACTOR [dB/m] Vert	EMISSION [dBuV/m] Hori	EMISSION [dBuV/m] Vert	LIMIT [dBuV/m]	MARGIN [dB] Hori	MARGIN [dB] Vert
1	1119.48	PEK	48.8	49.1	-4.4	-4.4	44.4	44.7	74.0	29.6	29.3
2	1119.48	AVG	36.9	37.3	-4.4	-4.4	32.5	32.9	54.0	21.5	21.1
3	1499.06	PEK	-	45.5	-3.0	-3.0	-	42.5	74.0	-	31.5
4	1499.06	AVG	-	33.3	-3.0	-3.0	-	30.3	54.0	-	23.7
5	1570.80	PEK	45.9	46.2	-2.6	-2.6	43.3	43.6	74.0	30.7	30.4
6	1570.80	AVG	36.0	35.4	-2.6	-2.6	33.4	32.8	54.0	**20.6**	21.2
7	1677.24	PEK	47.0	46.9	-2.2	-2.2	44.8	44.7	74.0	29.2	29.3
8	1677.24	AVG	34.3	34.0	-2.2	-2.2	32.1	31.8	54.0	21.9	22.2
9	1991.72	PEK	45.9	49.1	-0.9	-0.9	45.0	48.2	74.0	29.0	25.8
10	1991.72	AVG	32.4	31.5	-0.9	-0.9	31.5	30.6	54.0	22.5	23.4
11	3633.00	PEK	40.3	41.0	4.2	4.2	44.5	45.2	74.0	29.5	28.8
12	3633.00	AVG	28.8	29.2	4.2	4.2	33.0	33.4	54.0	21.0	20.6

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor
Factor = Ant.Factor + Cable Loss - Amp. Gain + ATT - Dist. Conversion

emiT 3, 0, 0, 0

9.1.3 Conducted power on antenna port

Location	Kashima No.12 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Operating mode	Required Frequency Range	Measured Frequency Range
RX mode(0.1000MHz)ANT1 RX mode(30.0000MHz)ANT1 RX mode(59.9999MHz)ANT1 RX mode(VFO SCAN)ANT1 RX mode(0.1000MHz)ANT2 RX mode(30.0000MHz)ANT2 RX mode(59.9999MHz)ANT2 RX mode(VFO SCAN)ANT2 RX mode(0.1000MHz)ANTRX RX mode(30.0000MHz)ANTRX RX mode(59.9999MHz)ANTRX RX mode(VFO SCAN)ANTRX	30 – 19000 MHz	30 – 19000 MHz

Test Procedure

Item	Document number
Conducted power on antenna port	LEN-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

< Measurement data correction >

Emission Level = Meter Reading + Factor

Margin = Limit - Emission Level

Factor = Pad + Cable Loss – Amplifier Gain

< Sample Calculations >

Sample @41.7450 MHz (RX mode(0.1000MHz)ANT1)

Emission Level = 33.9 [dBuV] – 14.2 [dB] = 19.7 [dBuV]

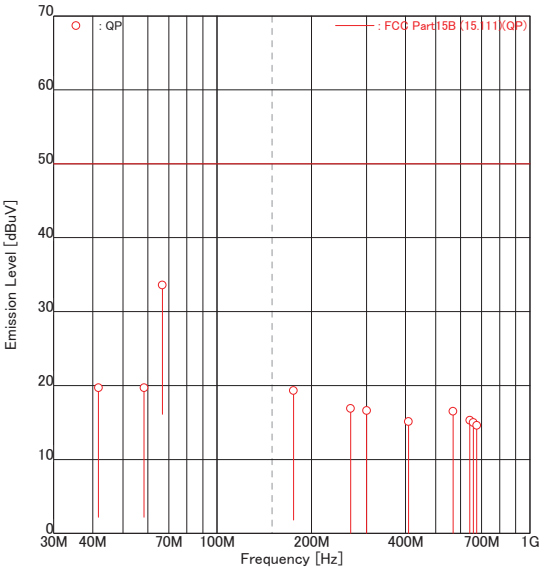
Result of Conducted power on antenna port
9.1.3.1 RX mode(0.1000MHz)ANT1
30 – 1000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	41.7450	33.9	-14.2	19.7	50.0	30.3
2	58.4381	33.6	-13.9	19.7	50.0	30.3
3	66.7875	47.3	-13.7	33.6	50.0	16.4
4	175.3130	31.7	-12.4	19.3	50.0	30.7
5	267.1440	28.2	-11.3	16.9	50.0	33.1
6	300.5380	27.6	-11.0	16.6	50.0	33.4
7	409.0635	24.8	-9.7	15.1	50.0	34.9
8	567.6730	25.2	-8.7	16.5	50.0	33.5
9	642.7950	23.4	-8.1	15.3	50.0	34.7
10	659.5090	22.9	-7.9	15.0	50.0	35.0
11	676.1830	22.3	-7.7	14.6	50.0	35.4

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

emiT 3, 0, 0, 0

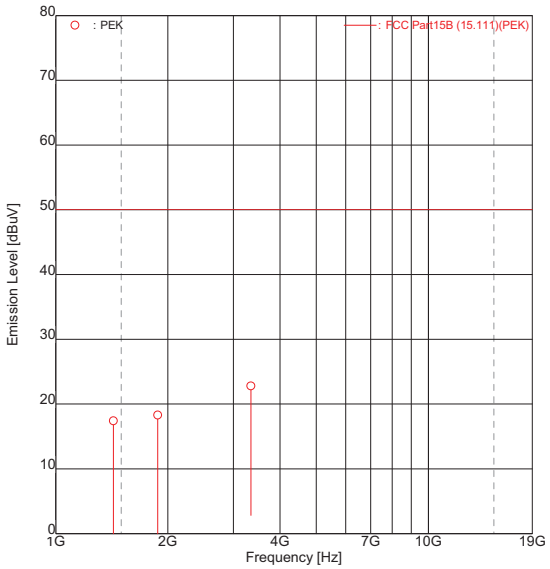
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1427.7400	41.8	-24.4	17.4	50.0	32.6
2	1878.4500	41.9	-23.6	18.3	50.0	31.7
3	3339.3200	45.1	-22.3	22.8	50.0	**27.2**

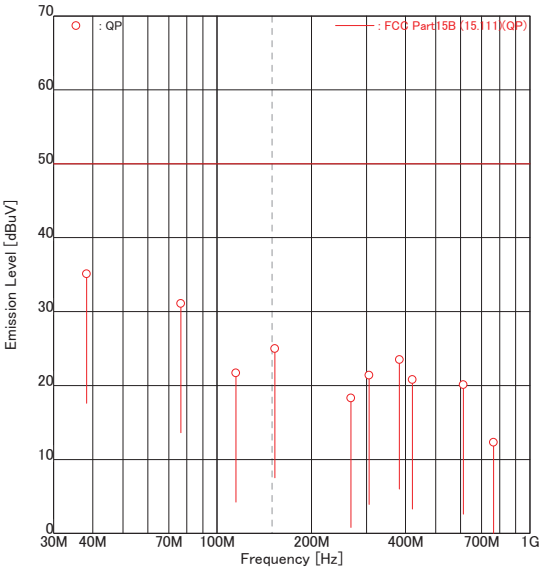
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.2 RX mode(30.0000MHz)ANT1
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	38.2490	49.3	-14.2	35.1	50.0	14.9
2	76.4992	44.7	-13.6	31.1	50.0	18.9
3	114.7500	34.8	-13.1	21.7	50.0	28.3
4	152.9920	37.7	-12.7	25.0	50.0	25.0
5	267.7370	29.6	-11.3	18.3	50.0	31.7
6	305.9800	32.4	-11.0	21.4	50.0	28.6
7	382.4860	33.4	-9.9	23.5	50.0	26.5
8	420.7295	30.5	-9.7	20.8	50.0	29.2
9	611.9795	28.4	-8.3	20.1	50.0	29.9
10	764.9635	19.4	-7.1	12.3	50.0	37.7

