FCC PART 15 CLASS B

EMI MEASUREMENT AND TEST REPORT

For

JUSTLISTEN TECHNOLOGY LIMITED

2, Independence Square, Valletta VLT 1520, Malta

FCC ID:ZF4WS823R

April 12, 2011

This Report Concerns: Original Report	Equipment Type： Wireless Guide Receiver
Test Engineer:	Jack Liu
Report No.:	BST11030416Y-1ER-3
Receive EUT Date/Test Date:	April 1, 2011/ April 1, 2011-April 11, 2011
Reviewed By:	Christina
Prepared By:	**Shenzhen BST Technology Co.,Ltd.** 3F,Weames Technology Building, No. 10 Kefa Road,Science Park, Nanshan District,Shenzhen,Guangdong,China Tel: 0755-26747751～3 Fax: 0755-26747751～3 ext.826

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1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

Test Facility -
The test site used to collect the radiated data is located on the address of
emitel (Shenzhen) Limited
(FCC Registered Test Site Number: 746887) on
Building 2, 171 Meihua Road, Futian District, Shenzhen, 518049 China
The Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

Available upon request.

2. PRODUCT DESCRIPTION

2.1. EUT Description

Description	:	Wireless Guide Receiver
Applicant	:	JUSTLISTEN TECHNOLOGY LIMITED 2, Independence Square, Valletta VLT 1520, Malta
Manufacturer	:	Shenzhen Freetalker Industry Co., Ltd. 3rd Floor, 6th level standard workshop, NO.10 North of Linyuan East Rd, Futian, Shenzhen, China
Model Number	:	WS823R
Trademark	:	Whisper

Additonal Information

Power Supply : 4.2V DC

2.2. Block Diagram of EUT Configuration

EUT

2.3. Support Equipment List

Name	Model No	S/N	Manufacturer	Used "√"
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2.4. Test Conditions

Temperature: 23~25℃

Relative Humidity: 50~63 %

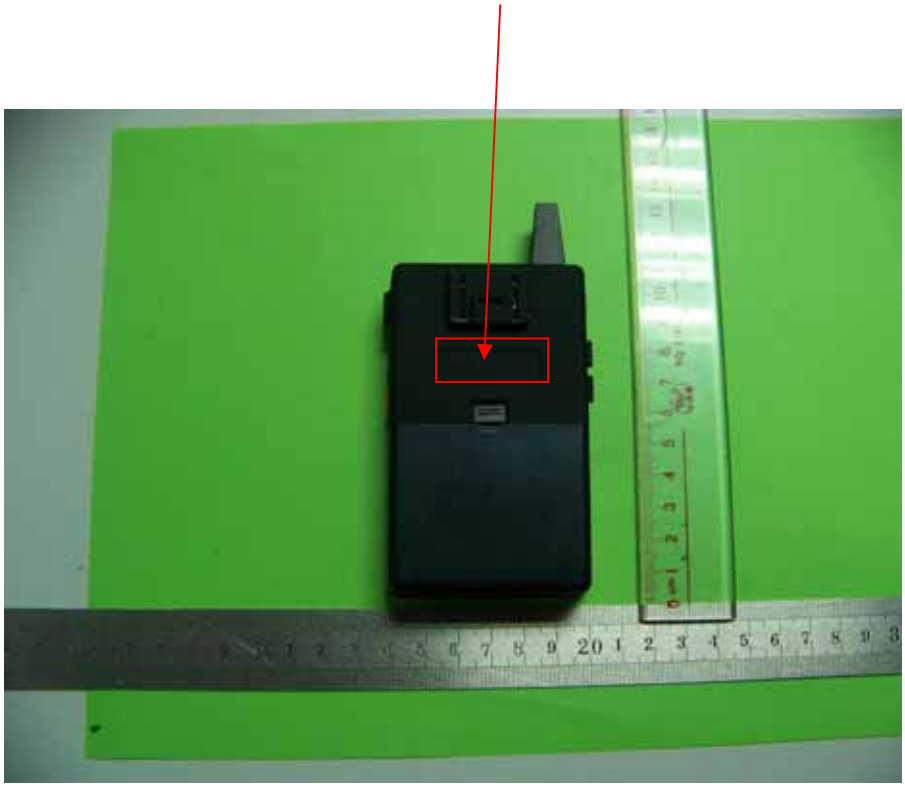
3. FCC ID LABEL

FCC ID: ZF4WS823R

This device complies with Part 15 of the FCC Rules.Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received,including interference that may cause undesired operation.

