TEST REPORT

STANDARD : FCC Part15B Class B -Scanning Receiver-
Industry Canada 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 (Anechoic chamber) 298-6 Sada, Kashima, Ibaraki 314-0027 Japan Tel. +81 299 82 8464 (Open area test site) 3-2 Sunayama, Kamisu, Ibaraki 314-0255 Japan Tel. +81 479 40 1097 URL: http://www.japan.intertek-etlsemko.com

Equipment Type	HF/50MHz ALL MODE TRANSCEIVER
Trademark	KENWOOD
Model(s)	TS-590SG
Serial No.	0001
Equipment Authorization	Certification (FCC ID : K44407110) (IC ID : 282F-407110)
Test Result	Complied
Report Number	14070023JKA-001
Original Issue Date	August 27, 2014

Approved by K. Gokita
Kazuo Gokita
[Manager]

Tested by K. Wagatsuma
Koichi Wagatsuma
[Engineer]

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	July 12, 2014
Date of Test	From July 14, 2014 to July 31, 2014
Standard Applied	FCC Part15B -Scanning Receiver- Industry Canada RSS-215 Issue 2
Test methods	ANSI C63.4-2003 / RSS-GEN Issue 3-2010
Deviation from Standard(s)	None

As for the ICES-003 “Digital Apparatus”, the EUT has been measured.
Refer to report No.14070023JKA-003.
As for the FCC Part15B Class B “Peripherals”, the EUT has been measured.
Refer to report No.14070023JKA-002.

Qualifications of Testing Laboratory

Accreditation	**Scope**	**Lab. Code**	**Remarks**
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-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	4.4 dB (0.2036 MHz) [Q-P] RX mode(0.03MHz : ANT 1)	
Radiated disturbance	0.7 dB (393.60 MHz) RX mode(VFO SCAN : ANT 1)	
Conducted power on antenna port	12.1 dB (80.5885 MHz) RX mode(VFO SCAN : ANT RX)	

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/50MHz ALL MODE TRANSCEIVER	TS-590SG	0001	JVC KENWOOD	
Rated Power : DC13.8 V ± 15% / 1.5A max.					
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	0.030 – 60.000 MHz
Receiver Type	Double or Triple conversion
Type of Emission	J3E / A1A / F1B / A3E / F3E

3.3 Intermediate frequency

1st	11.374 MHz (upper) or 73.095 MHz (upper)
2nd	24 kHz (upper or lower) or 10.695 MHz (lower)
3rd	24 kHz (upper) or 455 kHz (lower)

3.4 Port(s)/Connector(s)

Port Name	Connector Type	Connector Pin	Remarks
ANT 1	M	2 pin	
ANT 2	M	2 pin	
EXT. AT	JST 6pin	6 pin	
DC 13.8V	JST 4pin	4 pin	
COM	D-Sub	9 pin	
USB	Type B	4 pin	
EXT SP	3.5Φ	2 pin	
ACC2	MINI-DIN	13 pin	
REMOTE	MINI-DIN	7 pin	
KEY	3.5Φ	2 pin	
PADDLE	3.5Φ	3 pin	
DRV/ANT OUT	RCA	2 pin	
RX ANT	RCA	2 pin	
MIC	Receptacle	8 pin	
PHONES	6.2Φ	3 pin	

3.5 Highest Frequency Generated / Used

Operating Frequency	Operating mode	Remarks
480 MHz	RX mode	

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	Microphone	MC-47	none	JVC KENWOOD		N/A
D	Headphone	HS-6	none	JVC KENWOOD		N/A
E	Speaker	SP-50B	none	JVC KENWOOD		N/A
F	TCXO	SO-3	none	JVC KENWOOD		N/A
G	Voice Guide & Storage Unit	VGS-1	none	JVC KENWOOD		N/A
H	Terminator	none	none	none		N/A
I	Terminator	none	none	none		N/A
J	Terminator	none	none	JVC KENWOOD		N/A
K	Terminator	none	none	JVC KENWOOD		N/A
L	Computer	MTC2	GZNPG1X	DELL		DoC
M	Mobile Braket	MB-430	none	JVC KENWOOD		N/A
N	LCD	E151FPb	CN-04W569-46633-363-1DLT	DELL		DoC
O	Printer	C8154A	TH571320G8	HEWLETT PACKARD		DoC
P	AC Adapter	0957-2142	E10588014801L	HEWLETT PACKARD		N/A
Q	Keyboard	SK-8110	CN-07N247-71616-44Q-090P	DELL		DoC
R	Mouse	M-SAW34	LZC31257181	DELL		DZL211029
Supplied Power:						
B, L, N, P	AC120 V, 60 Hz					

SECTION 5. USED CABLE(S)

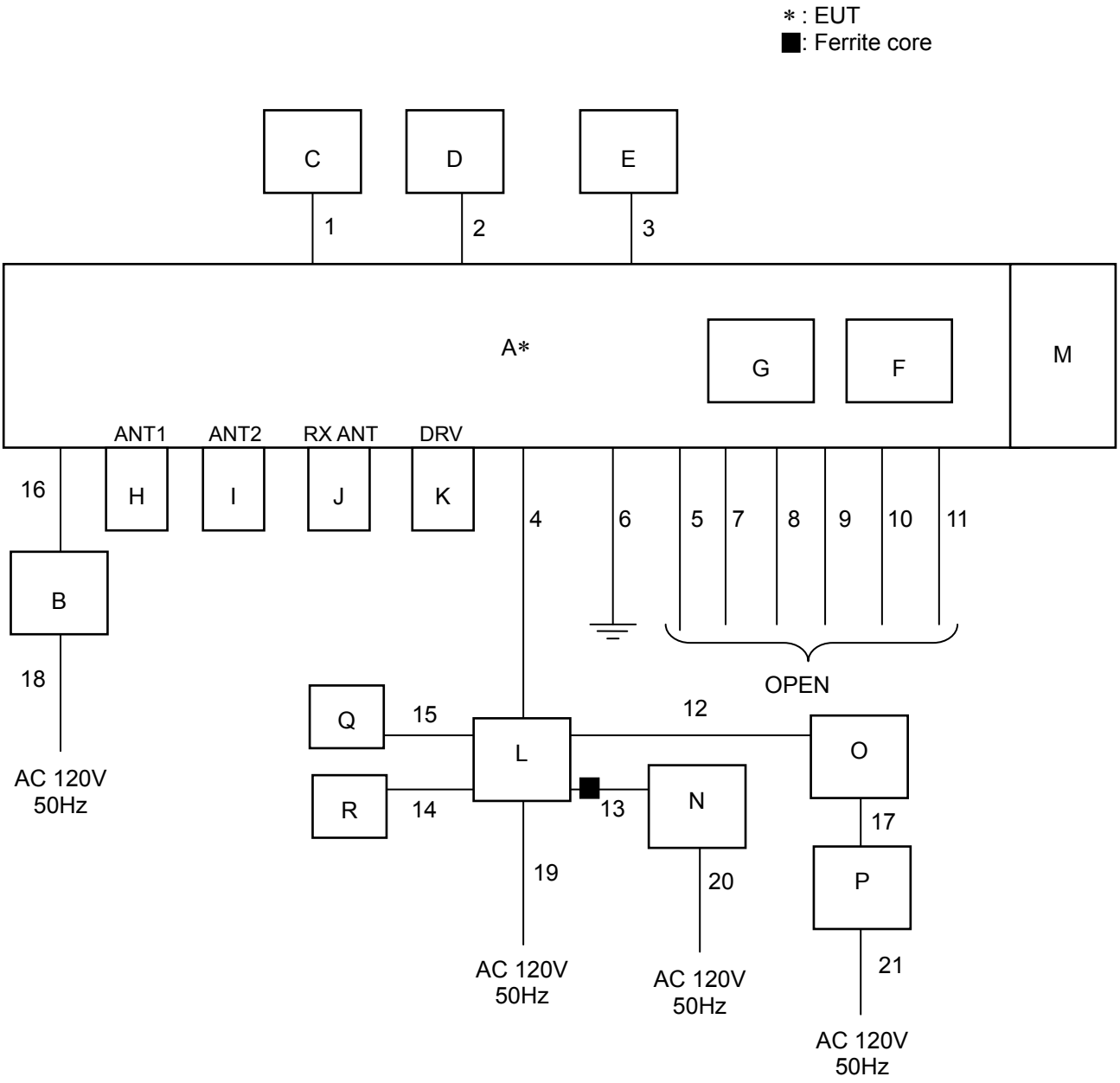
The following cable(s) was used for the test.

No.	Name	Length (m)	Shield	Metal Connector	Ferrite Core
1	Microphone Cable	0.6	No	Yes	
2	Headphone Cable	1.5	No	No	
3	Speaker Cable	2.5	No	No	
4	USB Cable	1.0	Yes	Yes	
5	EXT AT Cable	1.0	No	No	
6	GND Cable	1.6	No	Yes	
7	COM Cable	1.5	No	No	
8	ACC 2 Cable	1.0	No	No	
9	Remote Cable	1.0	No	No	
10	KEY Cable	1.0	No	No	
11	Paddle Cable	1.0	No	No	
12	Printer Cable	2.5	Yes	Yes	
13	Monitor Cable	1.6	Yes	Yes	Fixed x 1
14	Mouse Cable	1.8	Yes	Yes	
15	Keyboard Cable	2.0	Yes	Yes	
16	Power Cable for TS-590SG (DC)	2.0	No	No	
17	Power Cable for Printer (DC)	1.7	No	No	
18	Power Cable for DC Supply (AC)	1.8	No	No	
19	Power Cable for Computer (AC)	1.9	No	No	
20	Power Cable for LCD (AC)	1.7	No	No	
21	Power Cable for AC Adapter (AC)	2.0	No	No	

Note : No.13 cable is supplied together with LCD(N)