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

emiT 3, 0, 0, 0

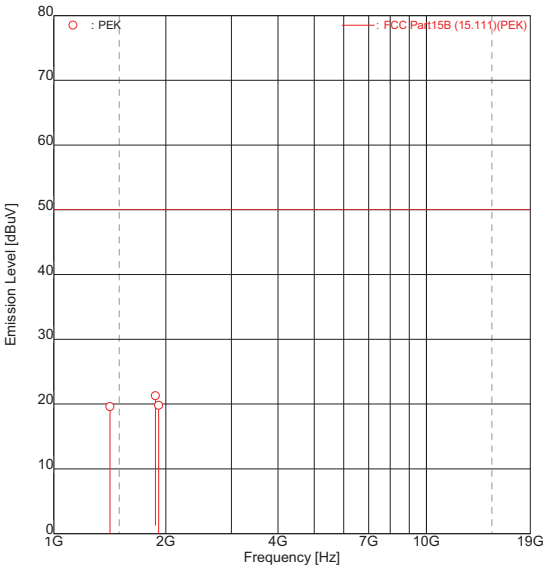
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1415.2200	43.9	-24.3	19.6	50.0	30.4
2	1874.0000	44.9	-23.6	21.3	50.0	**28.7**
3	1912.4900	43.4	-23.6	19.8	50.0	30.2

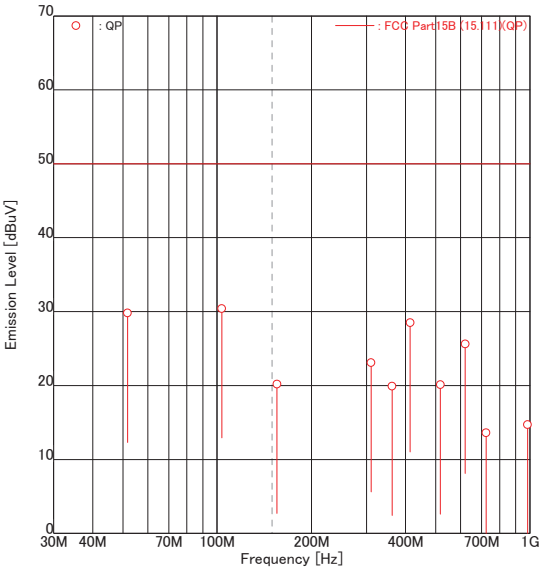
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.3 RX mode(59.9999MHz)ANT1
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	51.7540	43.7	-13.9	29.8	50.0	20.2
2	103.4990	43.6	-13.2	30.4	50.0	**19.6**
3	155.2580	32.8	-12.6	20.2	50.0	29.8
4	310.5180	34.0	-10.9	23.1	50.0	26.9
5	362.2630	29.9	-10.0	19.9	50.0	30.1
6	414.0210	38.2	-9.7	28.5	50.0	21.5
7	517.5190	29.1	-9.0	20.1	50.0	29.9
8	621.0360	33.8	-8.2	25.6	50.0	24.4
9	724.5330	21.1	-7.5	13.6	50.0	36.4
10	983.2880	20.4	-5.7	14.7	50.0	35.3

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

emiT 3, 0, 0, 0

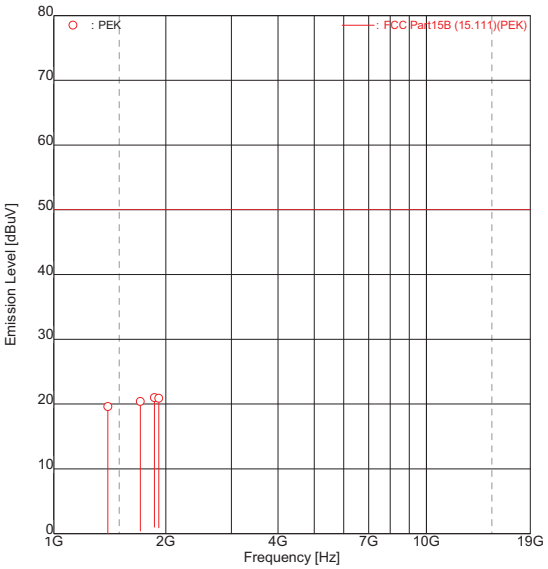
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT1



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1397.1750	43.9	-24.3	19.6	50.0	30.4
2	1707.7850	44.4	-24.0	20.4	50.0	29.6
3	1863.0950	44.7	-23.7	21.0	50.0	**29.0**
4	1914.7500	44.5	-23.6	20.9	50.0	29.1

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

emiT 3, 0, 0, 0

9.1.3.4 RX mode(VFO SCAN)ANT1
30 – 1000 MHz

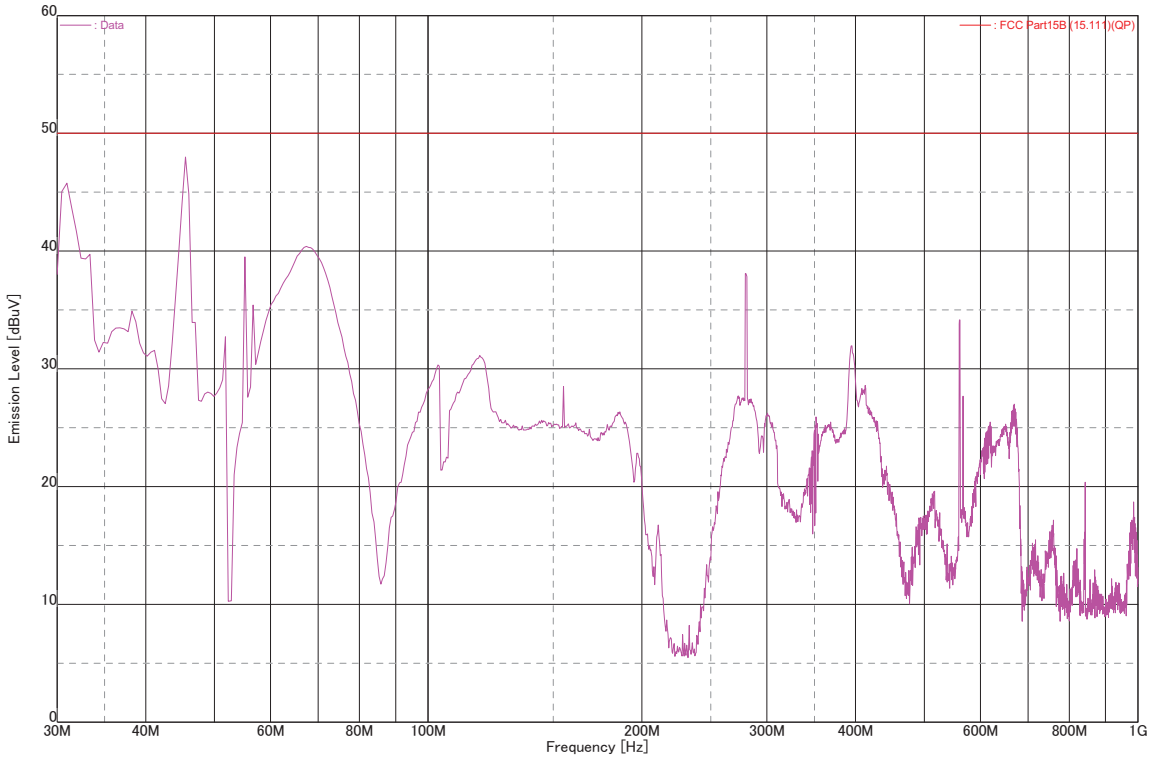
SPECTRUM ANALYSIS

Kashima No.12 Test Site

21.9°C /51.0%

Date tested : May 16 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V (AC 120V 60Hz)
File number : –
Engineer : Koichi Wagatuma
Note : ANT1



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
30.7650	60.0	-14.3	45.7	50.0	4.3
38.2490	49.3	-14.2	35.1	50.0	14.9
45.7520	62.5	-14.1	48.4	50.0	1.6
66.7875	47.3	-13.7	33.6	50.0	16.4
67.3700	53.5	-13.7	39.8	50.0	10.2
280.1260	46.7	-11.2	35.5	50.0	14.5
395.8850	41.6	-9.8	31.8	50.0	18.2

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)