Label Location on EUT

EUT Bottom View/ FCC ID Label Location



4. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	Pass
Radiated disturbance	Pass

Remark: “N/A” means “Not applicable.”

Modifications

No modification was made.

5. TEST EQUIPMENT USED

5.1. For Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Jun. 01, 10	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Jun. 01, 10	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Jun. 01, 10	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Jun. 01.10	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6100214550	Jun. 01, 10	1 Year

5.2. For Radiated Emission Measurement

Anechoic Chamber

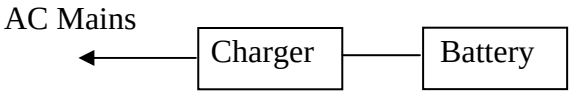
Z

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Jun 01,10	1 Year
2.	Test Receiver	Rohde&Schwarz	ESC830	828982/018	Jun 01,10	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Jun 01,10	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Jun 01,10	1 Year
5.	Cable	Schwarzbeck	AK9513	ACRX1	Jun 01,10	1 Year
6.	Cable	Rosenberger	N/A	FR2RX2	Jun 01,10	1 Year
7.	Cable	Schwarzbeck	AK9513	CRRX2	Jun 01,10	1 Year
8.	Cable	Schwarzbeck	AK9513	CRRX2	Jun 01,10	1 Year
9.	Single Phase Power Line Filter	MPE	23332C	N/A	Jun 01,10	1 Year
10.	Single Phase Power Line Filter	MPE	23333C	N/A	Jun 01,10	1 Year
11.	Signal Generator	HP	864A	3625U00573	Jun 01,10	1 Year

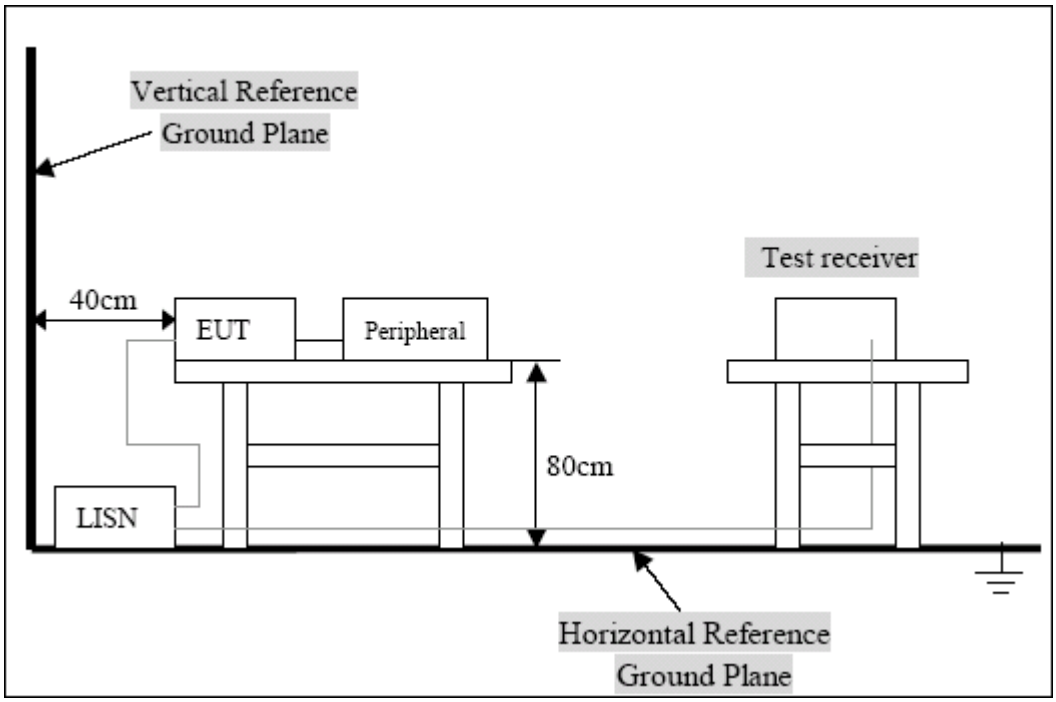
6. CONDUCTED EMISSION TEST

6.1. Block Diagram of Test Setup

6.1.1.Block Diagram of connection between the EUT and the simulators



6.1.2.Test Setup Diagram



6.2. Test Standard

FCC Part 15 CLASS B

6.3. Conducted Emission Limit(Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

6.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC Part 15 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

6.5. Operating Condition of EUT

6.5.1.Setup the EUT and simulators as shown in Section 6.1.