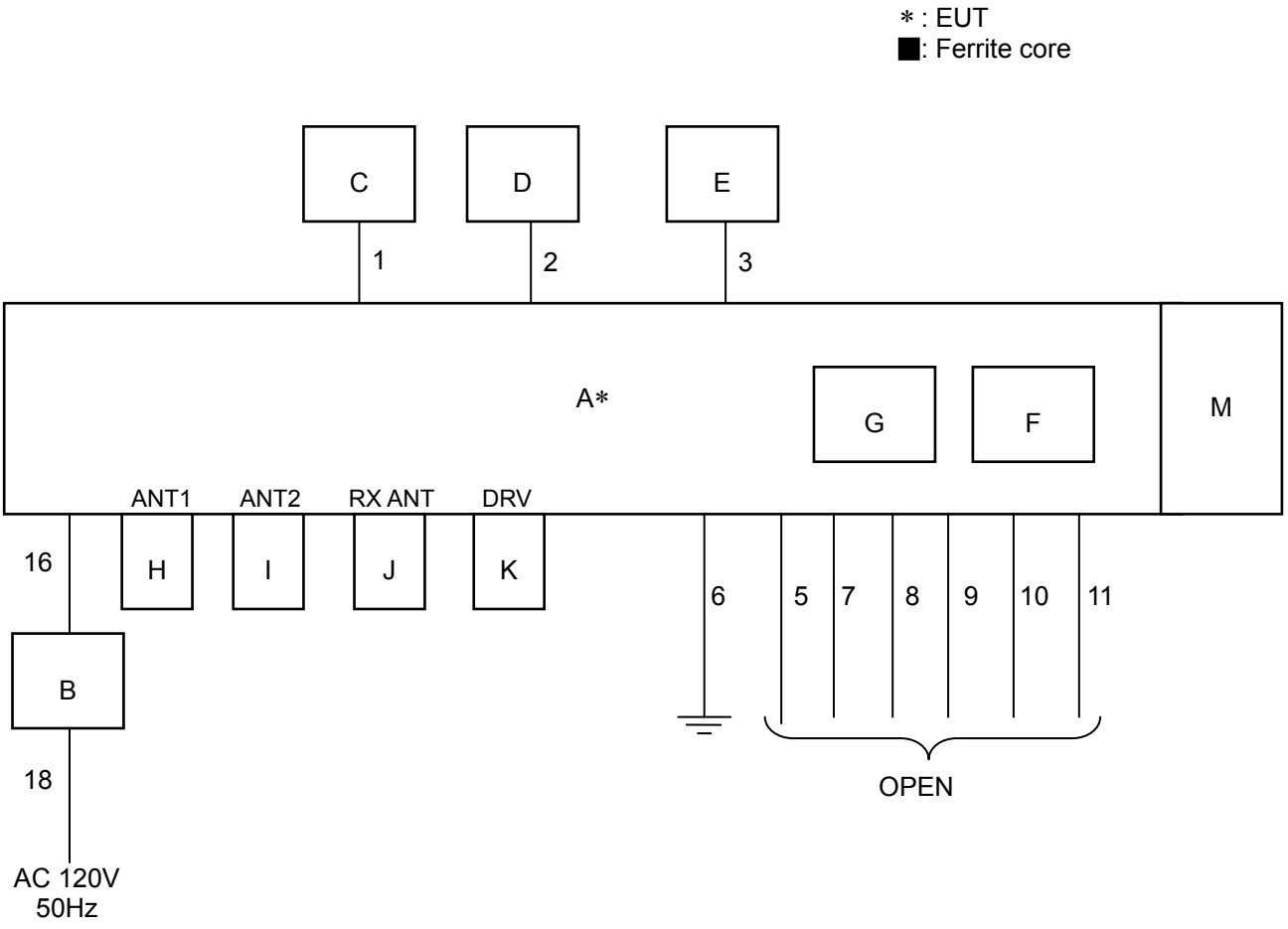
SECTION 6. TEST CONFIGURATION

6.1 Conducted disturbance at mains terminals Tests and Radiated disturbance tests



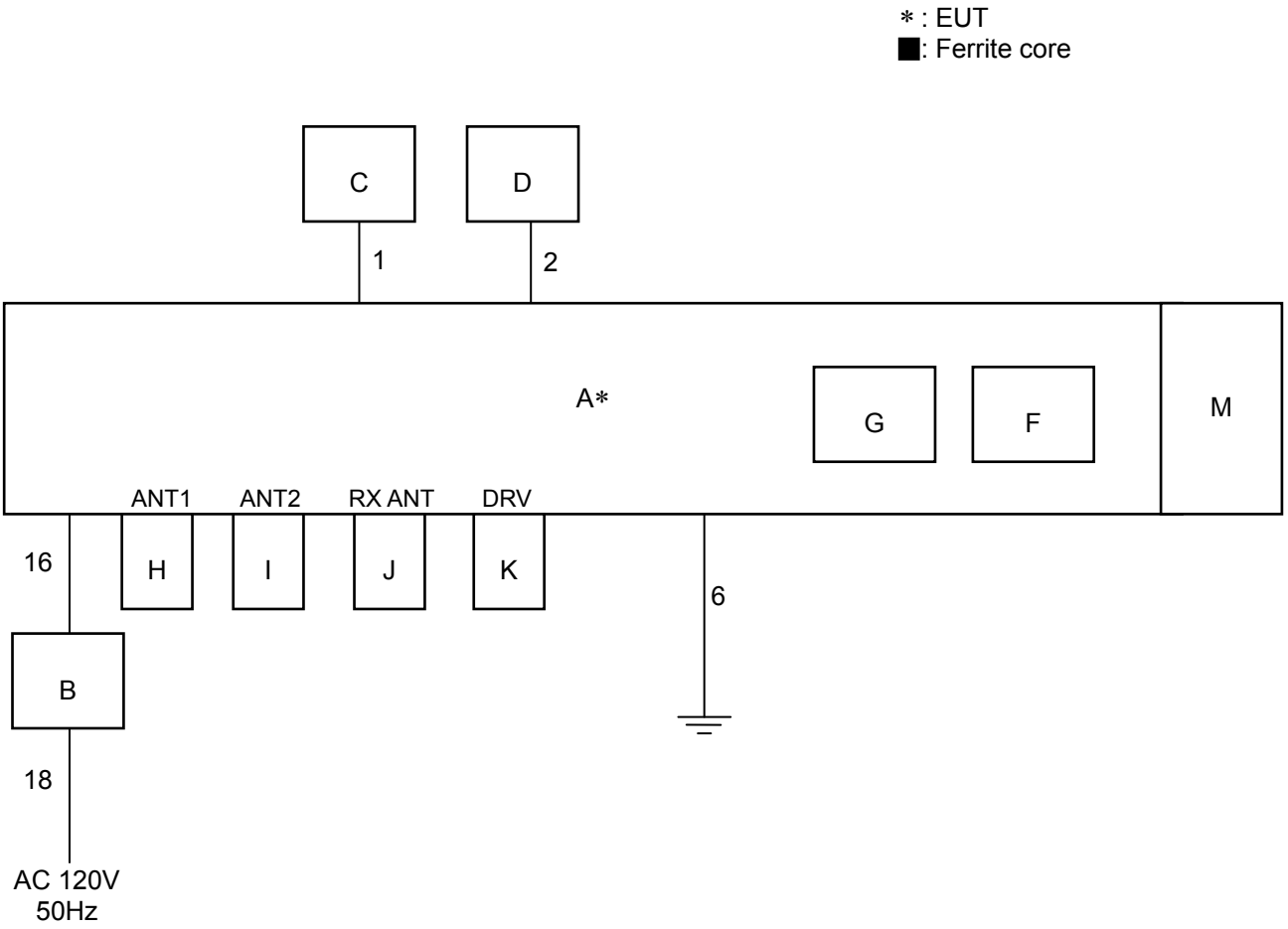
The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

6.2 Conducted Power on Antenna Port tests



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

6.3 38dB Rejection Tests

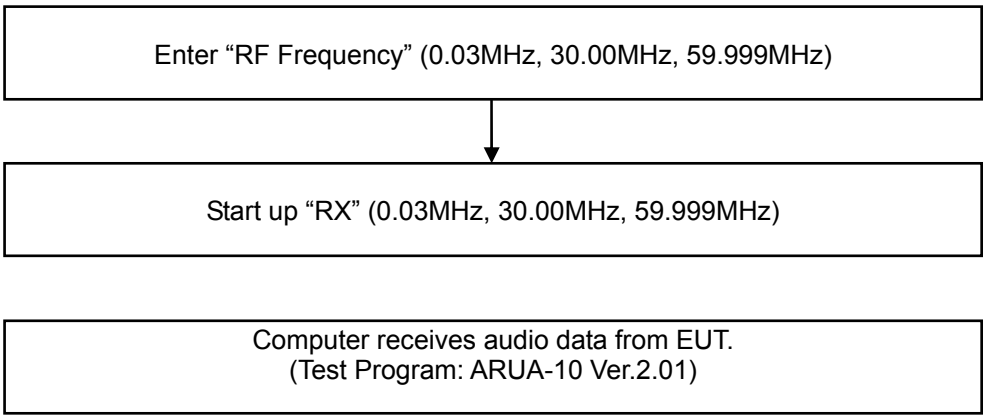


SECTION 7. OPERATING CONDITION

The test was carried out under the following mode.

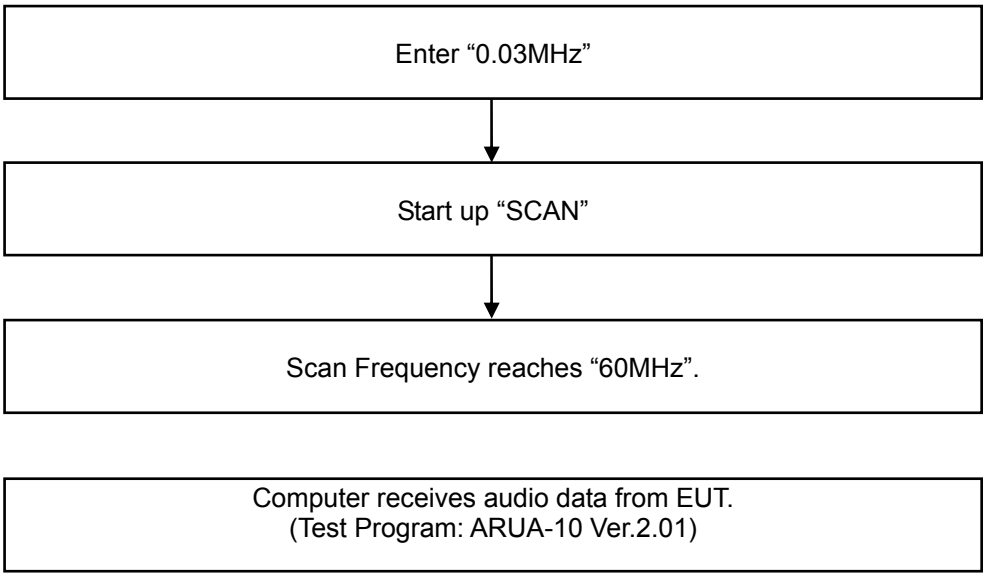
7.1 RX mode

Cycle time for operation: Continuity



7.2 VFO SCAN mode

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 3m	**U_{lab} [k = 2]**	**U_{cispr}**
30 MHz – 1000 MHz	+/- 4.83 dB	5.19 dB
Above 1 GHz CISPR22	+/- 4.33 dB	
Above 1 GHz ANCI 63.4	+/- 4.90 dB	
Radiated disturbance at 10m		
30 MHz – 1000 MHz	+/- 5.00 dB	5.06 dB
Above 1 GHz	+/- 4.95 dB	
Radiated disturbance at 30m		
	N/A	5.02 dB
Conducted disturbance at mains terminals		
9 kHz – 150 kHz	+/- 2.82 dB	3.97 dB
150 kHz – 30 MHz	+/- 2.80 dB	3.60 dB
Conducted disturbance at telecommunication ports (ISN)		
9 kHz – 30 MHz	+/- 3.85 dB	Nil
Conducted disturbance at telecommunication ports (Capacitive Voltage Probe)		
9 kHz – 30 MHz	+/- 3.77 dB	Nil
Conducted disturbance at telecommunication ports (Current Probe)		
9 kHz – 30 MHz	+/- 2.91 dB	Nil
Conducted disturbance at terminals		
150 kHz – 30 MHz	+/- 2.80 dB	Nil
Disturbance power		
30 MHz – 300 MHz	+/- 3.34 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 16-4-2:2011.

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	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

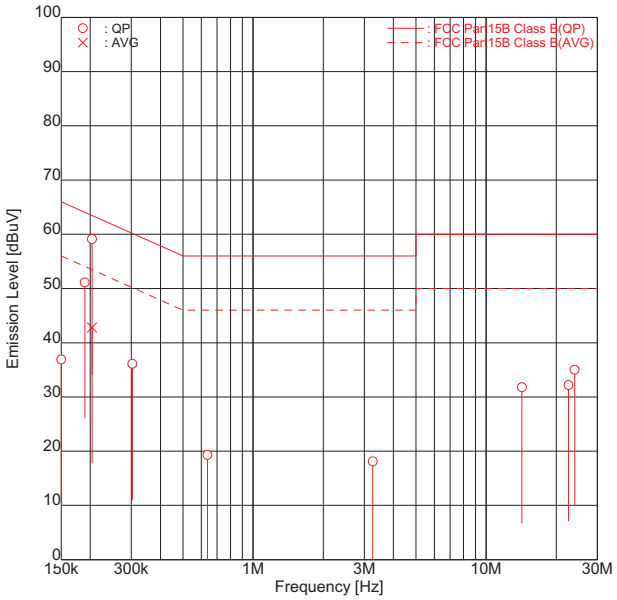
Result of Conducted disturbance at mains terminals
9.1.1.1 RX mode (0.030MHz : Ant 1)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.03MHz : ANT1)
POWER SOURCE	: DC 13.8V (AC 120V, 60Hz)
DATE TESTED	: Jul 31 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.7 [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	26.9	25.3	10.0	10.1	36.9	35.4	66.0	29.1	30.6
2	0.1895	QP	41.0	41.0	10.0	10.1	51.0	51.1	64.1	13.1	13.0
3	0.2036	QP	49.0	48.0	10.1	10.1	59.1	58.1	63.5	**4.4**	5.4
4	0.2036	AVG	32.6	32.7	10.1	10.1	42.7	42.8	53.5	10.8	10.7
5	0.3031	QP	18.4	26.0	10.1	10.1	28.5	36.1	60.2	31.7	24.1
6	0.6373	QP	9.1	3.3	10.2	10.2	19.3	13.5	56.0	36.7	42.5
7	3.2604	QP	7.7	3.4	10.4	10.5	18.1	13.9	56.0	37.9	42.1
8	14.2400	QP	20.8	20.7	11.0	11.0	31.8	31.7	60.0	28.2	28.3
9	22.5838	QP	21.0	20.0	11.2	11.4	32.2	31.4	60.0	27.8	28.6
10	23.9988	QP	23.8	23.1	11.2	11.4	35.0	34.5	60.0	25.0	25.5

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

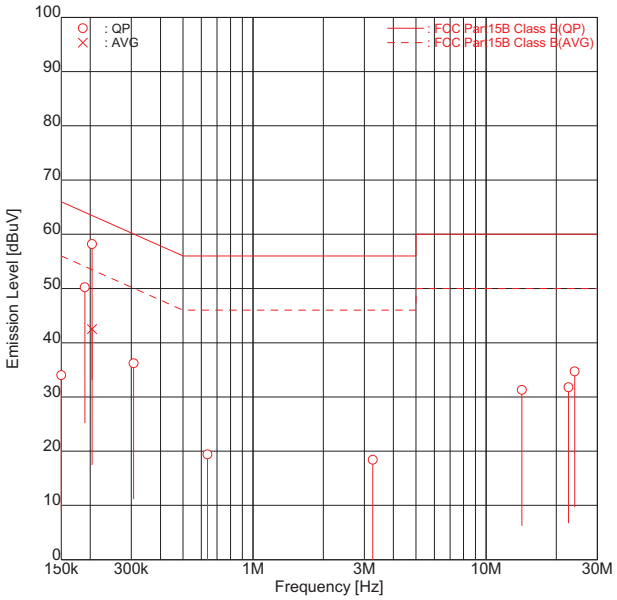
9.1.1.2 RX mode (30MHz : Ant 1)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT1)
POWER SOURCE	: DC 13.8V (AC 120V, 60Hz)
DATE TESTED	: Jul 31 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.7 [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	24.0	23.1	10.0	10.1	34.0	33.2	66.0	32.0	32.8
2	0.1895	QP	40.2	38.6	10.0	10.1	50.2	48.7	64.1	13.9	15.4
3	0.2036	QP	48.1	47.6	10.1	10.1	58.2	57.7	63.5	**5.3**	5.8
4	0.2036	AVG	32.2	32.4	10.1	10.1	42.3	42.5	53.5	11.2	11.0
5	0.3069	QP	16.3	26.1	10.1	10.1	26.4	36.2	60.1	33.7	23.9
6	0.6373	QP	9.2	4.3	10.2	10.2	19.4	14.5	56.0	36.6	41.5
7	3.2604	QP	8.0	3.2	10.4	10.5	18.4	13.7	56.0	37.6	42.3
8	14.2400	QP	20.3	20.3	11.0	11.0	31.3	31.3	60.0	28.7	28.7
9	22.5838	QP	20.3	20.4	11.2	11.4	31.5	31.8	60.0	28.5	28.2
10	23.9988	QP	23.3	23.3	11.2	11.4	34.5	34.7	60.0	25.5	25.3

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

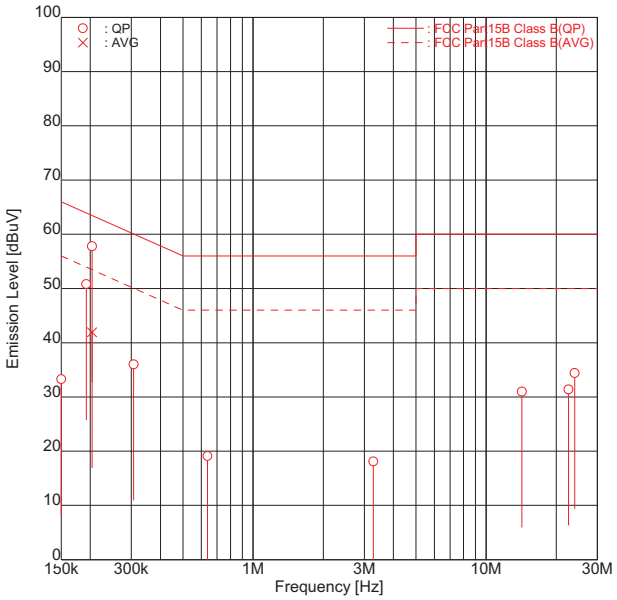
9.1.1.3 RX mode (59.999MHz : Ant 1)

Intertek Japan K.K.