1000-19000MHz

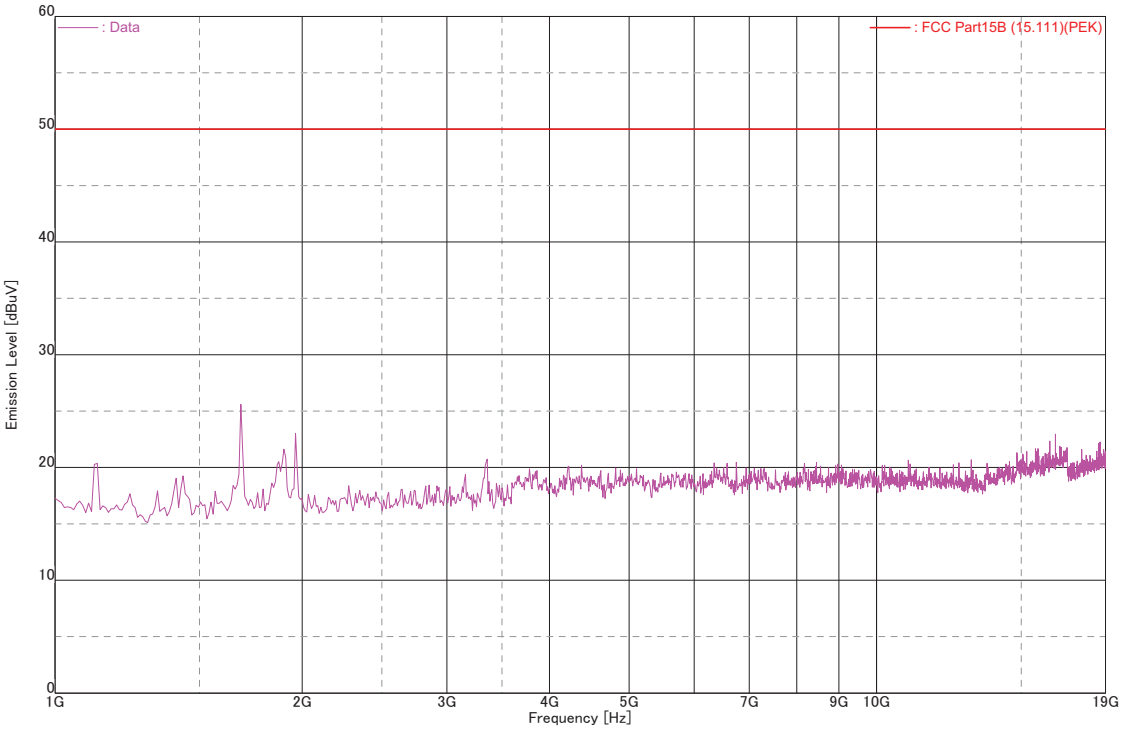
SPECTRUM ANALYSIS

Kashima No.12 Test Site

22.0°C /52.0%

Date tested : May 17 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V(AC 120V, 60Hz)
File number : 3
Engineer : Koichi Wagatuma
Note : ANT1



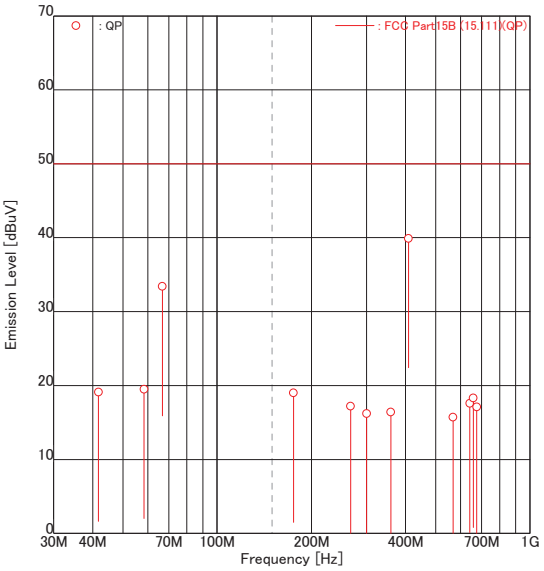
Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1685.7000	46.8	-24.1	22.7	50.0	27.3
1874.2500	46.2	-23.6	22.6	50.0	27.4
1970.0000	44.7	-23.5	21.2	50.0	28.8
3370.0000	43.9	-22.2	21.7	50.0	28.3

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(0.1000MHz)ANT2
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	41.7450	33.3	-14.2	19.1	50.0	30.9
2	58.4381	33.4	-13.9	19.5	50.0	30.5
3	66.7875	47.1	-13.7	33.4	50.0	16.6
4	175.3130	31.4	-12.4	19.0	50.0	31.0
5	267.1440	28.5	-11.3	17.2	50.0	32.8
6	300.5380	27.2	-11.0	16.2	50.0	33.8
7	358.9735	26.4	-10.0	16.4	50.0	33.6
8	409.0635	49.6	-9.7	39.9	50.0	10.1
9	567.6730	24.4	-8.7	15.7	50.0	34.3
10	642.7950	25.7	-8.1	17.6	50.0	32.4
11	659.5090	26.2	-7.9	18.3	50.0	31.7
12	676.1830	24.8	-7.7	17.1	50.0	32.9

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

emiT 3, 0, 0, 0

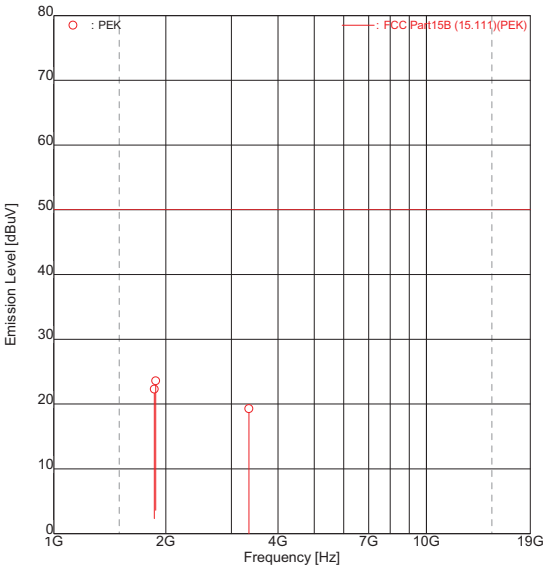
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1861.4900	46.0	-23.7	22.3	50.0	27.7
2	1878.4500	47.2	-23.6	23.6	50.0	**26.4**
3	3339.4400	41.6	-22.3	19.3	50.0	30.7

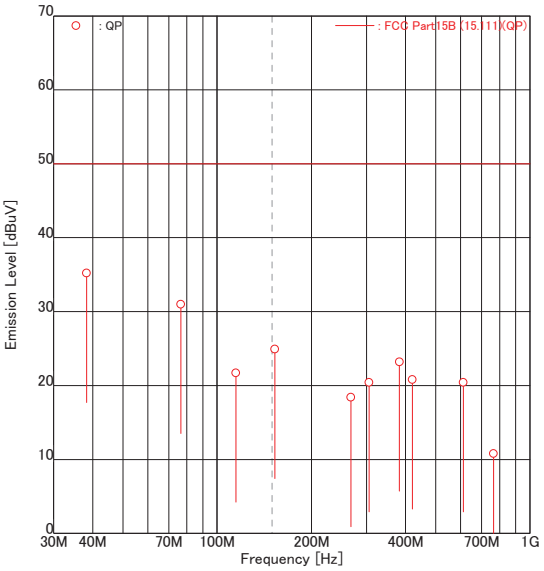
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.6 RX mode(30.0000MHz)ANT2
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	38.2490	49.4	-14.2	35.2	50.0	14.8
2	76.4992	44.6	-13.6	31.0	50.0	19.0
3	114.7500	34.8	-13.1	21.7	50.0	28.3
4	152.9920	37.6	-12.7	24.9	50.0	25.1
5	267.7370	29.7	-11.3	18.4	50.0	31.6
6	305.9800	31.4	-11.0	20.4	50.0	29.6
7	382.4860	33.1	-9.9	23.2	50.0	26.8
8	420.7295	30.5	-9.7	20.8	50.0	29.2
9	611.9795	28.7	-8.3	20.4	50.0	29.6
10	764.9635	17.9	-7.1	10.8	50.0	39.2

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

emiT 3, 0, 0, 0

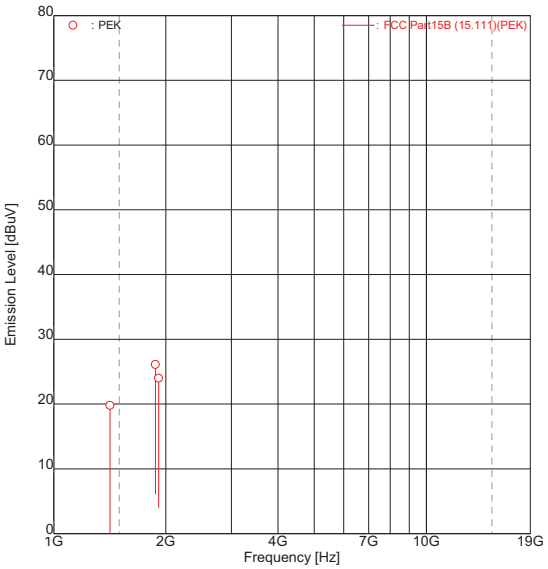
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1415.2200	44.1	-24.3	19.8	50.0	30.2
2	1874.0000	49.7	-23.6	26.1	50.0	**23.9**
3	1912.4900	47.6	-23.6	24.0	50.0	26.0