6.5.2.Turn on the power of all equipments.

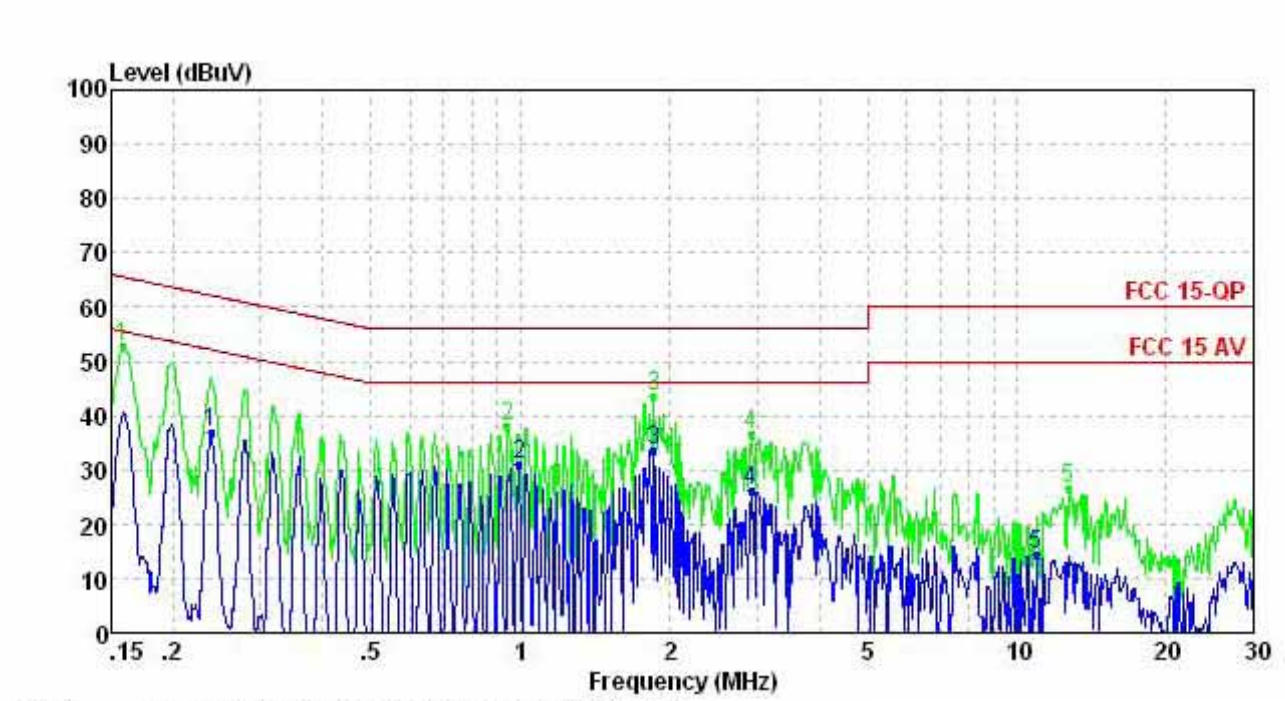
6.5.3.Let the EUT work in test mode (RX) and test it.

6.6. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

6.7. Test Result

Pass.