Kashima No.12 Test Site

Conducted Voltages on Mains Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT1)
POWER SOURCE	: DC 13.8V (AC 120V, 60Hz)
DATE TESTED	: Jul 31 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 22.7 [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	23.3	22.3	10.0	10.1	33.3	32.4	66.0	32.7	33.6
2	0.1922	QP	40.8	40.2	10.0	10.1	50.8	50.3	63.9	13.1	13.6
3	0.2036	QP	47.7	46.7	10.1	10.1	57.8	56.8	63.5	**5.7**	6.7
4	0.2036	AVG	31.8	31.8	10.1	10.1	41.9	41.9	53.5	11.6	11.6
5	0.3069	QP	15.0	25.9	10.1	10.1	25.1	36.0	60.1	35.0	24.1
6	0.6373	QP	8.9	4.1	10.2	10.2	19.1	14.3	56.0	36.9	41.7
7	3.2795	QP	7.7	3.3	10.4	10.5	18.1	13.8	56.0	37.9	42.2
8	14.2400	QP	19.8	20.0	11.0	11.0	30.8	31.0	60.0	29.2	29.0
9	22.5838	QP	20.0	20.0	11.2	11.4	31.2	31.4	60.0	28.8	28.6
10	23.9988	QP	23.0	23.0	11.2	11.4	34.2	34.4	60.0	25.8	25.6

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

9.1.2 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(0.030MHz : ANT1) RX mode(30MHz : ANT1) RX mode(59.999MHz : ANT1) RX mode(VFO SCAN : ANT1)	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 >

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)

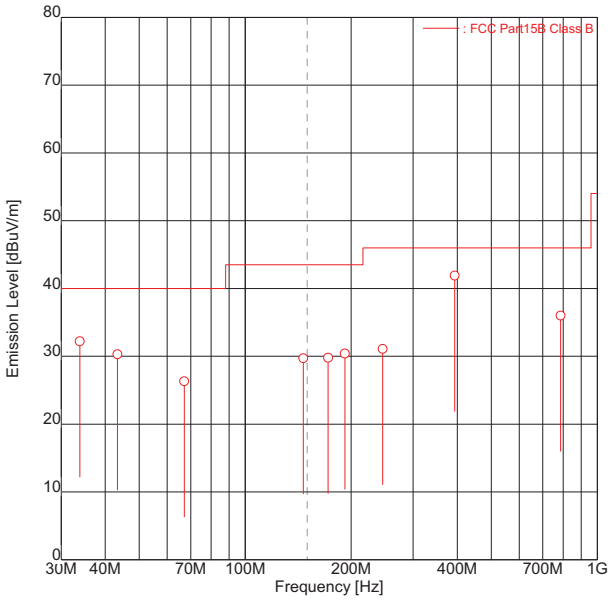
Result of Radiated disturbances
9.1.2.1 RX mode(0.030MHz : ANT1)
30 – 1000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT : JVC KENWOOD Corporation
EUT NAME : HF/50MHz ALL MODE TRANSCEIVER
MODEL NO. : TS-590SG
SERIAL NO. : 0001
TEST MODE : RX mode(0.03MHz : ANT1)
POWER SOURCE : DC 13.8V
DATE TESTED : Jul 29 2014
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 23.1 [degC]
HUMIDITY : 44.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	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	33.88	-	34.9	-2.7	-2.7	-	32.2	40.0	-	7.8
2	43.34	31.5	32.0	-1.7	-1.7	29.8	30.3	40.0	10.2	9.7
3	67.12	28.7	28.0	-2.4	-2.4	26.3	25.6	40.0	13.7	14.4
4	146.24	-	30.7	-1.0	-1.0	-	29.7	43.5	-	13.8
5	172.03	-	31.0	-1.2	-1.2	-	29.8	43.5	-	13.7
6	191.99	-	33.0	-2.6	-2.6	-	30.4	43.5	-	13.1
7	245.76	32.2	-	-1.1	-1.1	31.1	-	46.0	14.9	-
8	393.60	37.7	32.1	4.2	4.2	41.9	36.3	46.0	**4.1**	9.7
9	787.19	22.1	21.5	13.9	13.9	36.0	35.4	46.0	10.0	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

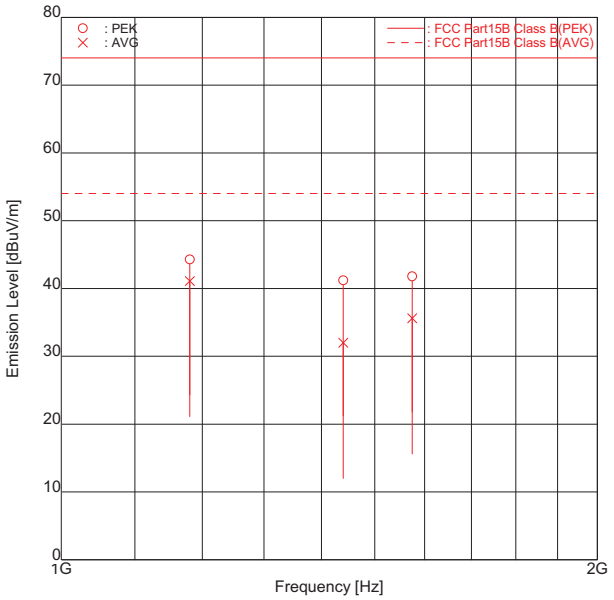
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.03MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 30 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 25.7 [degC]
HUMIDITY	: 50.0 [%]
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	1180.90	PEK	47.0	48.5	-4.2	-4.2	42.8	44.3	74.0	31.2	29.7
2	1180.90	AVG	43.3	45.3	-4.2	-4.2	39.1	41.1	54.0	14.9	**12.9**
3	1440.11	PEK	43.2	44.5	-3.3	-3.3	39.9	41.2	74.0	34.1	32.8
4	1440.11	AVG	32.3	35.3	-3.3	-3.3	29.0	32.0	54.0	25.0	22.0
5	1574.37	PEK	44.5	43.8	-2.7	-2.7	41.8	41.1	74.0	32.2	32.9
6	1574.37	AVG	38.3	37.3	-2.7	-2.7	35.6	34.6	54.0	18.4	19.4

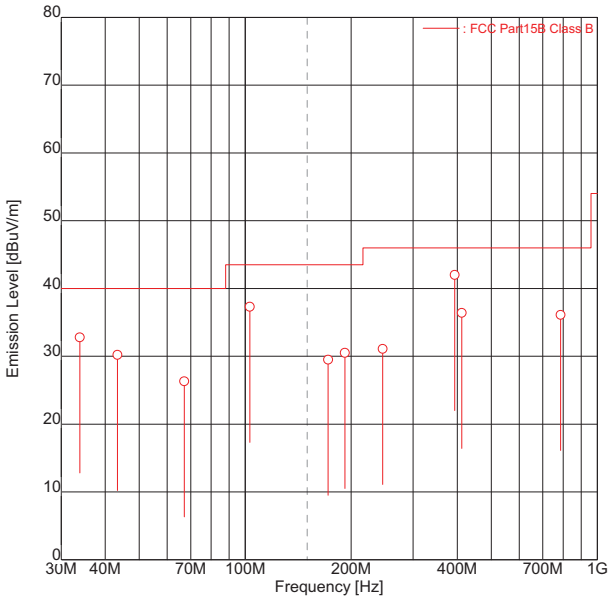
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

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

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

APPLICANT : JVC KENWOOD Corporation
EUT NAME : HF/50MHz ALL MODE TRANSCEIVER
MODEL NO. : TS-590SG
SERIAL NO. : 0001
TEST MODE : RX mode(30MHz : ANT1)
POWER SOURCE : DC 13.8V
DATE TESTED : Jul 29 2014
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 23.1 [degC]
HUMIDITY : 44.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	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	33.88	-	35.5	-2.7	-2.7	-	32.8	40.0	-	7.2
2	43.34	31.4	31.9	-1.7	-1.7	29.7	30.2	40.0	10.3	9.8
3	67.12	28.7	28.0	-2.4	-2.4	26.3	25.6	40.0	13.7	14.4
4	103.08	37.8	42.5	-5.2	-5.2	32.6	37.3	43.5	10.9	6.2
5	172.03	-	30.7	-1.2	-1.2	-	29.5	43.5	-	14.0
6	191.99	-	33.1	-2.6	-2.6	-	30.5	43.5	-	13.0
7	245.76	32.2	-	-1.1	-1.1	31.1	-	46.0	14.9	-
8	393.60	37.8	31.8	4.2	4.2	42.0	36.0	46.0	**4.0**	10.0
9	412.38	31.7	30.3	4.7	4.7	36.4	35.0	46.0	9.6	11.0
10	787.19	22.2	21.4	13.9	13.9	36.1	35.3	46.0	9.9	10.7

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

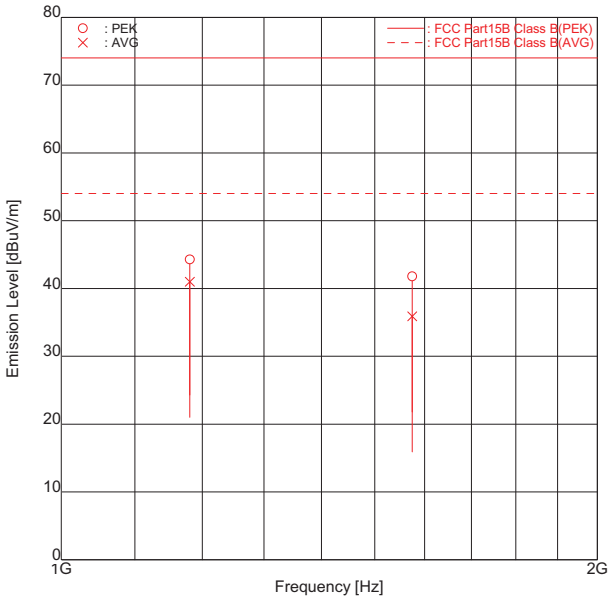
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 30 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 25.7 [degC]
HUMIDITY	: 50.0 [%]
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	1180.90	PEK	47.4	48.5	-4.2	-4.2	43.2	44.3	74.0	30.8	29.7
2	1180.90	AVG	42.7	45.2	-4.2	-4.2	38.5	41.0	54.0	15.5	**13.0**
3	1574.37	PEK	44.5	44.1	-2.7	-2.7	41.8	41.4	74.0	32.2	32.6
4	1574.37	AVG	38.3	38.6	-2.7	-2.7	35.6	35.9	54.0	18.4	18.1

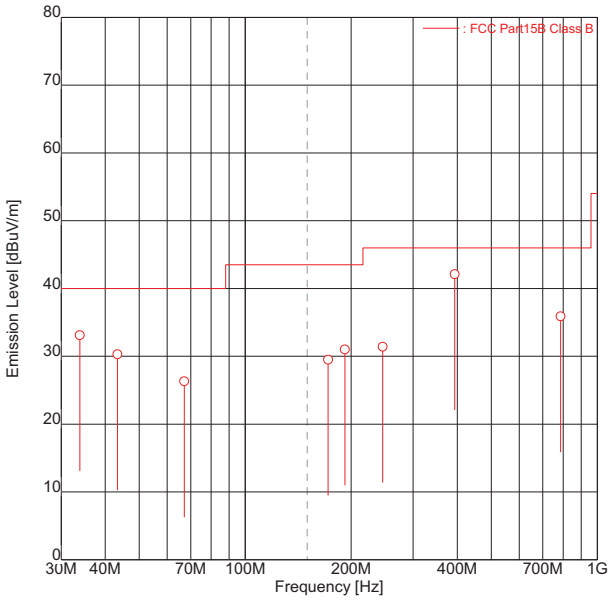
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

9.1.2.3 RX mode(59.999MHz : ANT1)
30 – 1000 MHz

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

APPLICANT : JVC KENWOOD Corporation
EUT NAME : HF/50MHz ALL MODE TRANSCEIVER
MODEL NO. : TS-590SG
SERIAL NO. : 0001
TEST MODE : RX mode(59.999MHz : ANT1)
POWER SOURCE : DC 13.8V
DATE TESTED : Jul 29 2014
FILE NO. : -
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 23.1 [degC]
HUMIDITY : 44.0 [%]
NOTE :



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	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	33.88	-	35.8	-2.7	-2.7	-	33.1	40.0	-	6.9
2	43.34	31.3	32.0	-1.7	-1.7	29.6	30.3	40.0	10.4	9.7
3	67.12	28.7	28.2	-2.4	-2.4	26.3	25.8	40.0	13.7	14.2
4	172.03	-	30.7	-1.2	-1.2	-	29.5	43.5	-	14.0
5	191.99	-	33.6	-2.6	-2.6	-	31.0	43.5	-	12.5
6	245.76	32.5	-	-1.1	-1.1	31.4	-	46.0	14.6	-
7	393.60	37.9	31.1	4.2	4.2	42.1	35.3	46.0	**3.9**	10.7
8	787.19	22.0	21.3	13.9	13.9	35.9	35.2	46.0	10.1	10.8

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

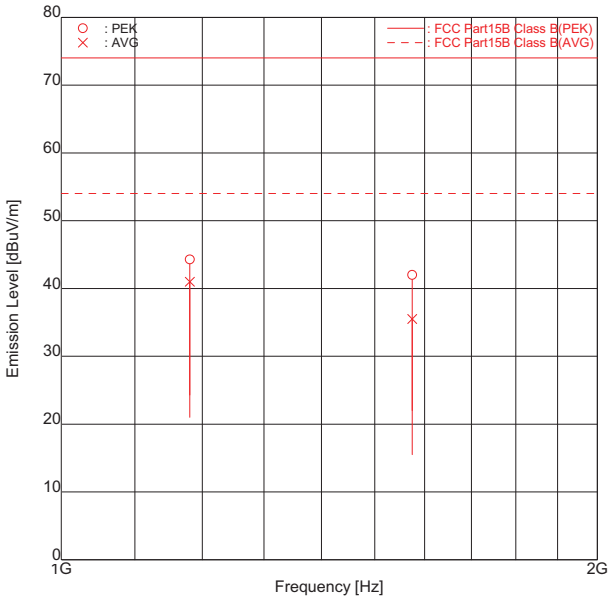
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 30 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 25.7 [degC]
HUMIDITY	: 50.0 [%]
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	1180.90	PEK	47.2	48.5	-4.2	-4.2	43.0	44.3	74.0	31.0	29.7
2	1180.90	AVG	42.8	45.2	-4.2	-4.2	38.6	41.0	54.0	15.4	**13.0**
3	1574.37	PEK	44.7	44.7	-2.7	-2.7	42.0	42.0	74.0	32.0	32.0
4	1574.37	AVG	38.2	37.9	-2.7	-2.7	35.5	35.2	54.0	18.5	18.8