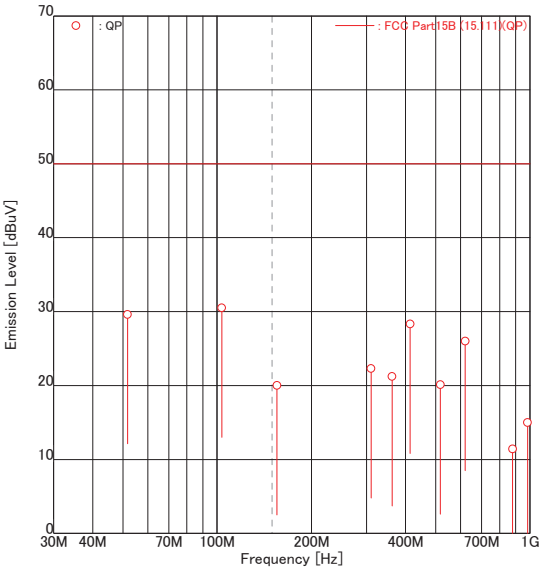
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.7 RX mode(59.9999MHz)ANT2
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	51.7540	43.5	-13.9	29.6	50.0	20.4
2	103.4990	43.7	-13.2	30.5	50.0	**19.5**
3	155.2580	32.6	-12.6	20.0	50.0	30.0
4	310.5180	33.2	-10.9	22.3	50.0	27.7
5	362.2630	31.2	-10.0	21.2	50.0	28.8
6	414.0210	38.0	-9.7	28.3	50.0	21.7
7	517.5190	29.1	-9.0	20.1	50.0	29.9
8	621.0360	34.2	-8.2	26.0	50.0	24.0
9	879.7890	17.7	-6.3	11.4	50.0	38.6
10	983.2880	20.7	-5.7	15.0	50.0	35.0

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

emiT 3, 0, 0, 0

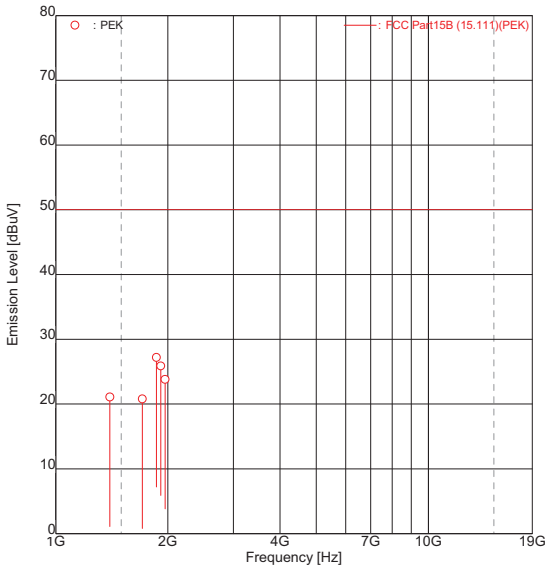
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANT2



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1397.1750	45.4	-24.3	21.1	50.0	28.9
2	1707.7850	44.8	-24.0	20.8	50.0	29.2
3	1863.1500	50.9	-23.7	27.2	50.0	**22.8**
4	1914.9300	49.5	-23.6	25.9	50.0	24.1
5	1966.4500	47.3	-23.5	23.8	50.0	26.2

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

emiT 3, 0, 0, 0

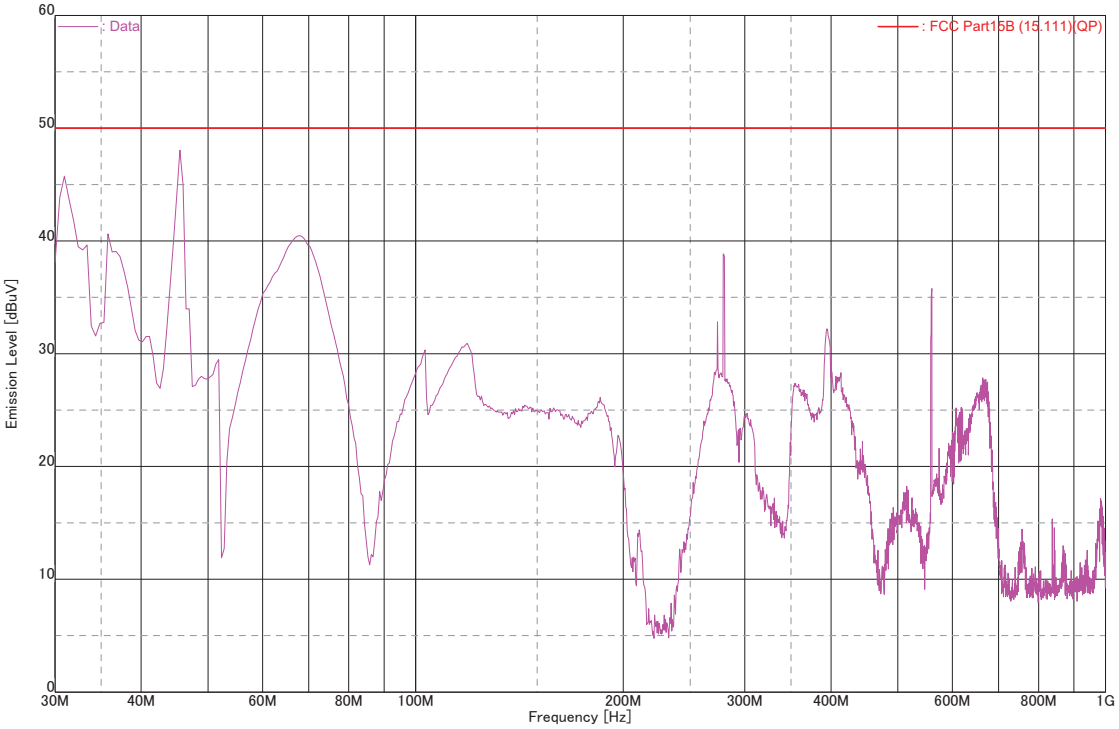
9.1.3.8 RX mode(VFO SCAN)ANT2
30 – 1000 MHz

SPECTRUM ANALYSIS
Kashima No.12 Test Site

21.9°C /51.0%

Date tested : May 16 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V (AC 120V 60Hz)
File number : -
Engineer : Koichi Wagatuma
Note : ANT2



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
30.7650	60.0	-14.3	45.7	50.0	4.3
38.2490	49.4	-14.2	35.2	50.0	14.8
45.7520	62.4	-14.1	48.3	50.0	1.7
66.7875	47.1	-13.7	33.4	50.0	16.6
67.3700	53.5	-13.7	39.8	50.0	10.2
280.1260	45.7	-11.2	34.5	50.0	15.5
409.0635	49.6	-9.7	39.9	50.0	10.1

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)