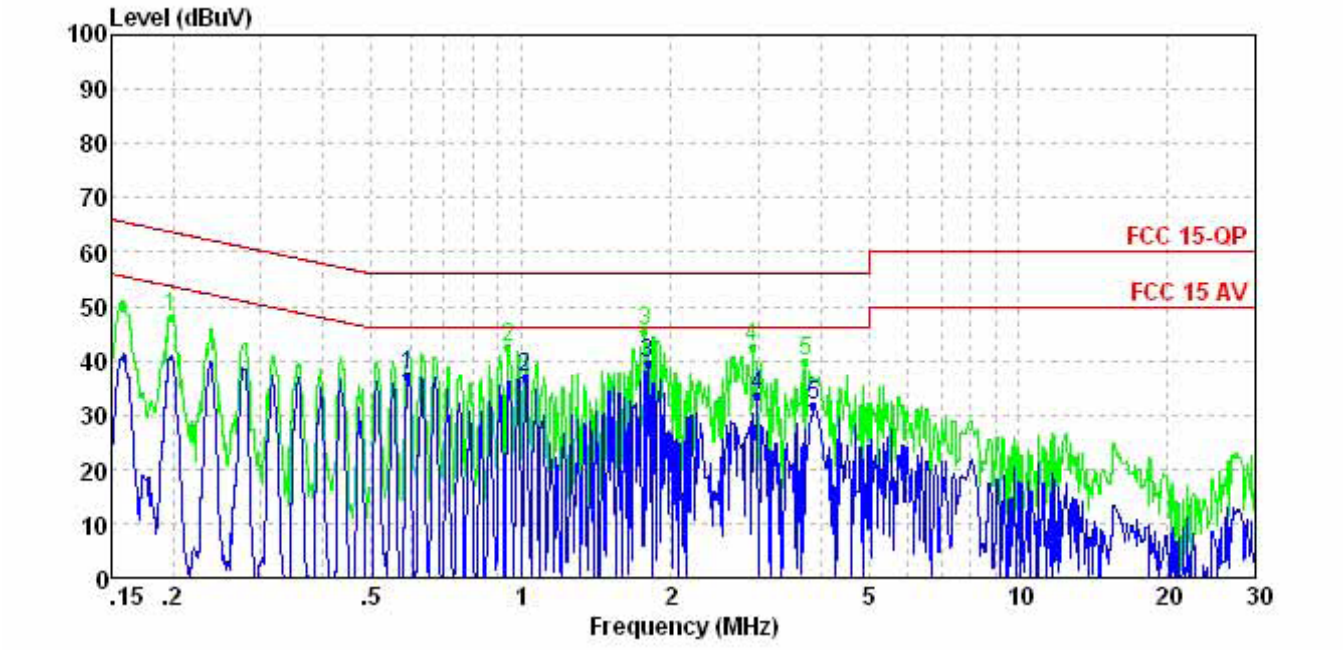


Condition:
: RBW:9.000KHz VBW:30.000KHz

	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dBuV	dB		
1	0.24	36.98	52.17	-15.19	Average	LINE
2	0.99	30.97	46.00	-15.03	Average	LINE
3 Max	1.86	33.72	46.00	-12.28	Average	LINE
4	2.92	26.05	46.00	-19.95	Average	LINE
5	10.96	14.52	50.00	-35.48	Average	LINE

Condition:
: RBW:9.000KHz VBW:30.000KHz

	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dBuV	dB		
1	0.16	52.80	65.56	-12.76	Peak	LINE
2	0.94	37.90	56.00	-18.10	Peak	LINE
3 Max	1.86	43.68	56.00	-12.32	Peak	LINE
4	2.92	36.71	56.00	-19.29	Peak	LINE
5	12.72	26.43	60.00	-33.57	Peak	LINE



Condition:
: RBW:9.000KHz VBW:30.000KHz

	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dBuV	dB		
1	0.59	37.28	46.00	-8.72	Average	NEUTRAL
2	1.02	36.98	46.00	-9.02	Average	NEUTRAL
3 Max	1.80	39.32	46.00	-6.68	Average	NEUTRAL
4	2.99	33.52	46.00	-12.48	Average	NEUTRAL
5	3.88	31.74	46.00	-14.26	Average	NEUTRAL