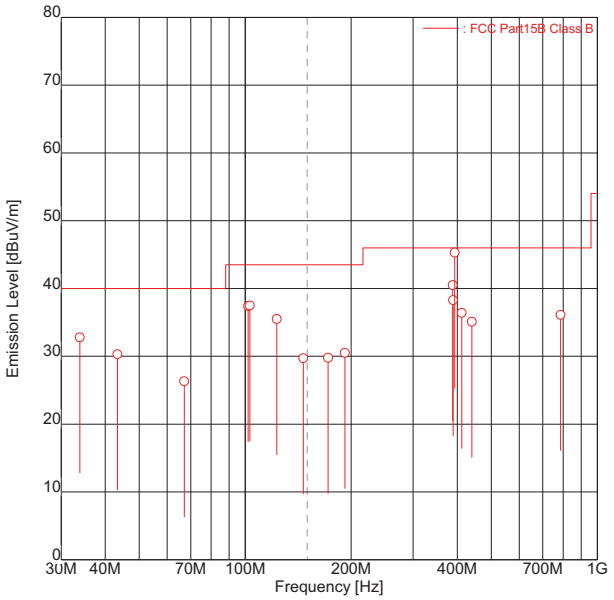
Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

9.1.2.4 RX mode(VFO Scan : ANT1)
30 – 1000 MHz

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

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(VFO Scan : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 30 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 23.1 [degC]
HUMIDITY	: 44.0 [%]
NOTE	:



ENGINEER : Koichi Wagatsuma

[No]	FREQUENCY [MHz]	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	33.88	-	35.5	-2.7	-2.7	-	32.8	40.0	-	7.2
2	43.34	31.5	32.0	-1.7	-1.7	29.8	30.3	40.0	10.2	9.7
3	67.12	28.7	28.0	-2.4	-2.4	26.3	25.6	40.0	13.7	14.4
4	101.95	35.8	42.7	-5.3	-5.3	30.5	37.4	43.5	13.0	6.1
5	103.08	37.8	42.7	-5.2	-5.2	32.6	37.5	43.5	10.9	6.0
6	122.89	38.5	35.0	-3.0	-3.0	35.5	32.0	43.5	8.0	11.5
7	146.24	-	30.7	-1.0	-1.0	-	29.7	43.5	-	13.8
8	172.03	-	31.0	-1.2	-1.2	-	29.8	43.5	-	13.7
9	191.99	-	33.1	-2.6	-2.6	-	30.5	43.5	-	13.0
10	388.80	36.5	30.7	4.0	4.0	40.5	34.7	46.0	5.5	11.3
11	389.39	33.1	34.2	4.1	4.1	37.2	38.3	46.0	8.8	7.7
12	393.60	41.1	36.6	4.2	4.2	45.3	40.8	46.0	**0.7**	5.2
13	412.38	31.7	30.3	4.7	4.7	36.4	35.0	46.0	9.6	11.0
14	440.05	29.3	29.6	5.5	5.5	34.8	35.1	46.0	11.2	10.9
15	787.19	22.2	21.4	13.9	13.9	36.1	35.3	46.0	9.9	10.7

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

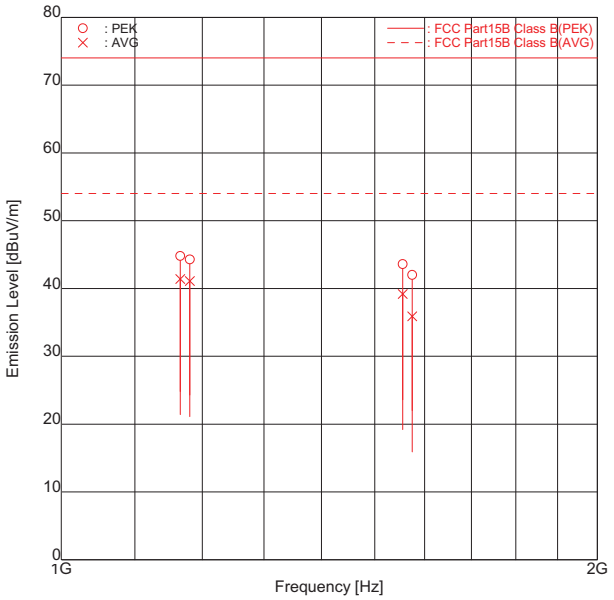
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.12 Test Site

Radiated Electric Field

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(VFO Scan : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 30 2014
FILE NO.	: -
REGULATION	: FCC Part15B Class B
TEST METHOD	: ANSI C63.4-2003
DISTANCE	: 3.00 [m]
TEMPERATURE	: 25.7 [degC]
HUMIDITY	: 50.0 [%]
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	1166.48	PEK	49.0	48.9	-4.2	-4.2	44.8	44.7	74.0	29.2	29.3
2	1166.48	AVG	45.6	45.4	-4.2	-4.2	41.4	41.2	54.0	**12.6**	12.8
3	1180.90	PEK	47.4	48.5	-4.2	-4.2	43.2	44.3	74.0	30.8	29.7
4	1180.90	AVG	43.3	45.3	-4.2	-4.2	39.1	41.1	54.0	14.9	12.9
5	1555.28	PEK	43.5	46.4	-2.8	-2.8	40.7	43.6	74.0	33.3	30.4
6	1555.28	AVG	35.2	42.0	-2.8	-2.8	32.4	39.2	54.0	21.6	14.8
7	1574.37	PEK	44.7	44.7	-2.7	-2.7	42.0	42.0	74.0	32.0	32.0
8	1574.37	AVG	38.2	38.6	-2.7	-2.7	35.5	35.9	54.0	18.5	18.1

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

9.1.3 Conducted power on antenna port

Location	Kashima No.1 Test Site
Test Engineer	Koichi Wagatsuma

Frequency Range of Measurements

Operating mode	Required Frequency Range	Measured Frequency Range
RX mode(0.030MHz : ANT1) RX mode(30MHz : ANT1) RX mode(59.999MHz : ANT1) RX mode(VFO Scan : ANT1) RX mode(0.030MHz : ANT2) RX mode(30MHz : ANT2) RX mode(59.999MHz : ANT2) RX mode(VFO Scan : ANT2) RX mode(0.030MHz : ANT RX) RX mode(30MHz : ANT RX) RX mode(59.999MHz : ANT RX) RX mode(VFO Scan : ANT RX)	30 – 2000 MHz	30 – 2000 MHz

Test Procedure

Item	Document number
Conducted power on antenna port	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 = Cable Loss - Amplifier Gain + Attenuator

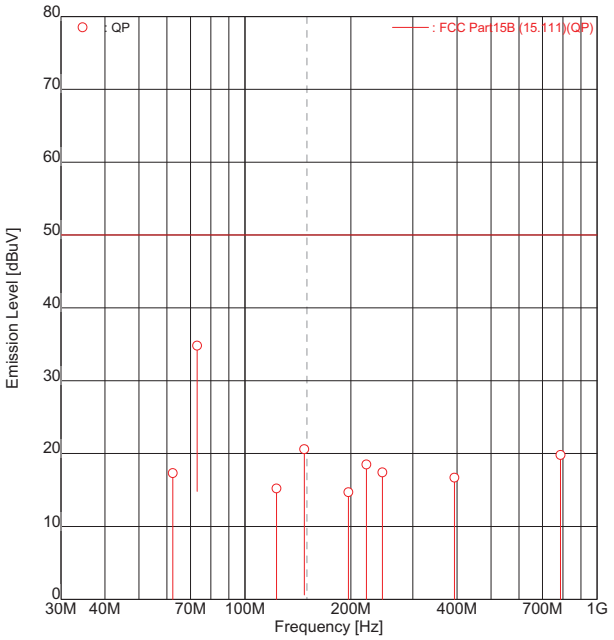
Result of Conducted power on antenna port
9.1.3.1 RX mode(0.030MHz : ANT1)
30 – 1000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3940	38.1	-20.8	17.3	50.0	32.7
2	73.1129	55.7	-20.9	34.8	50.0	**15.2**
3	122.8859	36.2	-21.0	15.2	50.0	34.8
4	147.4552	41.5	-20.9	20.6	50.0	29.4
5	196.6132	35.4	-20.7	14.7	50.0	35.3
6	221.1873	39.1	-20.6	18.5	50.0	31.5
7	245.7548	37.8	-20.4	17.4	50.0	32.6
8	393.6119	36.0	-19.3	16.7	50.0	33.3
9	787.7990	37.2	-17.4	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

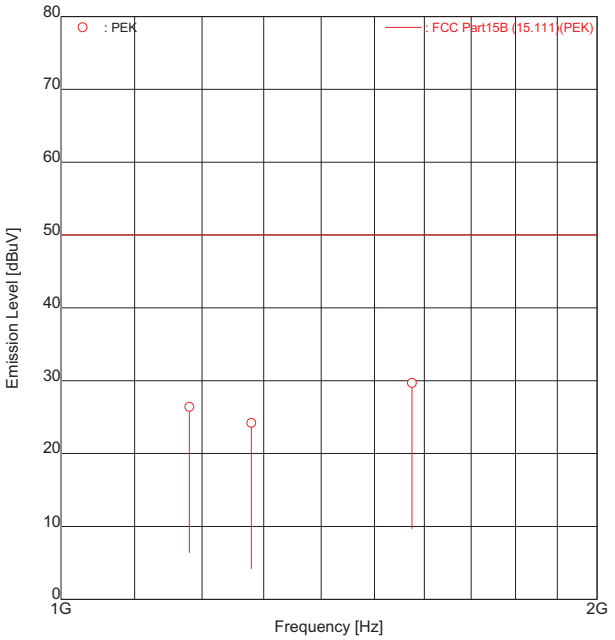
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1180.8325	55.3	-28.9	26.4	50.0	23.6
2	1279.1900	52.9	-28.7	24.2	50.0	25.8
3	1574.4125	58.0	-28.3	29.7	50.0	**20.3**

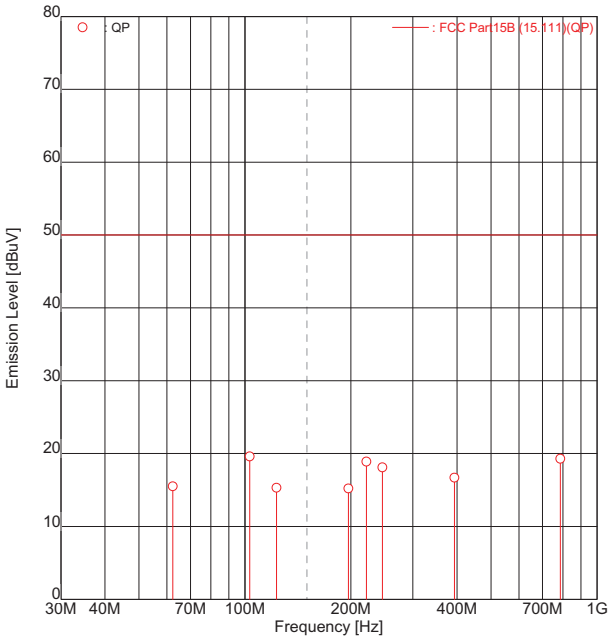
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

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

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.4000	36.3	-20.8	15.5	50.0	34.5
2	103.1024	40.6	-21.0	19.6	50.0	**30.4**
3	122.8809	36.3	-21.0	15.3	50.0	34.7
4	196.6058	35.9	-20.7	15.2	50.0	34.8
5	221.1719	39.5	-20.6	18.9	50.0	31.1
6	245.7634	38.5	-20.4	18.1	50.0	31.9
7	393.6103	36.0	-19.3	16.7	50.0	33.3
8	787.2111	36.7	-17.4	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

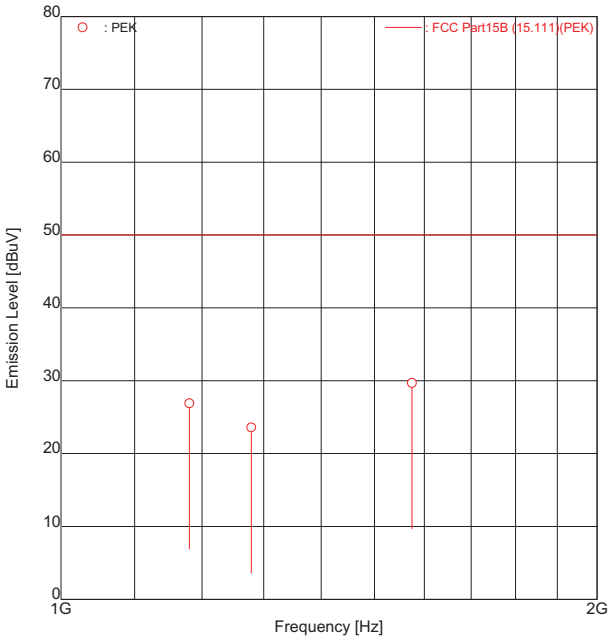
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1180.7475	55.8	-28.9	26.9	50.0	23.1
2	1279.1525	52.3	-28.7	23.6	50.0	26.4
3	1574.3750	58.0	-28.3	29.7	50.0	**20.3**