1000-19000MHz

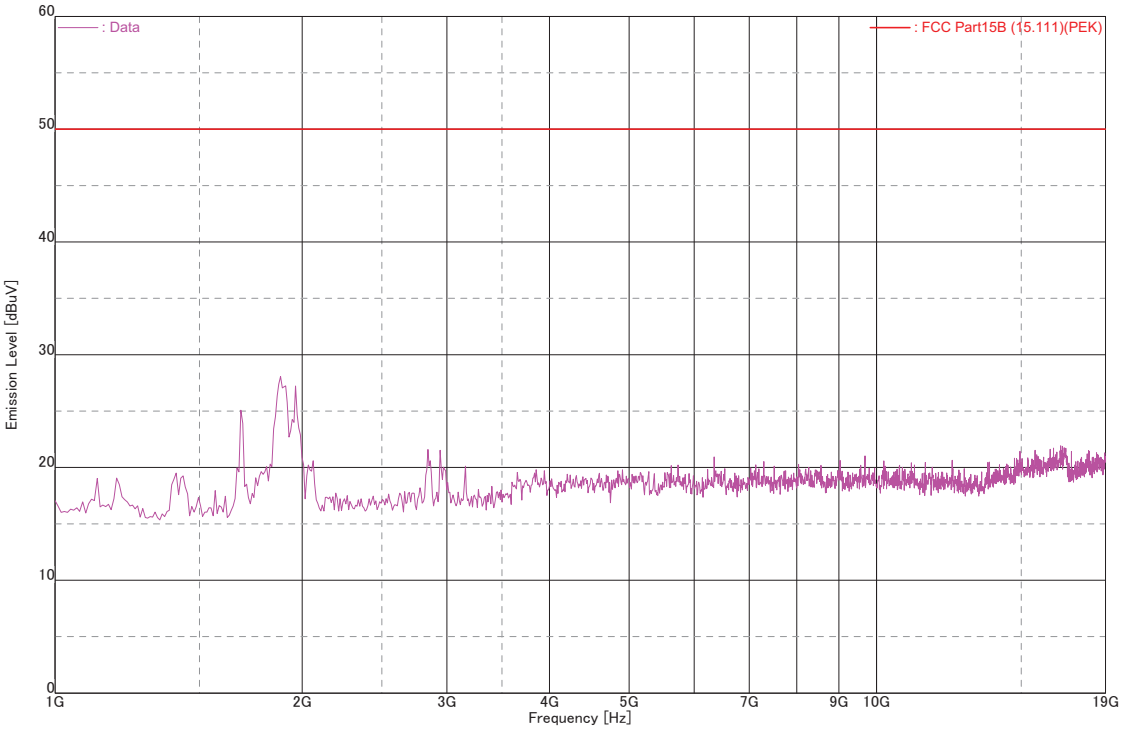
SPECTRUM ANALYSIS

Kashima No.12 Test Site

22.0°C /52.0%

Date tested : May 17 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V(AC 120V, 60Hz)
File number : -
Engineer : Koichi Wagatuma
Note : ANT2



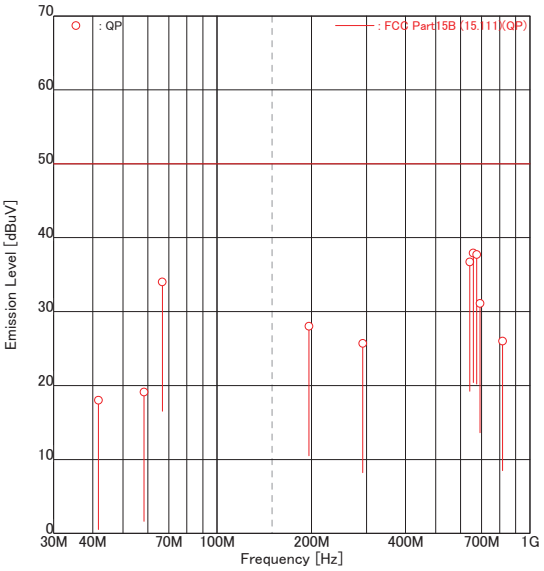
Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1125.2500	45.4	-23.7	21.7	50.0	28.3
1686.2500	49.8	-24.1	25.7	50.0	24.3
1879.7500	51.7	-23.6	28.1	50.0	21.9
1960.7500	53.2	-23.5	29.7	50.0	20.3

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)

9.1.3.9 RX mode(0.1000MHz)ANTRX
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	41.7334	32.2	-14.2	18.0	50.0	32.0
2	58.4421	33.0	-13.9	19.1	50.0	30.9
3	66.7802	47.7	-13.7	34.0	50.0	16.0
4	196.6200	40.1	-12.1	28.0	50.0	22.0
5	292.1790	36.8	-11.1	25.7	50.0	24.3
6	642.7760	44.8	-8.1	36.7	50.0	13.3
7	659.4760	45.8	-7.9	37.9	50.0	12.1
8	676.1760	45.4	-7.7	37.7	50.0	12.3
9	692.9140	38.8	-7.7	31.1	50.0	18.9
10	818.0860	32.7	-6.7	26.0	50.0	24.0

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

emiT 3, 0, 0, 0

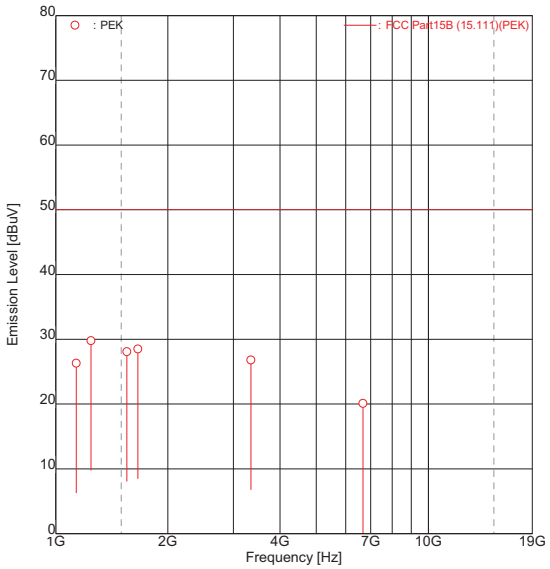
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(0.1000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1135.4250	50.0	-23.7	26.3	50.0	23.7
2	1243.8000	53.7	-23.9	29.8	50.0	**20.2**
3	1552.6500	52.4	-24.3	28.1	50.0	21.9
4	1661.3100	52.6	-24.1	28.5	50.0	21.5
5	3339.1300	49.1	-22.3	26.8	50.0	23.2
6	6678.5100	38.2	-18.1	20.1	50.0	29.9

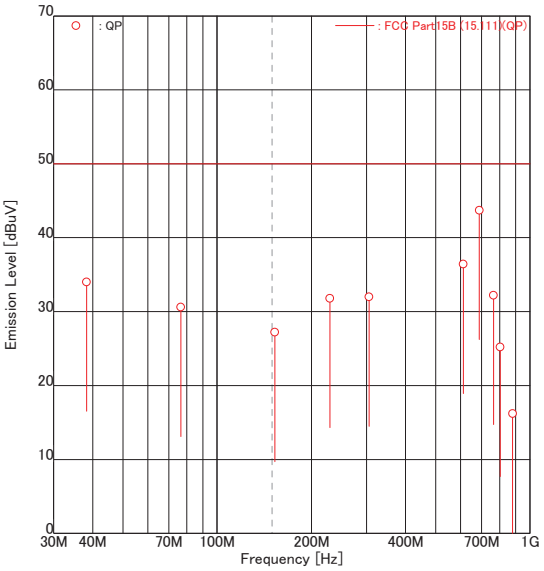
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.10 RX mode(30.0000MHz)ANTRX
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	38.2520	48.2	-14.2	34.0	50.0	16.0
2	76.4994	44.2	-13.6	30.6	50.0	19.4
3	152.9950	39.9	-12.7	27.2	50.0	22.8
4	229.4910	43.6	-11.8	31.8	50.0	18.2
5	305.9850	43.0	-11.0	32.0	50.0	18.0
6	611.9750	44.7	-8.3	36.4	50.0	13.6
7	688.4700	51.4	-7.7	43.7	50.0	6.3
8	764.9660	39.3	-7.1	32.2	50.0	17.8
9	803.2170	32.0	-6.8	25.2	50.0	24.8
10	879.6930	22.5	-6.3	16.2	50.0	33.8

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

emiT 3, 0, 0, 0

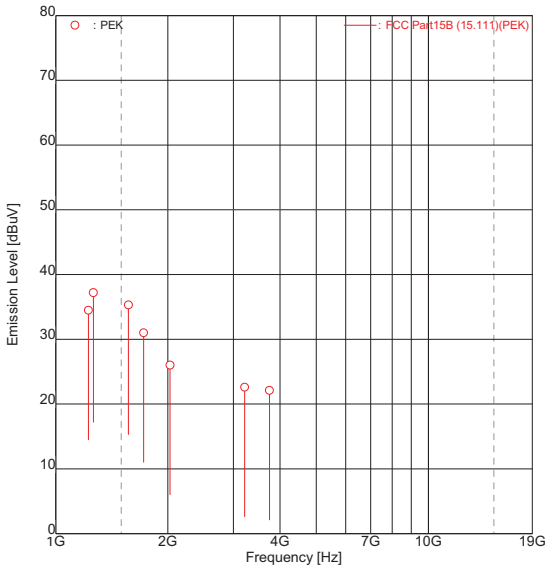
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(30.0000MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1223.8900	58.4	-23.9	34.5	50.0	15.5
2	1262.1800	61.2	-24.0	37.2	50.0	**12.8**
3	1568.1400	59.6	-24.3	35.3	50.0	14.7
4	1721.1700	55.0	-24.0	31.0	50.0	19.0
5	2027.1300	49.3	-23.3	26.0	50.0	24.0
6	3212.9000	45.0	-22.4	22.6	50.0	27.4
7	3748.3100	44.0	-21.9	22.1	50.0	27.9

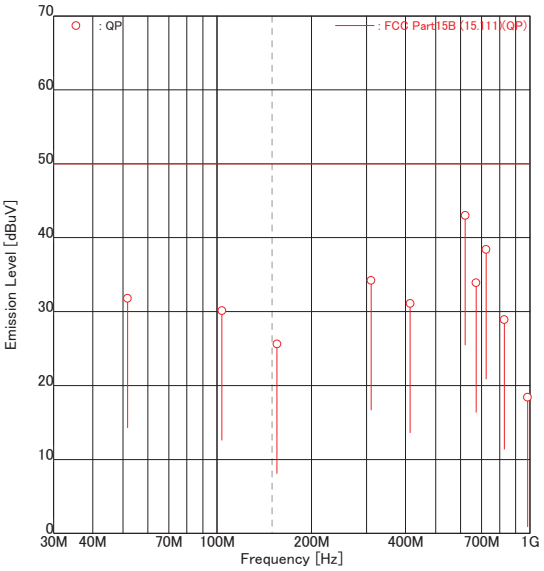
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.11 RX mode(59.9999MHz)ANTRX
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.12 Test Site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V (AC 120V 60Hz)
DATE TESTED	: May 16 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 21.9 [degC]
HUMIDITY	: 51.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	51.7557	45.7	-13.9	31.8	50.0	18.2
2	103.5080	43.3	-13.2	30.1	50.0	19.9
3	155.2570	38.2	-12.6	25.6	50.0	24.4
4	310.5180	45.1	-10.9	34.2	50.0	15.8
5	414.0130	40.8	-9.7	31.1	50.0	18.9
6	621.0250	51.2	-8.2	43.0	50.0	7.0
7	672.7760	41.6	-7.7	33.9	50.0	16.1
8	724.5340	45.9	-7.5	38.4	50.0	11.6
9	828.0340	35.5	-6.6	28.9	50.0	21.1
10	983.2900	24.1	-5.7	18.4	50.0	31.6

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

emiT 3, 0, 0, 0

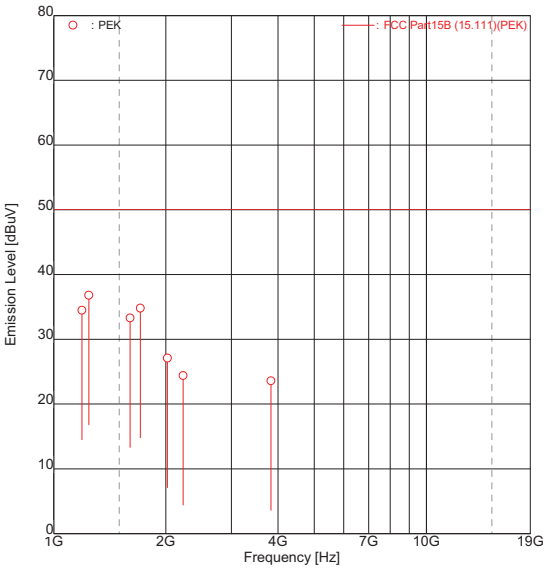
1000-19000MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz TRANSCEIVER
MODEL NO.	: TS-890S
SERIAL NO.	: 001
TEST MODE	: RX mode(59.9999MHz)
POWER SOURCE	: DC 13.8V(AC 120V, 60Hz)
DATE TESTED	: May 17 2018
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2014
TEMPERATURE	: 22.0 [degC]
HUMIDITY	: 52.0 [%]
NOTE	: ANTRX



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1190.2800	58.3	-23.8	34.5	50.0	15.5
2	1242.1000	60.7	-23.9	36.8	50.0	**13.2**
3	1604.3300	57.5	-24.2	33.3	50.0	16.7
4	1707.7500	58.8	-24.0	34.8	50.0	15.2
5	2018.3100	50.4	-23.3	27.1	50.0	22.9
6	2225.3000	47.6	-23.2	24.4	50.0	25.6
7	3829.6200	45.4	-21.8	23.6	50.0	26.4

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

emiT 3, 0, 0, 0

9.1.3.12 RX mode(VFO SCAN)ANTRX
30 – 1000 MHz

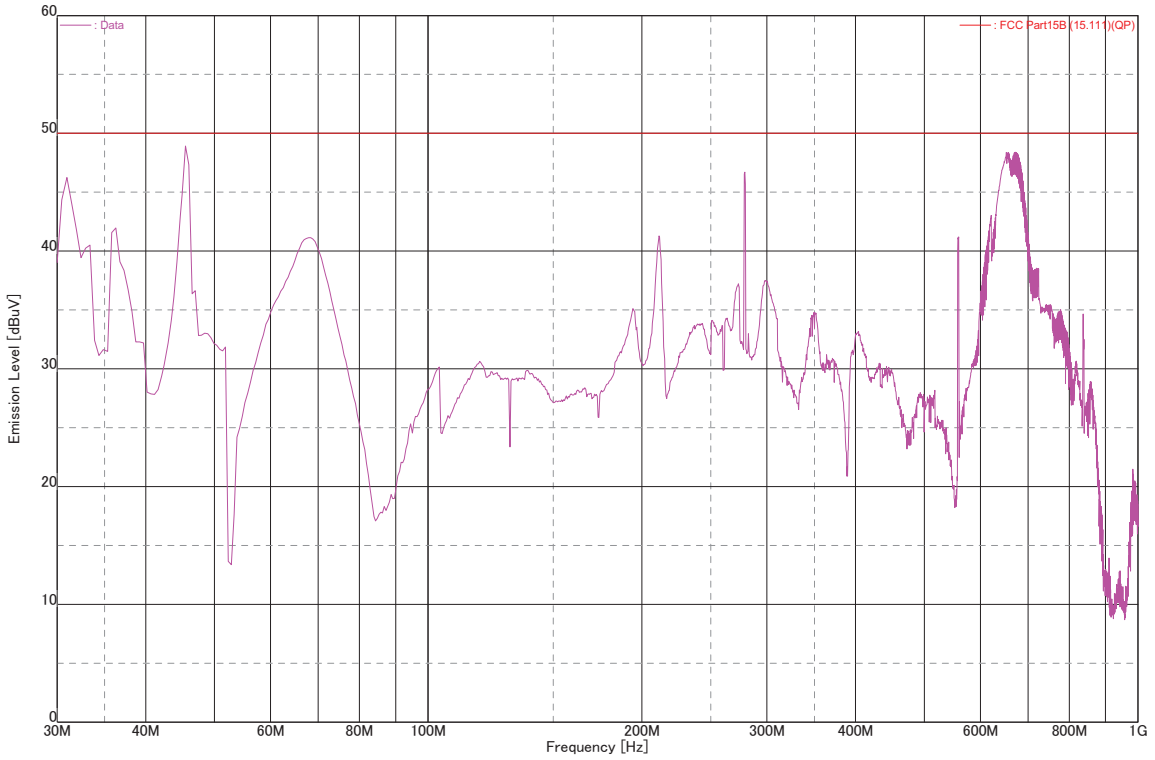
SPECTRUM ANALYSIS

Kashima No.12 Test Site

21.9°C /51.0%

Date tested : May 16 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V (AC 120V 60Hz)
File number : –
Engineer : Koichi Wagatuma
Note : ANTRX



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
30.7650	60.6	-14.3	46.3	50.0	3.7
45.7520	63.1	-14.1	49.0	50.0	1.0
278.8000	54.1	-11.2	42.9	50.0	7.1
621.0250	51.2	-8.2	43.0	50.0	7.0
654.5950	56.2	-8.0	48.2	50.0	1.8
676.1750	56.0	-7.7	48.3	50.0	1.7
688.4700	51.4	-7.7	43.7	50.0	6.3

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)

1000-19000MHz

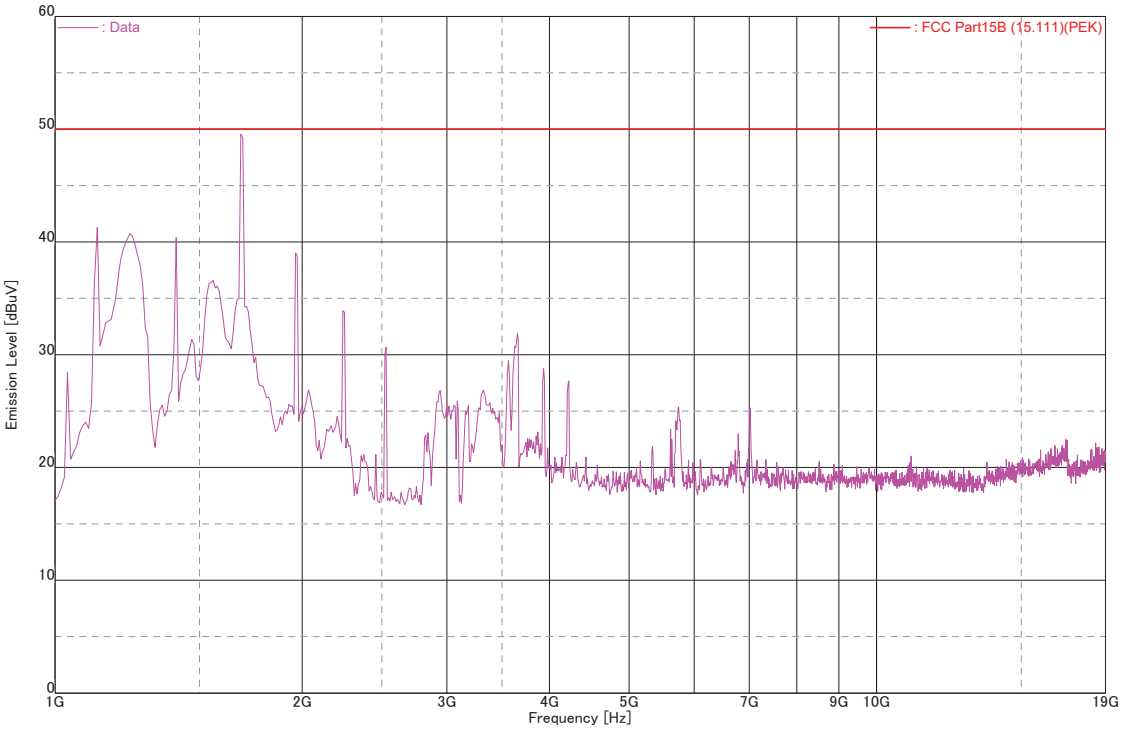
SPECTRUM ANALYSIS

Kashima No.12 Test Site

22.0°C /52.0%

Date tested : May 17 2018
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz TRANSCEIVER
Model number : TS-890S
Serial number : 001

Test mode : RX mode(VFO SCAN)
Power source : DC 13.8V(AC 120V, 60Hz)
File number : -
Engineer : Koichi Wagatuma
Note : ANTRX



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1124.5000	65.2	-23.7	41.5	50.0	8.5
1235.5000	69.7	-23.9	45.8	50.0	4.2
1403.7500	65.0	-24.3	40.7	50.0	9.3
1684.2500	73.9	-24.1	49.8	50.0	0.2

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)

9.2 38dB Rejection Test

Location	Kashima No.12 Test Site
Test Engineer	Koichi Wagatsuma
Date Tested	From May 17, 2018 to May 18, 2018
Temperature Variation	21.0 – 23.5 [degC]
Humidity Variation	49 - 53 [%]

Test Procedure

Item	**Document number**
38dB Rejection test	LEN-RJP-TE102

9.2.1 Result of 38dB Rejection

9.2.1.1 VFO SCAN mode (ANT1)

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 = 73dBuV
SG Reference Level = 5.0dBuV (the worst case sensitivity)

9.2.1.2 VFO SCAN mode (ANT2)

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 = 72dBuV
SG Reference Level = 6.0dBuV (the worst case sensitivity)

9.2.1.3 VFO SCAN mode (ANTRX)

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 = 70dBuV
SG Reference Level = 4.0dBuV (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.
All measurements equipment used for the measurement is calibrated based on standard.
Each measurement result is traceable to national or international standards.
Antenna used for the measurement is calibrated based on the ANSI C63.5.

Instrument	Model No.	Serial No.	Manufacturer	Cal. Interval	Effective period
Conducted disturbance at mains terminals					
LISN(EUT)	ESH2-Z5	860903/012	Rohde & Schwarz	1Y	Dec. 31, 2018
LISN(Peripheral)	KNW-242	8-851-21	KYORITSU	1Y	Jan. 31, 2019
10dB LISN Pad	CFA-01	KSR00246	TME	1Y	Dec. 31, 2018
10dB LISN Pad	CFA-01	KSR00255	TME	1Y	Jan. 31, 2019
50 ohm Termination	CT-01	A120CON50	TME	1Y	Feb. 28, 2019
Coaxial cable	RG-5A/U (14.0 m)	R2	Intertek	1Y	Nov. 30, 2018
Coaxial cable	10D-2W (7.0m)	R4	Intertek	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U (4.0 m)	R6	Intertek	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U(0.6 m)	R7	Intertek	1Y	Nov. 30, 2018
Coaxial cable	5D-2W (1.2 m)	R10	Intertek	1Y	Nov. 30, 2018
MXE EMI Receiver	N9038A	MY51210201	Agilent	1Y	Nov. 30, 2018
RF Switch	ACX-150	A12301501	Intertek	1Y	Nov. 30, 2018
Radiated disturbance					
Broad Band antenna	VULB9168WP	288	Schwarzbeck	1Y	May. 31, 2018
6dB Attenuator	UFA-01	A00040805	TME	1Y	Nov. 30, 2018
Amplifier	ZX60-3018G	002	Intertek	1Y	Nov. 30, 2018
Coaxial Cable	5D-2W(14.0m)	R11	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	5D-2W(8.0 m)	R1	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	10D-2W(7.0 m)	R3	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U(4.0 m)	R5	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U(0.6 m)	R7	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	5D-2W(1.2 m)	R10	FUJIKURA	1Y	Nov. 30, 2018
RF Switch	ACX-150	A12301501	Intertek	1Y	Nov. 30, 2018
Double ridged antenna	3115	5045	EMCO	1Y	Apr. 30, 2019
Horn Antenna with Preamplifier	MLA-18265-B03-30	1694440	TSJ	1Y	Mar. 31, 2019
3 dB Attenuator	6803.17.B	KSR00089	SUHNER	1Y	May. 31, 2019
Amplifier (1-18 GHz)	TPA0118-30	0402	TOYO	1Y	May. 31, 2019
Coaxial cable(G1)	SUCOFLEX 104	229603/4(R14)	SUHNER	1Y	May. 31, 2019
Coaxial cable(G2)	5B-048-98-98-5000	111130(R15)	Candox	1Y	May. 31, 2019
Coaxial Cable (G3)	5B-048-98-98-6000	120315	Candox	1Y	May. 31, 2019
MXE EMI Receiver	N9038A	MY51210201	Agilent	1Y	Nov. 30, 2018
Spectrum Analyzer	N9030ARev.A,08,54)	US51350220	Agilent	1Y	Mar. 31, 2019
Site Attenuation	-	-	-	1Y	Mar. 31, 2019
SVSWR	-	-	-	1Y	Feb. 28, 2019

Common					
Testing Software	emiT (Version 3,0,0,0)				