Condition:
: RBW:9.000KHz VBW:30.000KHz

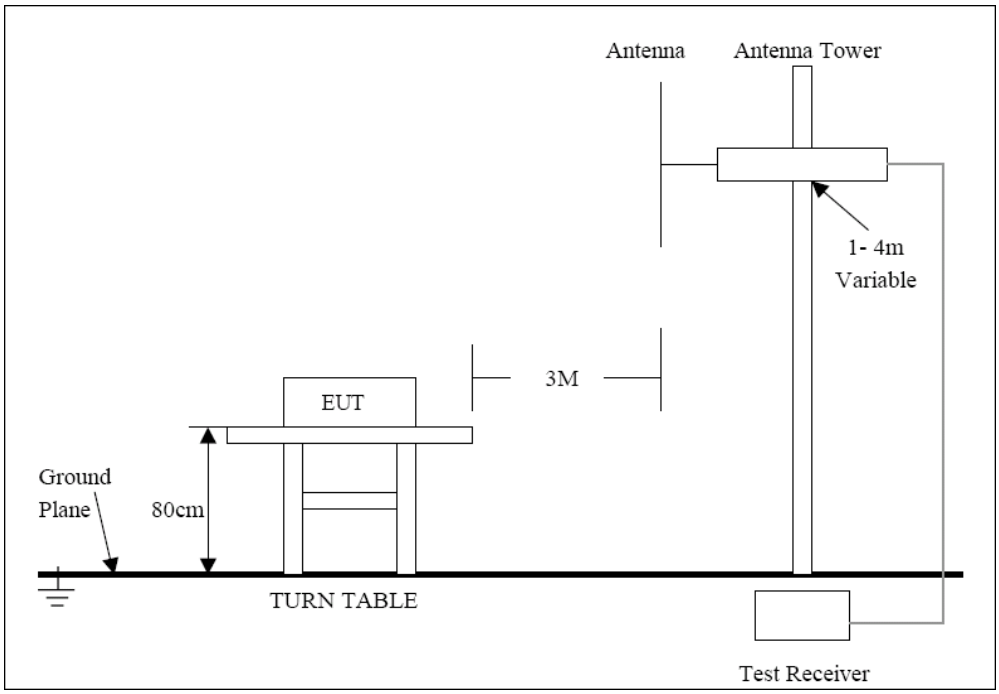
	Freq	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dBuV	dB		
1	0.20	48.11	63.71	-15.60	Peak	NEUTRAL
2	0.94	42.58	56.00	-13.42	Peak	NEUTRAL
3 Max	1.77	45.52	56.00	-10.48	Peak	NEUTRAL
4	2.92	42.43	56.00	-13.57	Peak	NEUTRAL
5	3.74	39.99	56.00	-16.01	Peak	NEUTRAL

7. RADIATED EMISSION MEASUREMENT

7.1. Block Diagram of EUT Configuration

7.1.1.Block Diagram of connection between the EUT and the simulators

7.1.2.Semi-anechoic Chamber Test Setup Diagram



7.2. Test Standard

FCC Part 15 CLASS B

7.3. Radiated Emission Limit(Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Note**:**(1) The smaller limit shall apply at the edge between two frequency bands.
(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT or system.

7.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirements and operating regulations in a manner which tends to maximize Its emission characteristics in normal application.

7.5. Operating Condition of EUT

7.5.1.Setup the EUT as shown on Section 7.1

7.5.2.Turn on the power of all equipments.

7.5.3.Let the EUT work in test modes (RX) and measure it.

7.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCS20) is 120kHz. The EUT is tested in Semi-anechoic Chamber. The frequency range from 30MHz to 1000MHz is checked.All the test results are listed in Section 7.7.

7.7. Test Result

PASS

Date of Test:	April 11, 2011	Temperature:	25°C
EUT:	Wireless Guide Receiver	Humidity:	50%
Model No.:	WS823T	Power Supply:	4.2V DC
Test Mode:	RX	Test Engineer:	Eric Li