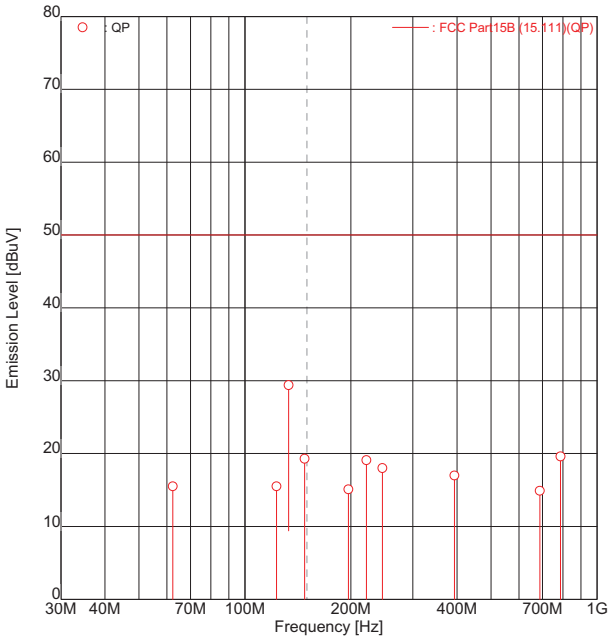
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.3 RX mode(59.999MHz : ANT1)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3997	36.3	-20.8	15.5	50.0	34.5
2	122.8811	36.5	-21.0	15.5	50.0	34.5
3	133.0971	50.3	-20.9	29.4	50.0	**20.6**
4	147.7539	40.2	-20.9	19.3	50.0	30.7
5	196.6128	35.8	-20.7	15.1	50.0	34.9
6	221.1881	39.7	-20.6	19.1	50.0	30.9
7	245.7565	38.4	-20.4	18.0	50.0	32.0
8	393.6032	36.3	-19.3	17.0	50.0	33.0
9	688.1300	32.7	-17.8	14.9	50.0	35.1
10	787.7990	37.0	-17.4	19.6	50.0	30.4

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

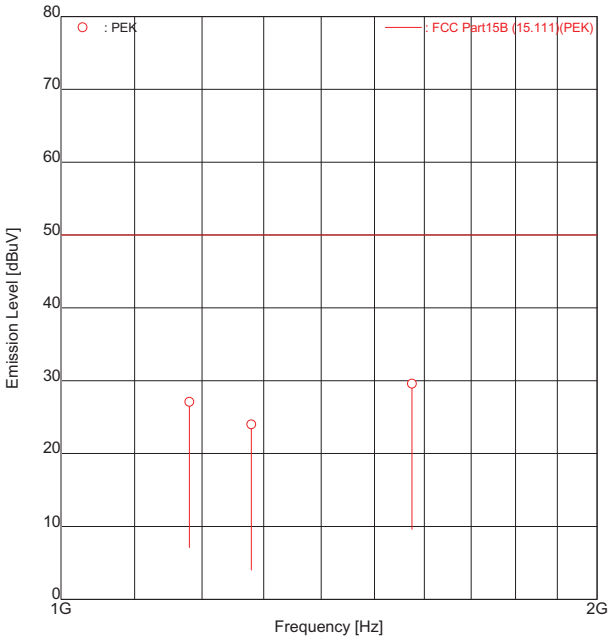
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT1)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1180.8375	56.0	-28.9	27.1	50.0	22.9
2	1279.2125	52.7	-28.7	24.0	50.0	26.0
3	1574.5125	57.9	-28.3	29.6	50.0	**20.4**

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

9.1.3.4 RX mode(VFO Scan : ANT1)
30 – 1000 MHz

< Graph number #3 >

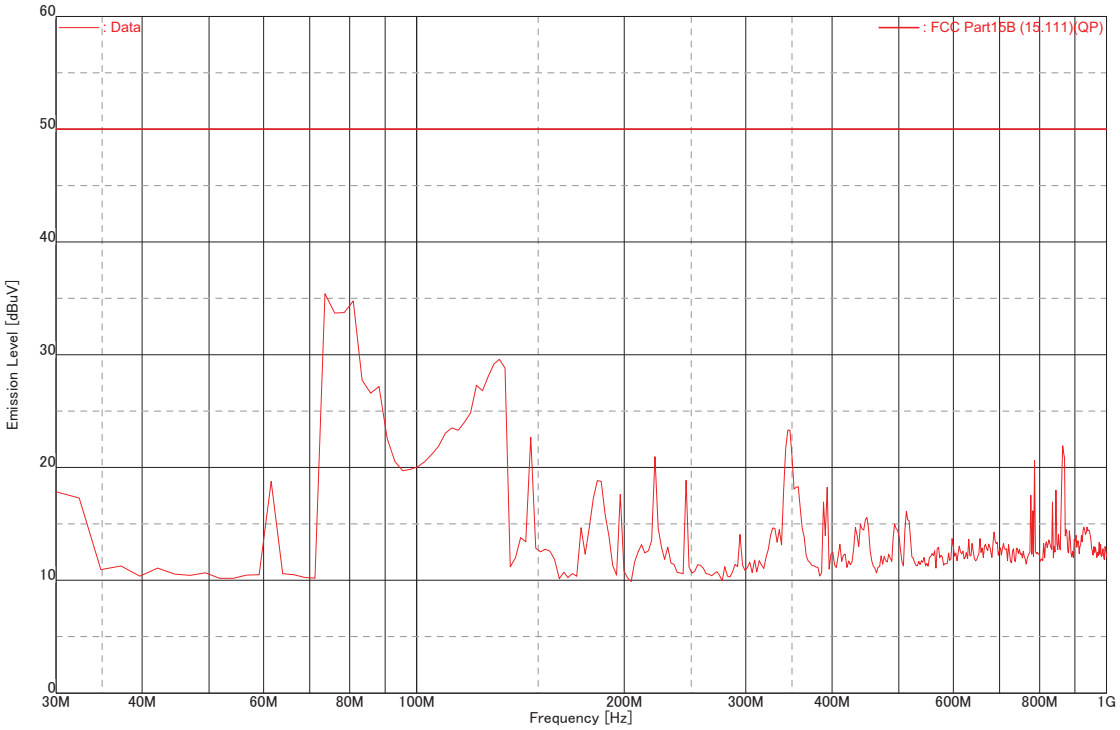
SPECTRUM ANALYSIS

Kashima No.1 Test site

23.0°C /60.0%

Date tested : Jul 23 2014
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz ALL MODE TRANSCEIVER
Model number : TS-590SG
Serial number : 0001

Test mode : RX mode(VFO SCAN : ANT1)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatuma
Note : -



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
73.4277	56.4	-20.9	35.5	50.0	14.5
74.7853	56.0	-20.9	35.1	50.0	14.9
77.2391	54.9	-20.9	34.0	50.0	16.0
80.2778	55.6	-21.0	34.6	50.0	15.4
87.0544	48.2	-21.0	27.2	50.0	22.8
122.8783	48.3	-21.0	27.3	50.0	22.7
132.3253	50.2	-21.0	29.2	50.0	20.8

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 #6 >

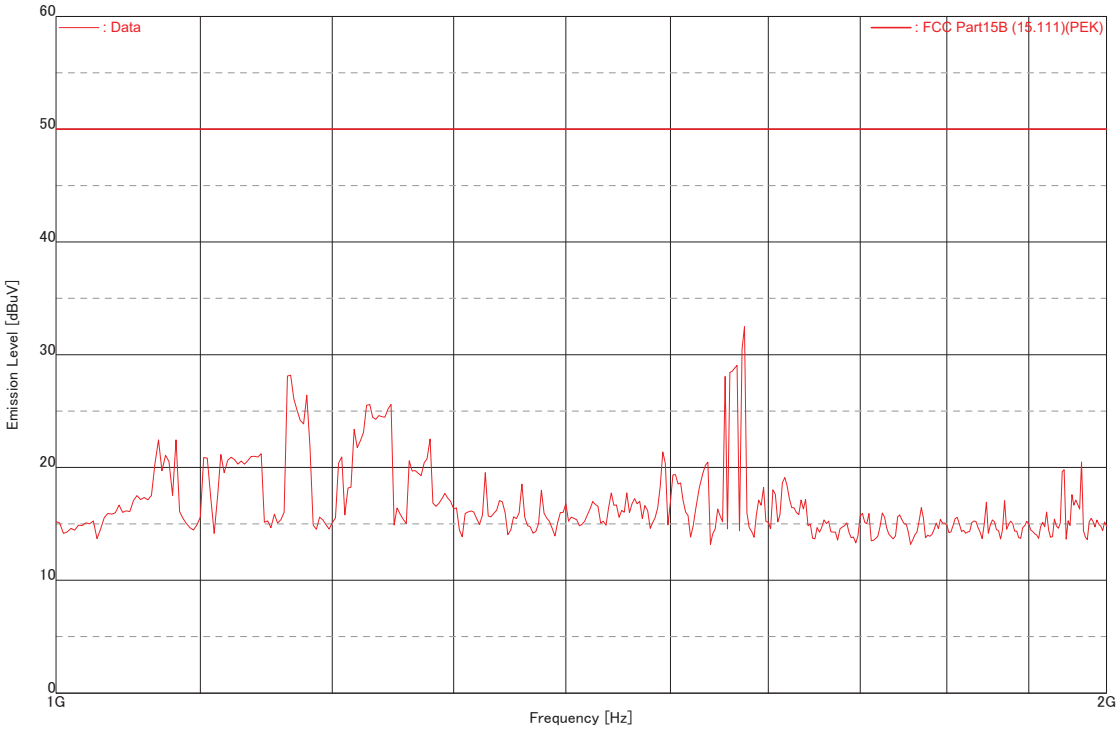
SPECTRUM ANALYSIS

Kashima No.1 Test site

23.0°C /60.0%

Date tested : Jul 24 2014
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz ALL MODE TRANSCEIVER
Model number : TS-590SG
Serial number : 0001

Test mode : RX mode(VFO SCAN : ANT1)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatuma
Note : -



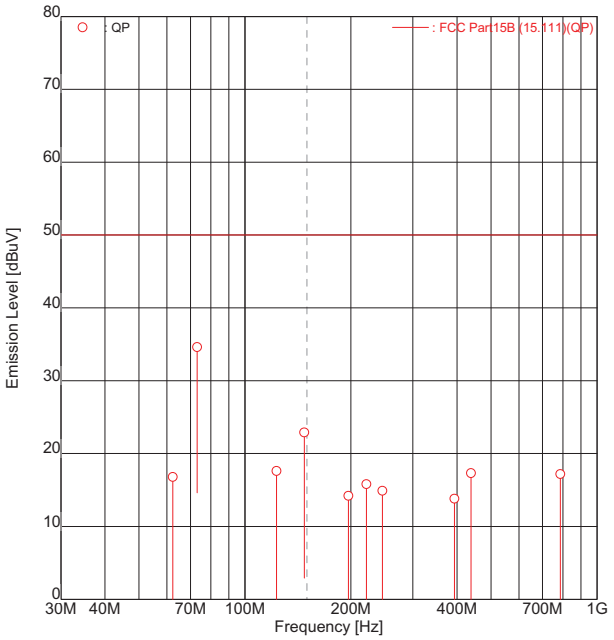
Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1166.4400	56.4	-28.9	27.5	50.0	22.5
1555.2500	56.2	-28.3	27.9	50.0	22.1
1574.2500	60.8	-28.3	32.5	50.0	17.5

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(0.030MHz : ANT2)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3814	37.6	-20.8	16.8	50.0	33.2
2	73.1180	55.5	-20.9	34.6	50.0	**15.4**
3	122.8711	38.6	-21.0	17.6	50.0	32.4
4	147.4598	43.8	-20.9	22.9	50.0	27.1
5	196.6065	34.9	-20.7	14.2	50.0	35.8
6	221.1821	36.4	-20.6	15.8	50.0	34.2
7	245.7550	35.3	-20.4	14.9	50.0	35.1
8	393.6056	33.1	-19.3	13.8	50.0	36.2
9	438.7430	36.1	-18.8	17.3	50.0	32.7
10	787.2132	34.6	-17.4	17.2	50.0	32.8

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

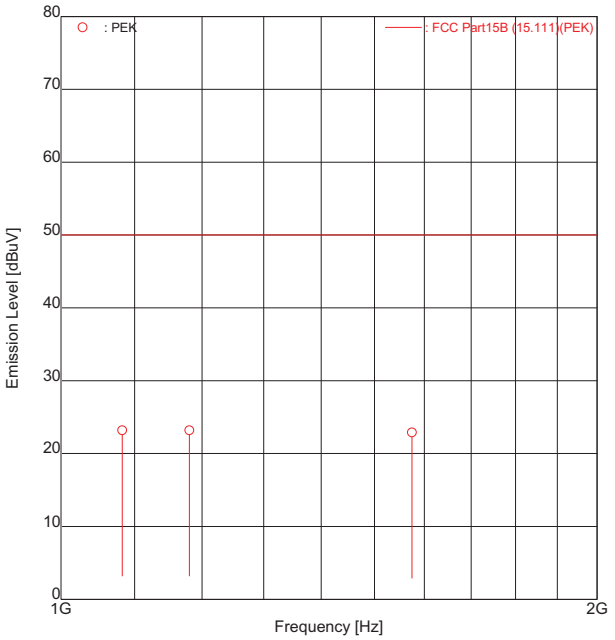
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1082.4725	52.2	-29.0	23.2	50.0	**26.8**
2	1180.8300	52.1	-28.9	23.2	50.0	26.8
3	1574.3325	51.2	-28.3	22.9	50.0	27.1

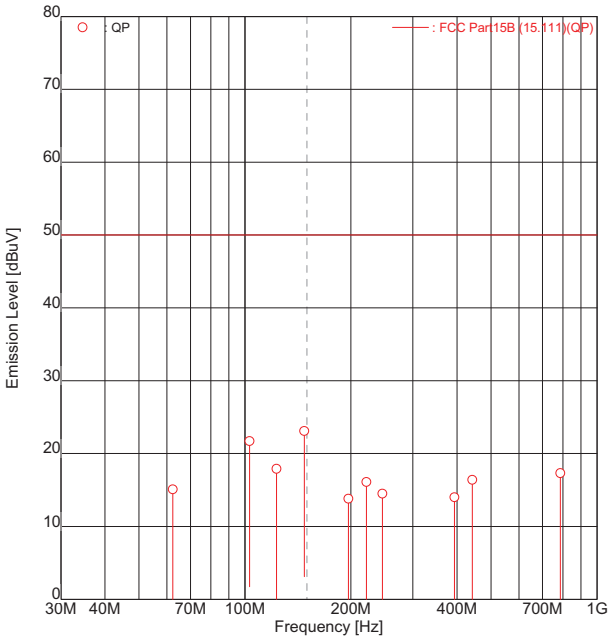
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

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

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.4000	35.9	-20.8	15.1	50.0	34.9
2	103.0907	42.7	-21.0	21.7	50.0	28.3
3	122.8810	38.9	-21.0	17.9	50.0	32.1
4	147.4446	44.0	-20.9	23.1	50.0	**26.9**
5	196.5867	34.5	-20.7	13.8	50.0	36.2
6	221.1720	36.7	-20.6	16.1	50.0	33.9
7	245.7630	34.9	-20.4	14.5	50.0	35.5
8	393.6100	33.3	-19.3	14.0	50.0	36.0
9	442.3642	35.2	-18.8	16.4	50.0	33.6
10	787.2110	34.7	-17.4	17.3	50.0	32.7

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

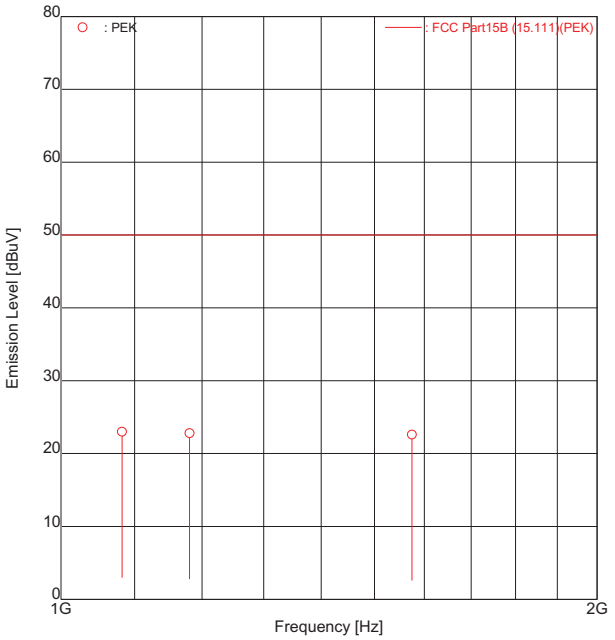
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1082.2625	52.0	-29.0	23.0	50.0	**27.0**
2	1180.8750	51.7	-28.9	22.8	50.0	27.2
3	1574.4175	50.9	-28.3	22.6	50.0	27.4

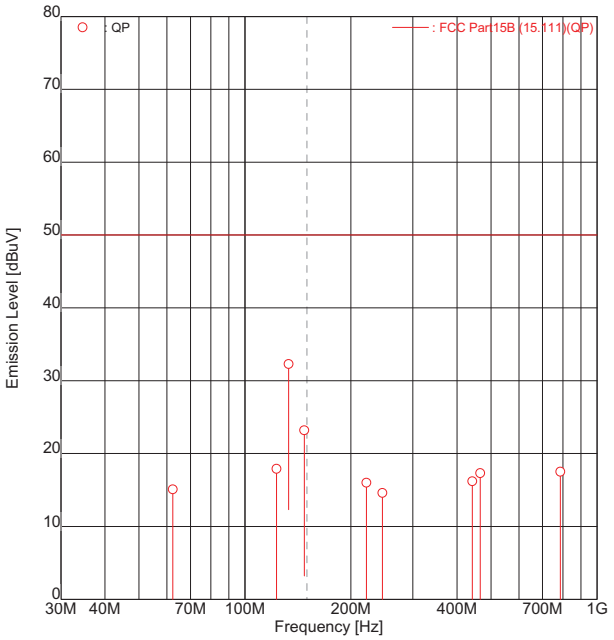
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.7 RX mode(59.999MHz : ANT2)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3962	35.9	-20.8	15.1	50.0	34.9
2	122.8810	38.9	-21.0	17.9	50.0	32.1
3	133.0970	53.2	-20.9	32.3	50.0	**17.7**
4	147.4559	44.1	-20.9	23.2	50.0	26.8
5	221.1880	36.6	-20.6	16.0	50.0	34.0
6	245.7560	35.0	-20.4	14.6	50.0	35.4
7	442.3518	35.0	-18.8	16.2	50.0	33.8
8	465.8306	35.9	-18.6	17.3	50.0	32.7
9	787.1950	34.9	-17.4	17.5	50.0	32.5

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

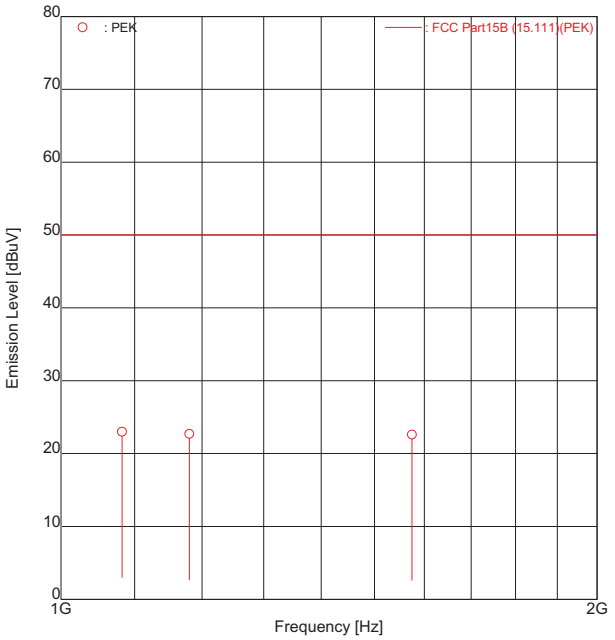
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT2)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

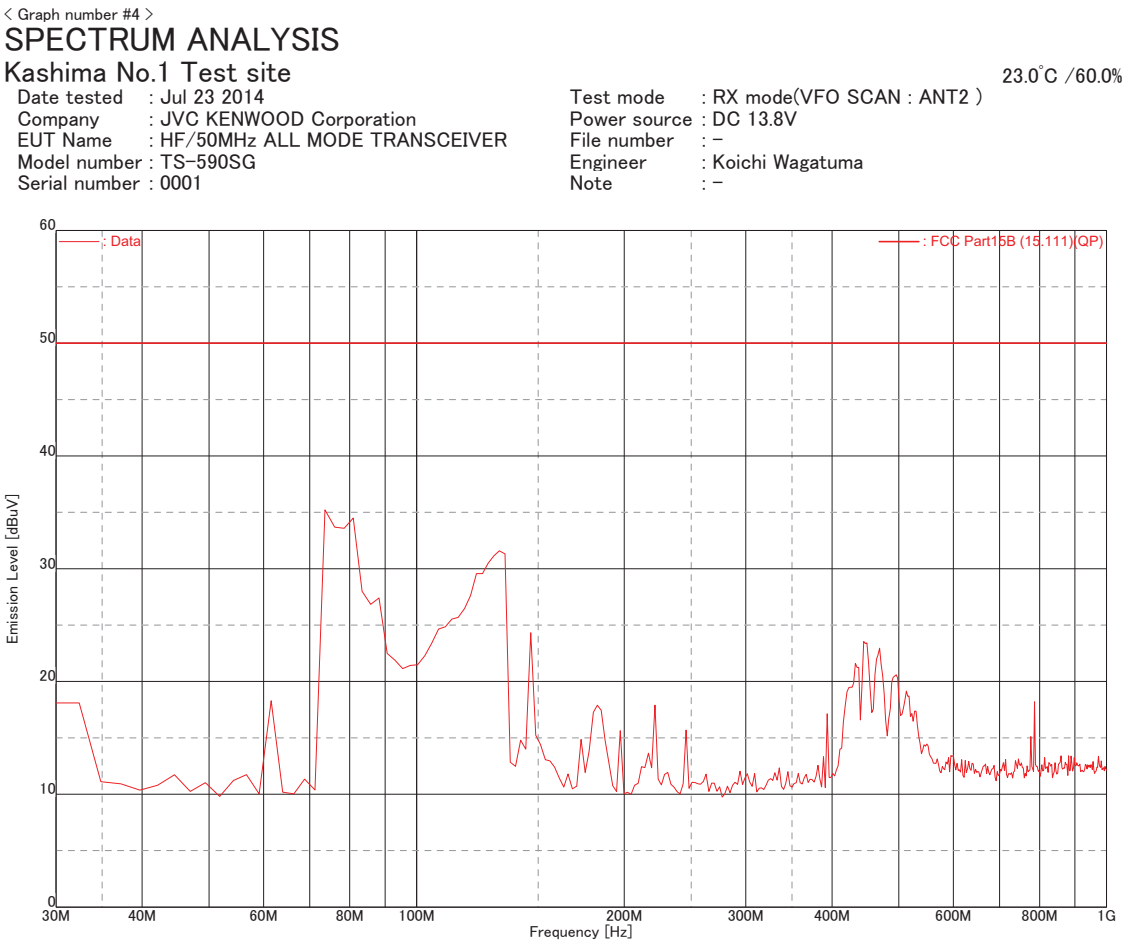
[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1082.3000	52.0	-29.0	23.0	50.0	**27.0**
2	1180.8070	51.6	-28.9	22.7	50.0	27.3
3	1574.4775	50.9	-28.3	22.6	50.0	27.4

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

9.1.3.8 RX mode(VFO Scan : ANT2)
30 – 1000 MHz

< Graph number #4 >



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
73.6217	56.0	-20.9	35.1	50.0	14.9
75.4921	51.4	-20.9	30.5	50.0	19.5
77.2304	54.8	-20.9	33.9	50.0	16.1
80.5820	55.4	-21.0	34.4	50.0	15.6
87.0172	48.5	-21.0	27.5	50.0	*22.5*
122.8772	51.5	-21.0	30.5	50.0	19.5
130.4907	53.3	-21.0	32.3	50.0	17.7
133.0874	53.5	-20.9	32.6	50.0	17.4

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 #5 >

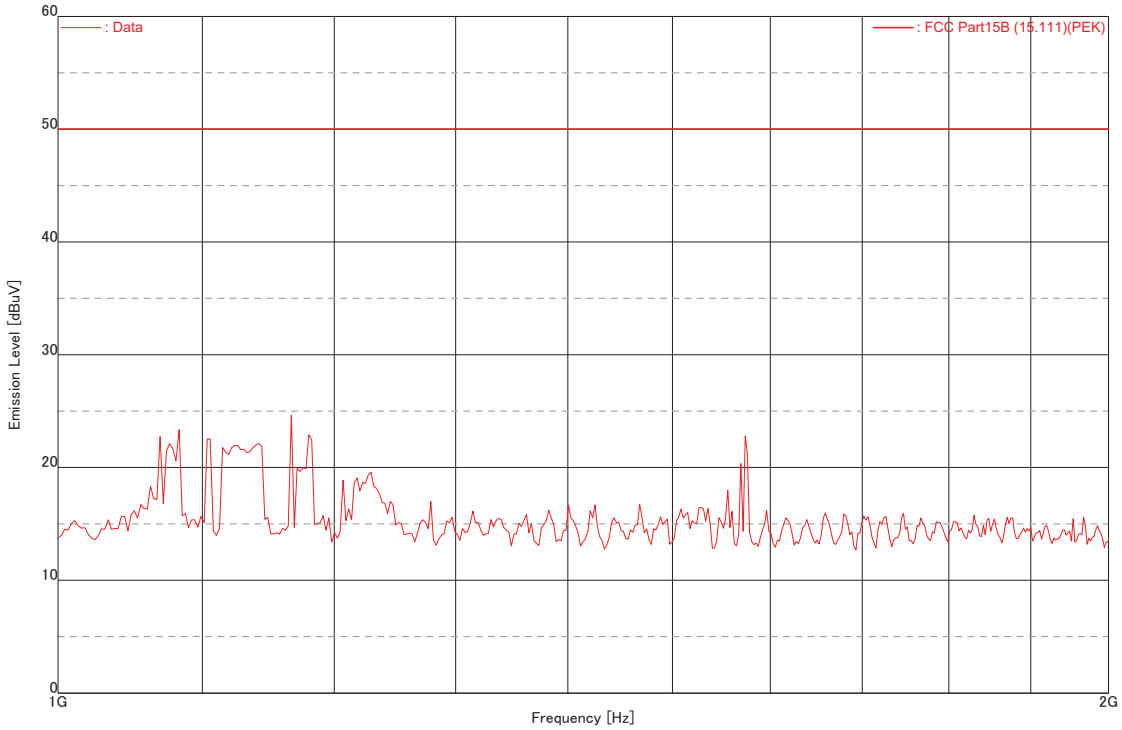
SPECTRUM ANALYSIS

Kashima No.1 Test site

23.0°C /53.0%

Date tested : Jul 23 2014
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz ALL MODE TRANSCEIVER
Model number : TS-590SG
Serial number : 0001

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



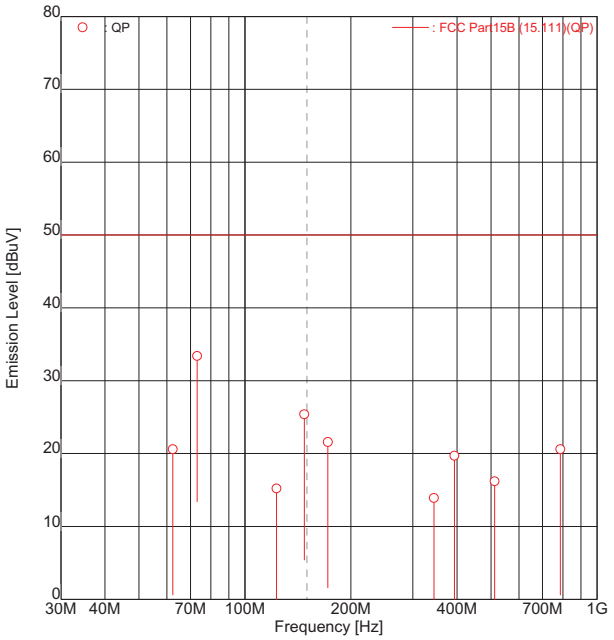
Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1082.5000	52.6	-29.0	23.6	50.0	26.4
1166.5000	54.4	-28.9	25.5	50.0	24.5
1181.0000	52.6	-28.9	23.7	50.0	26.3
1574.5000	51.8	-28.3	23.5	50.0	26.5

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(0.030MHz : ANT RX)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3814	41.4	-20.8	20.6	50.0	29.4
2	73.1180	54.3	-20.9	33.4	50.0	**16.6**
3	122.8710	36.2	-21.0	15.2	50.0	34.8
4	147.4600	46.3	-20.9	25.4	50.0	24.6
5	172.0304	42.4	-20.8	21.6	50.0	28.4
6	344.0500	33.6	-19.7	13.9	50.0	36.1
7	393.6060	39.0	-19.3	19.7	50.0	30.3
8	511.8686	34.5	-18.3	16.2	50.0	33.8
9	787.1876	38.0	-17.4	20.6	50.0	29.4

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

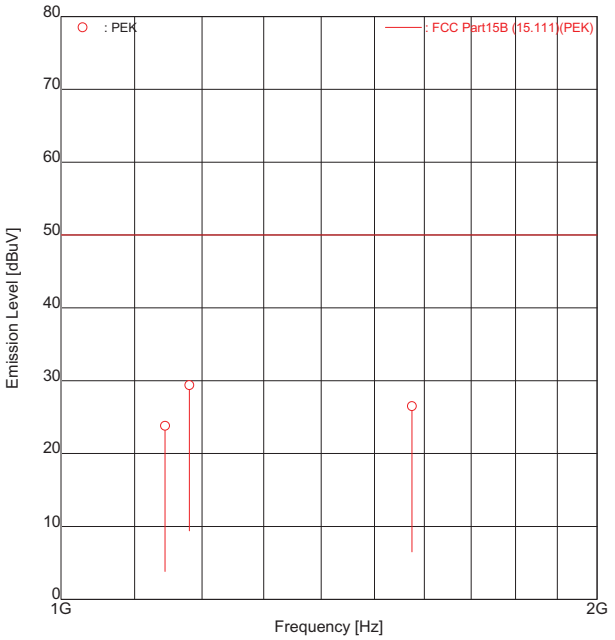
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(0.030MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1144.1875	52.7	-28.9	23.8	50.0	26.2
2	1180.7950	58.3	-28.9	29.4	50.0	**20.6**
3	1574.4775	54.8	-28.3	26.5	50.0	23.5

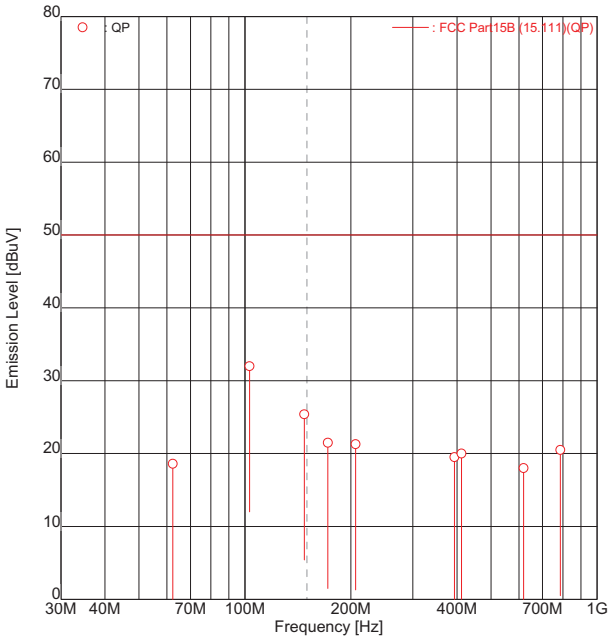
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.10 RX mode(30MHz : ANT RX)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.4000	39.4	-20.8	18.6	50.0	31.4
2	103.0910	53.0	-21.0	32.0	50.0	**18.0**
3	147.4450	46.3	-20.9	25.4	50.0	24.6
4	172.0192	42.3	-20.8	21.5	50.0	28.5
5	206.1861	41.9	-20.6	21.3	50.0	28.7
6	393.6100	38.8	-19.3	19.5	50.0	30.5
7	412.3960	39.1	-19.1	20.0	50.0	30.0
8	618.5707	36.1	-18.1	18.0	50.0	32.0
9	787.2110	37.9	-17.4	20.5	50.0	29.5

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

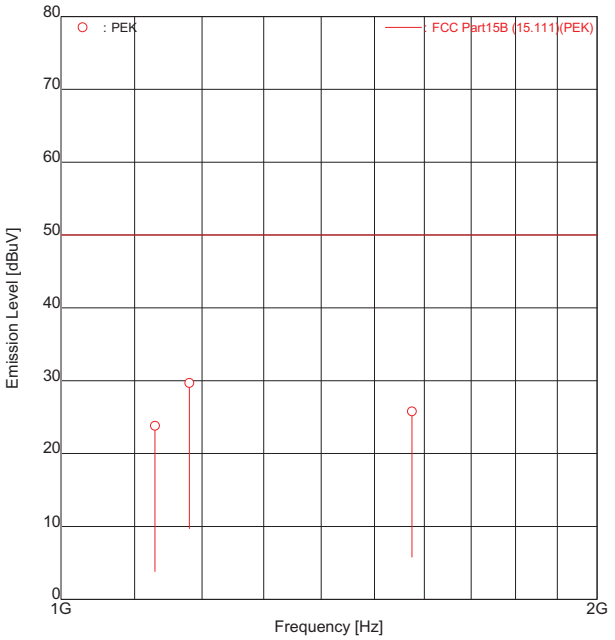
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(30MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1129.3225	52.7	-28.9	23.8	50.0	26.2
2	1180.7750	58.6	-28.9	29.7	50.0	**20.3**
3	1574.4225	54.1	-28.3	25.8	50.0	24.2

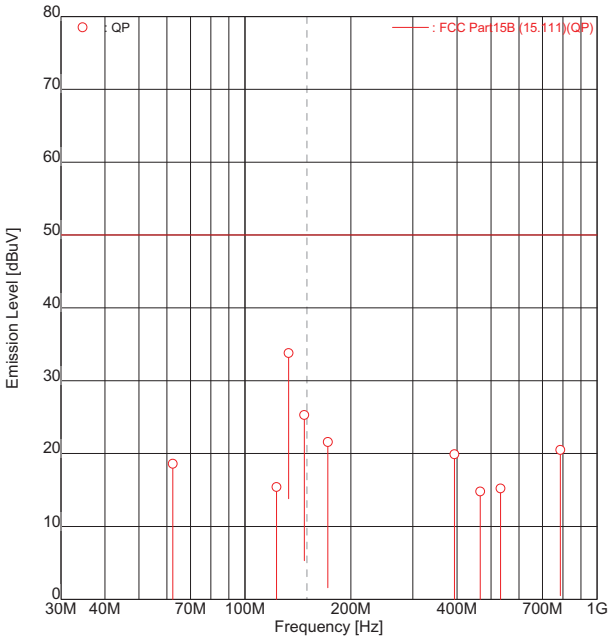
Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Pad, Cable, Preamp)
Limit : 2nW = 50dBuV(50ohm impedance)

emiT 3, 0, 0, 0

9.1.3.11 RX mode(59.999MHz : ANT RX)
30 – 1000 MHz

Intertek Japan K.K.
Kashima No.1 Test site
Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 16 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 24.6 [degC]
HUMIDITY	: 60.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	62.3962	39.4	-20.8	18.6	50.0	31.4
2	122.8817	36.4	-21.0	15.4	50.0	34.6
3	133.0951	54.7	-20.9	33.8	50.0	**16.2**
4	147.4431	46.2	-20.9	25.3	50.0	24.7
5	172.0344	42.4	-20.8	21.6	50.0	28.4
6	393.5983	39.2	-19.3	19.9	50.0	30.1
7	465.8437	33.4	-18.6	14.8	50.0	35.2
8	532.3729	33.4	-18.2	15.2	50.0	34.8
9	787.2052	37.9	-17.4	20.5	50.0	29.5

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

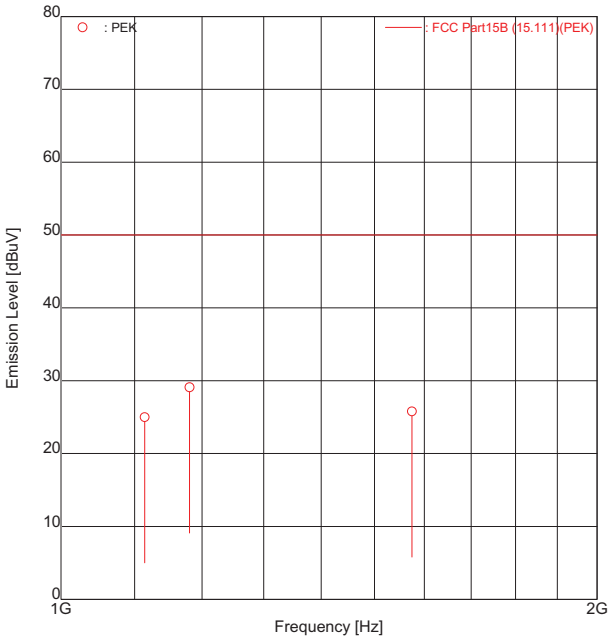
1000 – 2000 MHz

Intertek Japan K.K.

Kashima No.1 Test site

Conducted Power on Antenna Port

APPLICANT	: JVC KENWOOD Corporation
EUT NAME	: HF/50MHz ALL MODE TRANSCEIVER
MODEL NO.	: TS-590SG
SERIAL NO.	: 0001
TEST MODE	: RX mode(59.999MHz : ANT RX)
POWER SOURCE	: DC 13.8V
DATE TESTED	: Jul 23 2014
FILE NO.	: -
REGULATION	: FCC Part15B (15.111)
TEST METHOD	: ANSI C63.4-2003
TEMPERATURE	: 23.0 [degC]
HUMIDITY	: 53.0 [%]
NOTE	: -



ENGINEER : Koichi Wagatuma

[No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1114.3500	53.9	-28.9	25.0	50.0	25.0
2	1180.8750	58.0	-28.9	29.1	50.0	**20.9**
3	1574.3470	54.1	-28.3	25.8	50.0	24.2

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

9.1.3.12 RX mode(VFO Scan : ANT RX)
30 – 1000 MHz

< Graph number #2 >

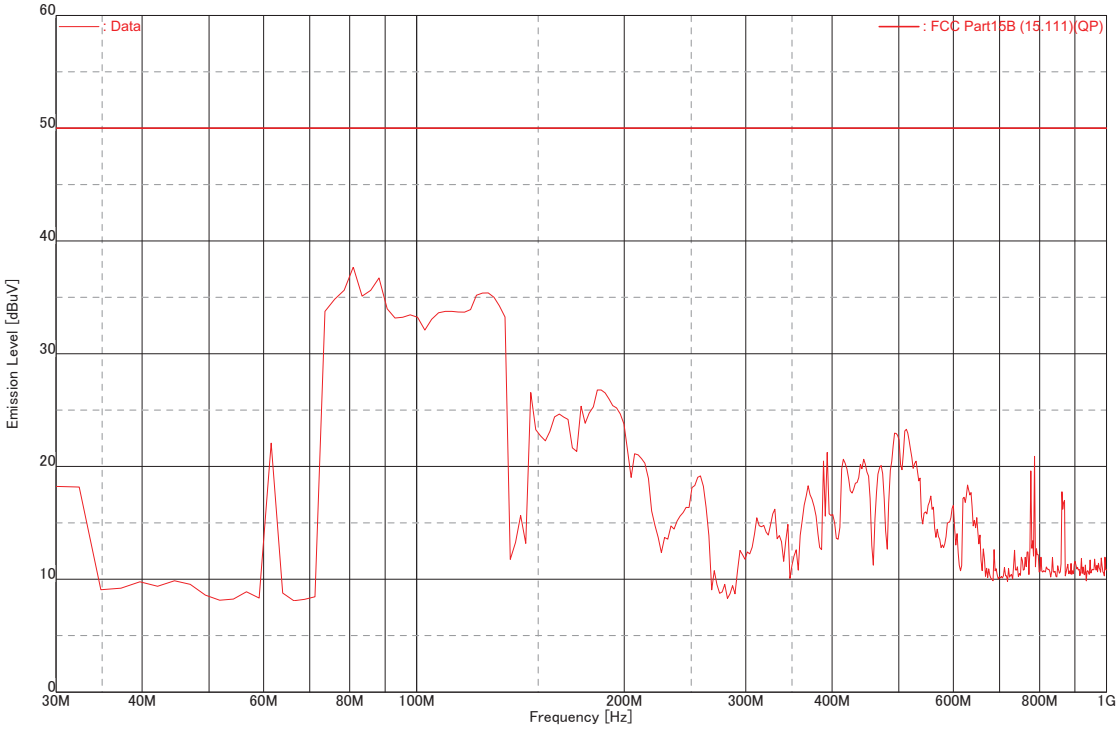
SPECTRUM ANALYSIS

Kashima No.1 Test site

24.6°C /60.0%

Date tested : Jul 16 2014
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz ALL MODE TRANSCEIVER
Model number : TS-590SG
Serial number : 0001

Test mode : RX mode(VFO SCAN : ANT RX)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatuma
Note : -



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
73.1085	54.0	-20.9	33.1	50.0	16.9
80.5885	58.9	-21.0	37.9	50.0	12.1
87.0845	57.6	-21.0	36.6	50.0	13.4
122.8743	56.6	-21.0	35.6	50.0	14.4
133.0881	54.7	-20.9	33.8	50.0	16.2
147.4410	50.4	-20.9	29.5	50.0	20.5
184.4584	47.4	-20.8	26.6	50.0	23.4

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 #9 >

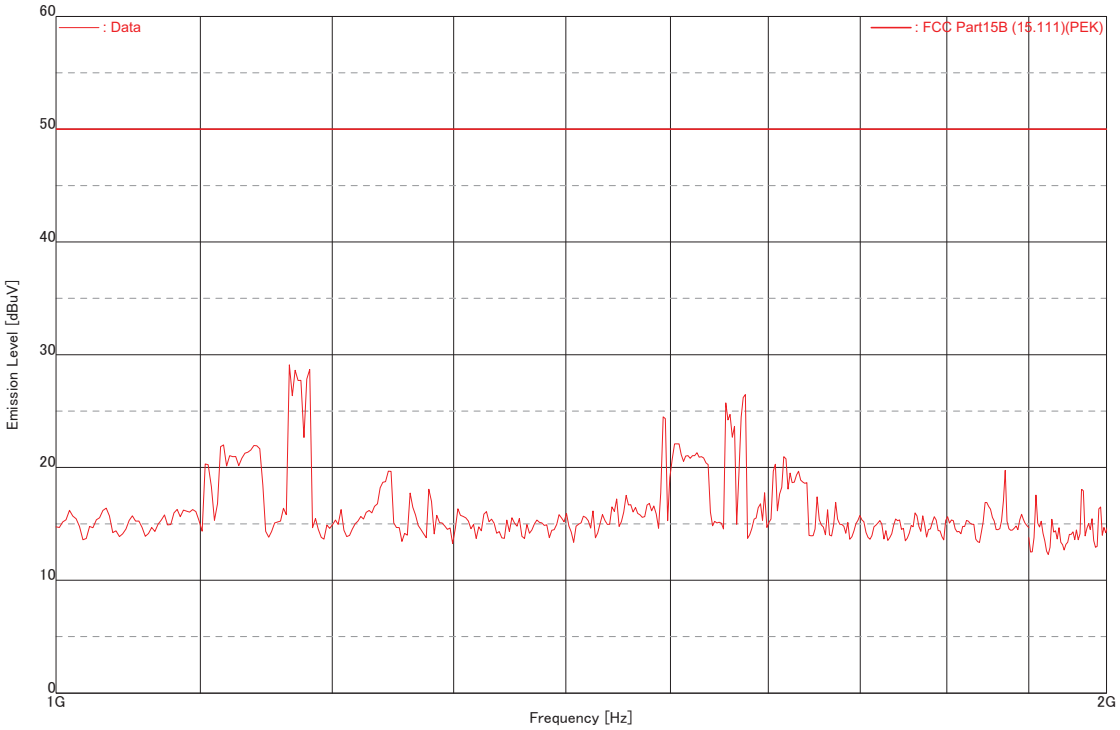
SPECTRUM ANALYSIS

Kashima No.1 Test site

23.0°C /60.0%

Date tested : Jul 24 2014
Company : JVC KENWOOD Corporation
EUT Name : HF/50MHz ALL MODE TRANSCEIVER
Model number : TS-590SG
Serial number : 0001

Test mode : RX mode(VFO SCAN : ANT RX)
Power source : DC 13.8V
File number : -
Engineer : Koichi Wagatuma
Note : -



Frequency [MHz]	Reading [dBuV]	Factor [dB]	Emission [dBuV]	Limit [dBuV]	Margin [dB]
1166.3850	58.4	-28.9	29.5	50.0	20.5
1180.8300	57.5	-28.9	28.6	50.0	21.4
1574.8500	55.3	-28.3	27.0	50.0	23.0

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.1 Test Site
Test Engineer	Koichi Wagatsuma
Date Tested	From July 14, 2014 to July 15, 2014
Temperature Variation	24.4 – 24.8 [degC]
Humidity Variation	51 - 59 [%]

Test Procedure

Item	Document number
38dB Rejection test	RJP-TE102

9.2.1 Result of 38dB Rejection

9.2.1.1 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 = 9.0dBuV (the worst case sensitivity)

9.2.1.2 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 = 9.0dBuV (the worst case sensitivity)

9.2.1.3 VFO SCAN mode (Ant.RX)

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 = 9.0dBuV (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.

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, 2014
LISN(Peripheral)	KNW-242	8-851-21	Kyoritsu	1 Y	May.31, 2015
10dB LISN Pad	CFA-01	KSR00240	TAMAGAWA	1 Y	Nov.30, 2014
10dB LISN Pad	CFA-01	KSR00255	TAMAGAWA	1 Y	May.31, 2015
50ohm Termination	CT-01	KSR00138	TAMAGAWA	1 Y	May.31, 2015
Coaxial Cable	RG-5A/U (14.0m)	R2	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	10D-2W(7.0m)	R4	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	RG-5A/U(4.0m)	R6	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	5D-2W(0.6m)	R7	MIYAZAKI	1 Y	Jan.31 2015
Coaxial Cable	5D-2W(1.2m)	R10	FUJIKURA	1 Y	Jan.31 2015
Radiated disturbance					
Antenna	Tri-Log VULB9168	126	Schwarzbeck	1 Y	Nov.31 2014
Amplifier	ZX60-3018G	005	Intertek Japan	1 Y	Jan.31 2015
6dB Attenuator	CFA-01	A00040805	TAMAGAWA	1 Y	Jan.31 2015
Coaxial Cable	5D-2W(14.0m)	R11	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	10D-2W(7.0m)	R3	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	RG-5A/U(4.0m)	R5	FUJIKURA	1 Y	Jan.31 2015
Coaxial Cable	5D-2W(0.6m)	R7	MIYAZAKI	1 Y	Jan.31 2015
Coaxial Cable	5D-2W(1.2m)	R10	FUJIKURA	1 Y	Jan.31 2015
Spectrum Analyzer	N9000A	MY51206520	Agilent	1 Y	Mar.31, 2015
Double Ridged Antenna	3115	5045	EMCO	1 Y	Mar.31, 2015
3dB Attenuator	6803.17.B	5111	HUBER + SUHNER	1 Y	Feb.28, 2015
Amplifier	TPA0118-30	0402	TOYO	1 Y	Feb.28, 2015
Coaxial Cable (R13)	SUCOFLEX 104	229603	SUHNER	1 Y	Feb.28, 2015
Coaxial Cable (R12)	5B-048-98-98-5000	111130	Candox	1 Y	Feb.28, 2015
Site Attenuation				1 Y	Feb.28, 2015
Common					
Test receiver	ESS (Firmware Version 1.07)	847151/012	Rohde & Schwarz	1 Y	Mar.31, 2015
RF Switch	ACX-150-1	A12301501	Intertek Japan	1 Y	Jan.31 2015
Testing Software	emiT (Version 3,0,0,0)				

Conducted power on antenna port					
10dB Attenuator	CFA-05-NPJ-10	262856	TME	1 Y	Nov 30, 2014
Coaxial Cable (Ant1)	5D-2W	KSR00312	Fujikura	1 Y	Jun 30, 2015
Coaxial Cable (Ant2)	SUCOFLEX104	142854/4	SUHNER	1 Y	Jun 30, 2015
Amplifier	ZFL-1200GH+L	20130705-2	Intertek	1 Y	Jul.31, 2015
3dB Attenuator	6803.17.B	5111	HUBER + SUHNER	1 Y	Feb.28, 2015
Coaxial Cable (AntG1)	5B-048-98-98-5000	111130	Candox	1 Y	Feb.28, 2015
Amplifier	TPA0118-30	0402	TOYO	1 Y	Feb.28, 2015
Spectrum Analyzer	N9030A (Rev.A,08,54)	US51350220	Agilent	1 Y	Jul.31, 2015
Test receiver	ESS (Firmware Version 1.07)	847151/012	Rohde & Schwarz	1 Y	Mar.31, 2015
Testing Software	emiT (Version 3,0,0,0)				
38dB Rejection test					
Signal Generator	SMB100A	105709	Rohde & Schwarz	1 Y	Feb.28, 2015
Audio Analyzer	8903B	2818A04372	Hewlett Packard	1 Y	May 31, 2015
Coaxial Cable	SUCOFLEX 104(1.5m)	306309/4	SUHNER	1 Y	May 31, 2015

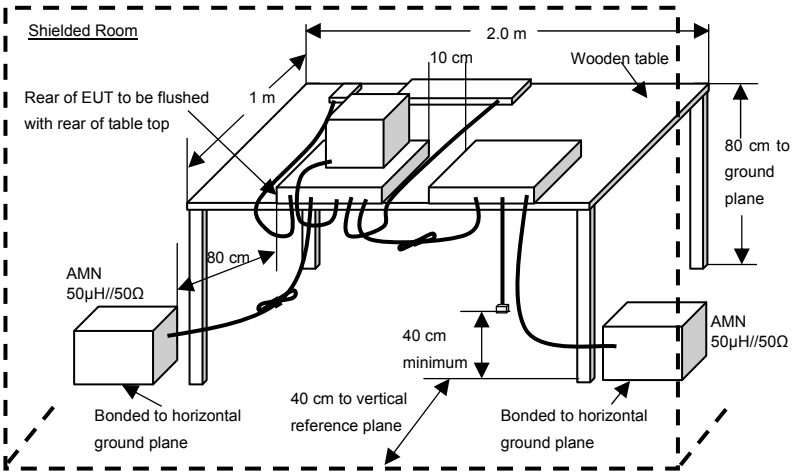
ANNEX

A. TEST PROCEDURE(S)

Test was carried out under the following conditions.

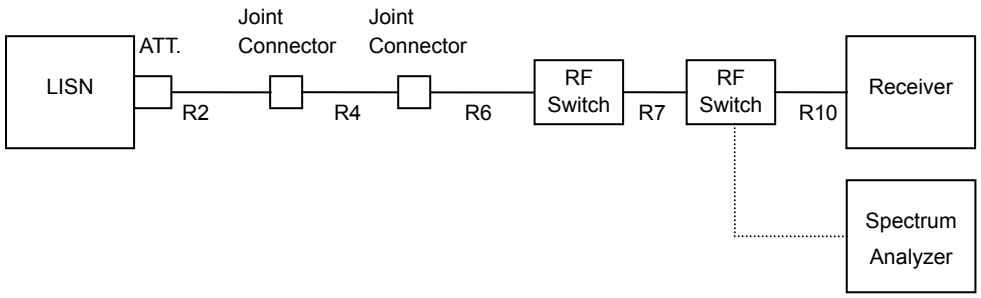
Conducted disturbance at mains terminals

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

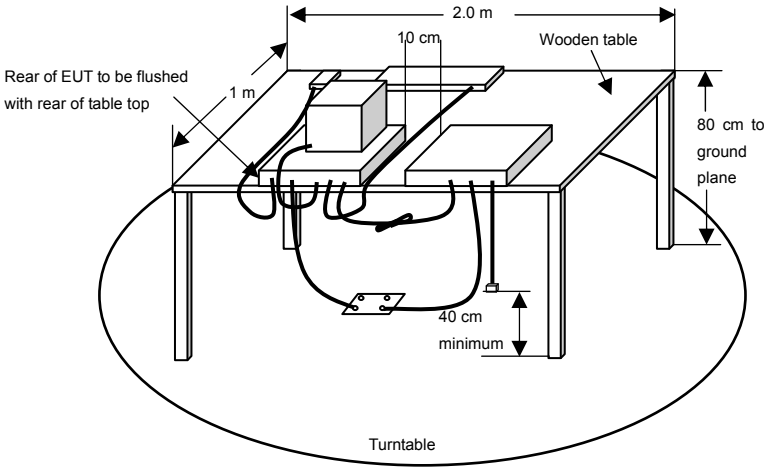
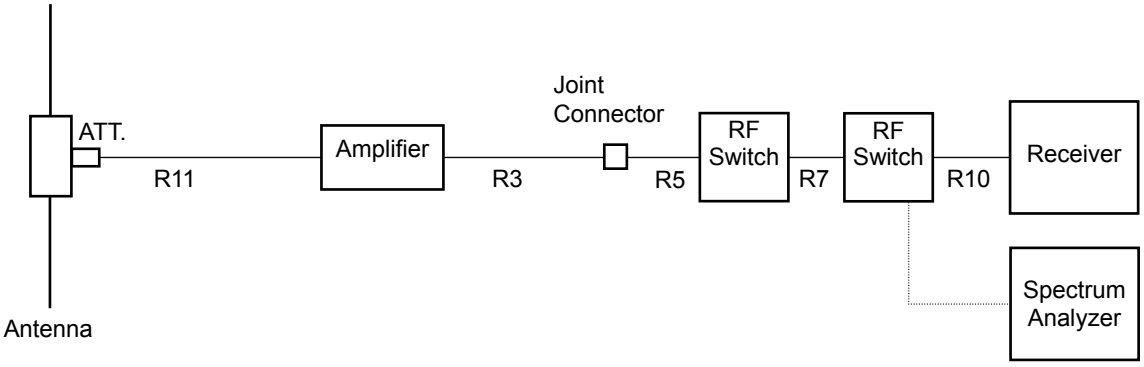
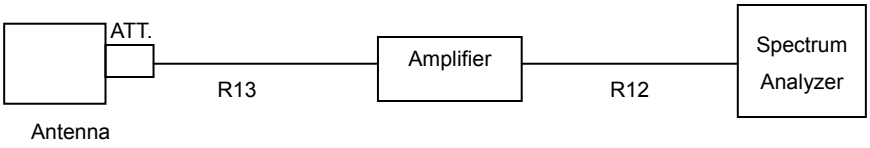


Diagram of the measuring instruments (30-1000MHz)



Above 1GHz

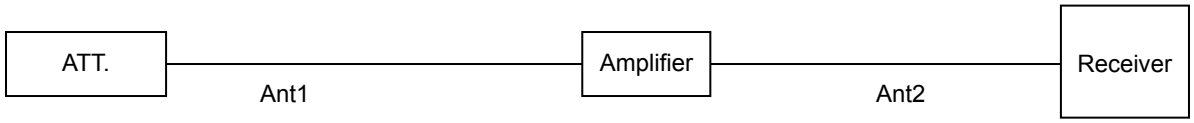


[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree,
And find the worst emission conditions in configuration, operating mode, or ambient noise notation.

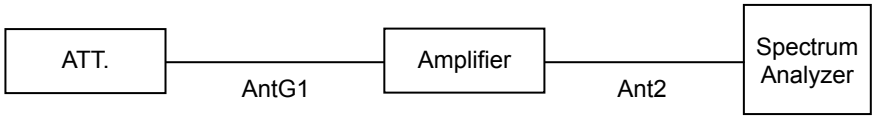
[Final Measurement]
The EUT operated in the worst emission condition found by the preliminary test.
The turntable azimuth (EUT direction) and antenna height are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.
The equipment and cables are arranged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

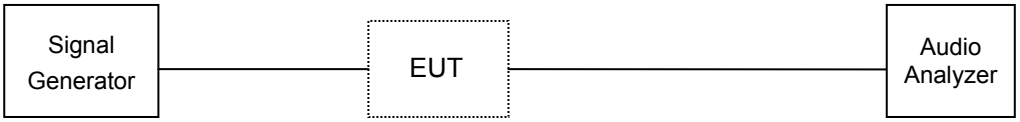


[Preliminary Measurement]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the 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 Section15.121(b) of the Rule.

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