Conducted power on antenna port					
6dB Attenuator	UFA-01	A00040805	TME	1Y	Nov. 30, 2018
Amplifier	ZX60-3018G	002	Intertek	1Y	Nov. 30, 2018
Coaxial Cable	5D-2W(14.0m)	R11	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	5D-2W(8.0 m)	R1	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	10D-2W(7.0 m)	R3	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U(4.0 m)	R5	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	RG-5A/U(0.6 m)	R7	FUJIKURA	1Y	Nov. 30, 2018
Coaxial cable	5D-2W(1.2 m)	R10	FUJIKURA	1Y	Nov. 30, 2018
RF Switch	ACX-150	A12301501	Intertek	1Y	Nov. 30, 2018
MXE EMI Receiver	N9038A	MY51210201	Agilent	1Y	Nov. 30, 2018
Testing software	emiT (Version 3,0,0,0)	-	-	-	-
3dB Attenuator	8493C	18477	HP	1Y	Feb. 28, 2019
Amplifier	83051A	3332A00329	HP	1Y	Dec. 31, 2018
Coaxial Cable (AG1)	SUCOFLEX 104PE	94704/4PE	SUHNER	1Y	Feb. 28, 2019
Coaxial Cable (AG2)	SUCOFLEX 102EA	712/2EA	SUHNER	1Y	Feb. 28, 2019
38dB Rejection test					
Audio Analyzer	8903B	2948A07326	Hewlett Packard	1 Y	Mar. 31, 19
Coaxial Cable	SUCOFLEX104	306309/4	SUHNER	1 Y	Feb. 28, 19
Signal Generator	SMB 100A	105709	Rohde&Schwarz	1 Y	Apr. 30, 19

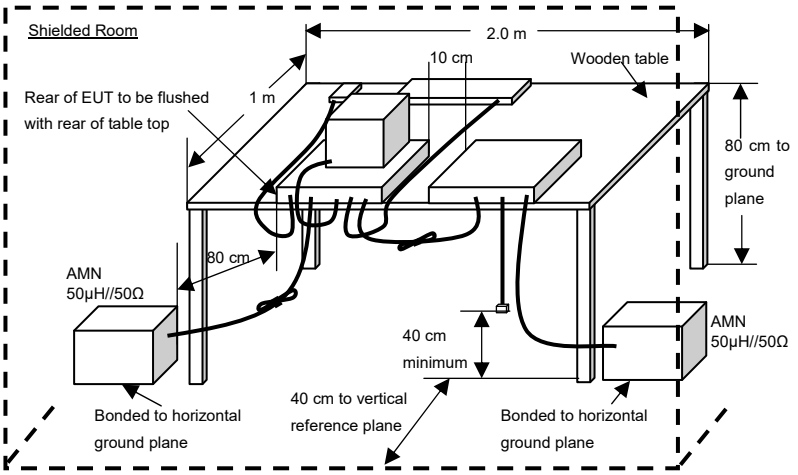
ANNEX

A. TEST PROCEDURE(S)

Test was carried out under the following conditions.

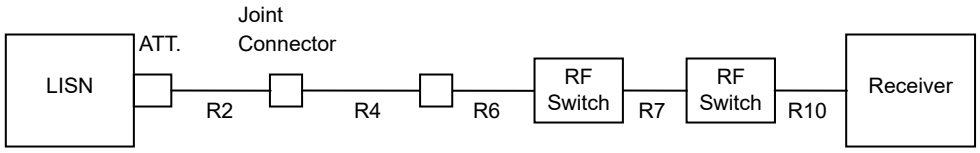
Conducted disturbance at mains terminals

Test setup as per standard



* Reference Ground plane : greater than 2 x 2m

Diagram of the measuring instruments



[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 is plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.
All leads other than safety ground are tested.

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

Radiated disturbance

Test setup as per standard

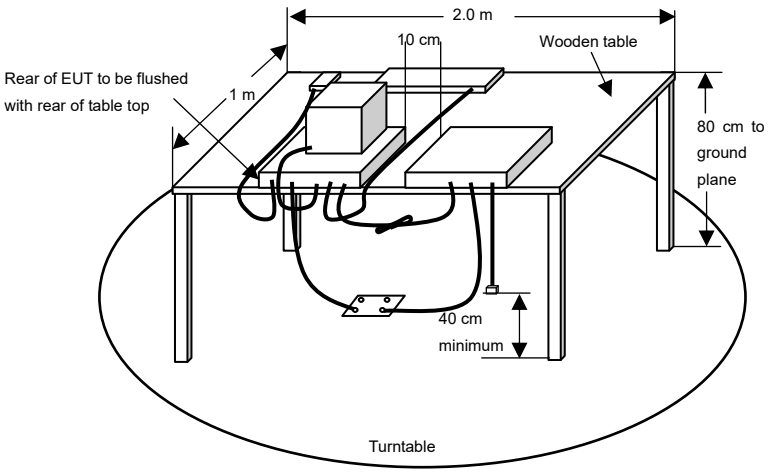
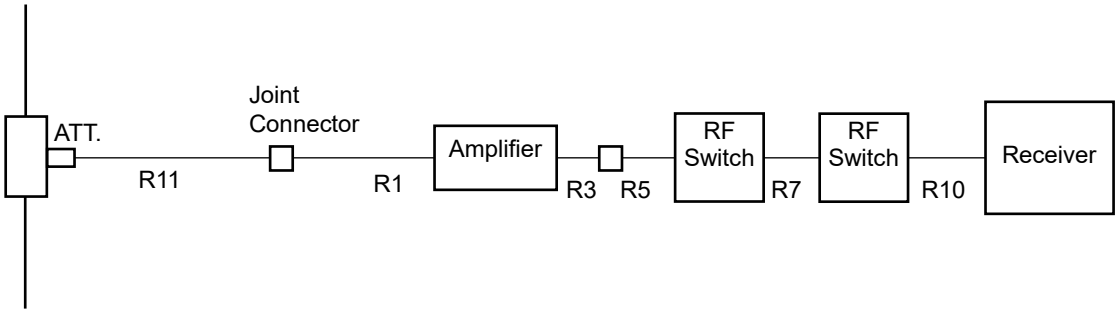
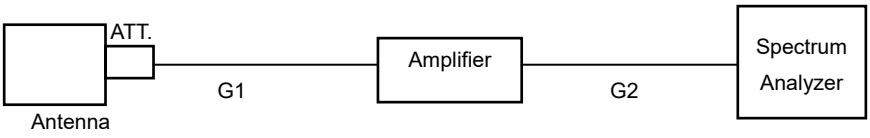


Diagram of the measuring instruments (30-1000MHz)



Above 1GHz(1-18GHz)



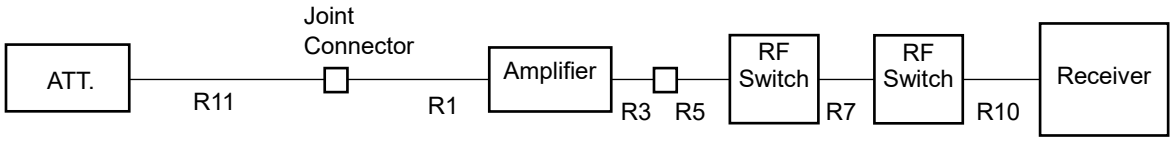
Above 1GHz(18-26.5GHz)

[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.

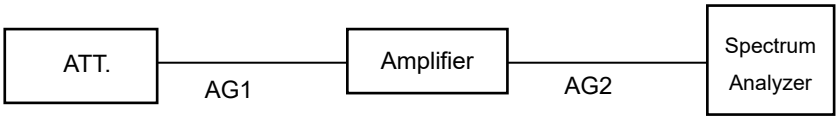
[Final Measurement]
The EUT operated in the worst emission condition found by the preliminary test.
The turntable azimuth (EUT direction) and antenna height are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.
The equipment and cables are arranged 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)

Diagram of the measuring instruments (30 - 1000MHz)



Above 1GHz

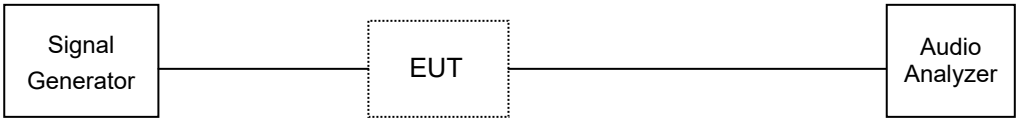


[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the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

38dB Rejection test

Schema for the 38dB rejection measurement



[Preliminary Measurement]

The Signal Genarator conditions :

Output level = 66 dBuV + SG Reference Level (the worst case sensitivity)

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 = 0.1 – 60 MHz (Minimum Scan Step).

Scan stopped point, was the detected frequency.

[Final Measurement]

Injected 12dB SINAD Reading (SG RF Output)

The EUT condition :

Frequency = Scan stopped point

The Signal Genarator condition :

Frequency = Cellular point

Detected 12dB SINAD Reading (SG RF Output)

The EUT condition :

Frequency = Scan stopped point

The Signal Genarator condition :

Frequency = Scan stopped point

Under the requirements of Section15.121(b) of the Rule.

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