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

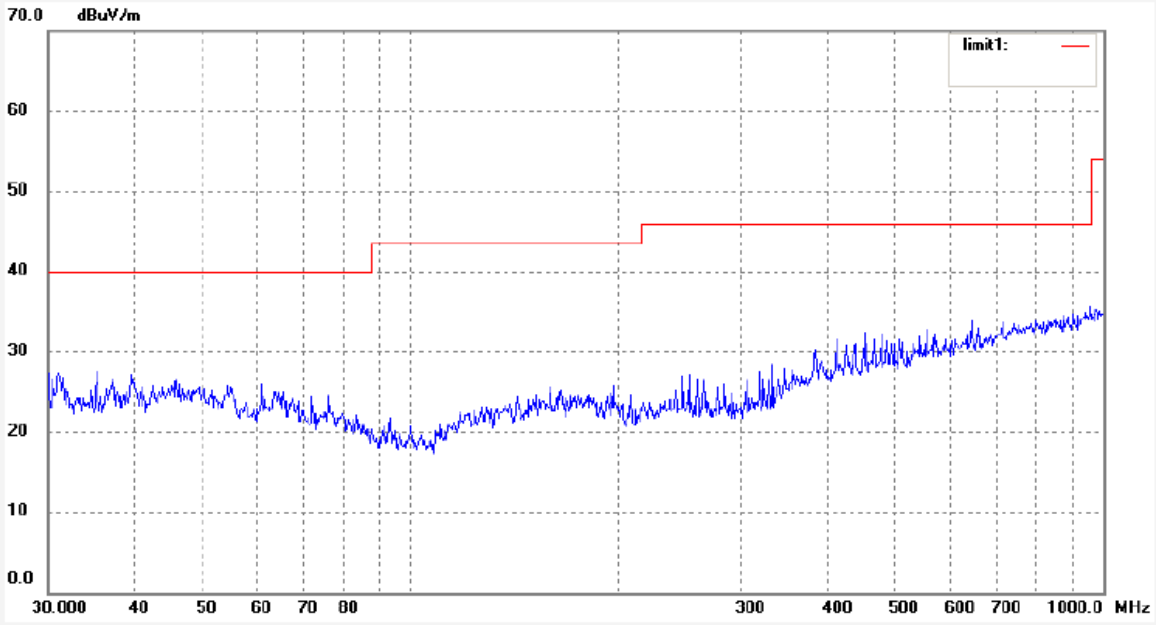
Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

   Result = Reading + Corrected Factor

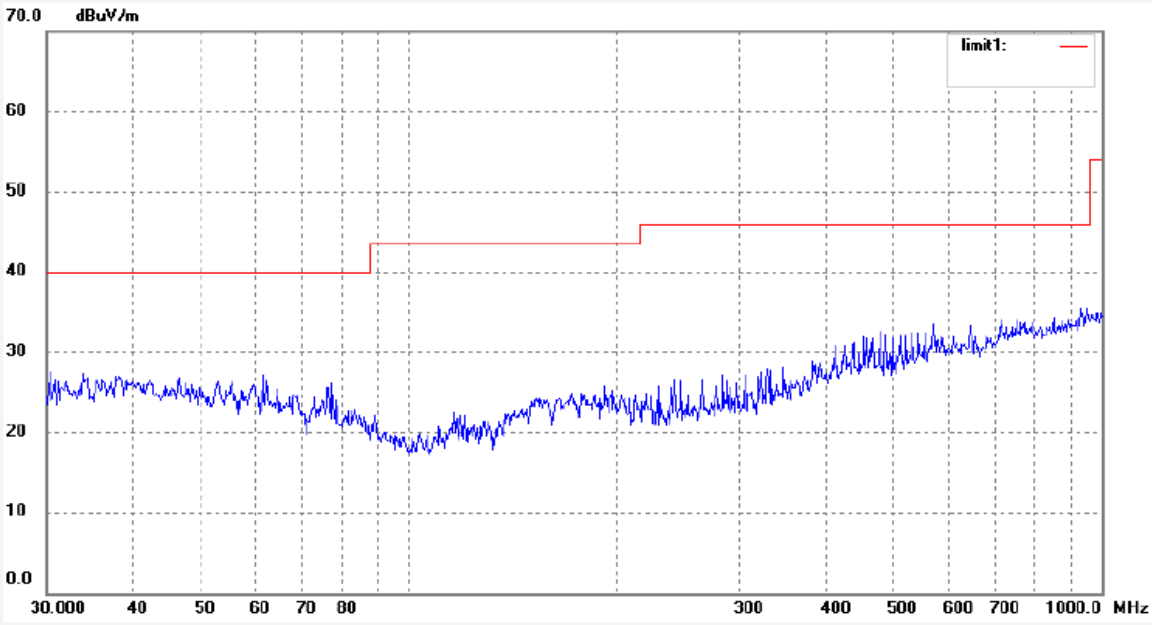
   Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

Horizontal polarization



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

Vertical polarization



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark