AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

FCC 15.247
DSS Report

for

ClarIDy Solutions, Inc.

No. 187, Sec. 2, Tiding Blvd., Neihu Dist., Taipei, Taiwan (R.O.C)

Brand	**:**	**ClarIDy**
Product Name	**:**	**UHF Single-lane Security Gate**
Model Name	**:**	**SUG-100-04**
FCC ID	**:**	**WQHSUG-100-04**

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

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AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

TEST REPORT CERTIFICATION

Applicant	:	ClarIDy Solutions, Inc.
Manufacturer	:	ClarIDy Solutions, Inc.
Product Name	:	UHF Single-lane Security Gate
Model No.	:	SUG-100-04
Serial No.	:	N/A
Brand	:	ClarIDy
Power Supply	:	(1)DC 12V (Power Supply)& (2)AC 120V/60Hz (AC Power Cord)
Test Voltage	:	(1)DC 12V (Via Power Supply) & (2)AC 120V/60Hz (Via AC Power Cord)

Applicable Standards:

FCC Rules and Regulations Part 15 Subpart C, Oct. 2014
ANSI C63.10:2013
FCC Public Notice DA 00-705

AUDIX Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. ***AUDIX Technology Corp.*** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Test: 2015. 11. 14 ~ 2016. 01. 21 Date of Report: 2016. 01. 22

Producer: Sabrina Wang
(Sabrina Wang/Administrator)

Signatory: Ben Cheng
(Ben Cheng/Manager)

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2015. 11. 23	Original Report.	EM-F150710

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

2. SUMMARY OF TEST RESULTS

Rule	Description	Results
15.207	Conducted Emission	**PASS**
15.247(d)/15.205	Radiated Band Edge and Radiated Spurious Emission	**PASS**
15.247(a)(1)	20dB Bandwidth	**PASS**
15.247(a)(1)	Carrier Frequency Separation	**PASS**
15.247(a)(1)(iii)	Time of Occupancy	**PASS**
15.247(a)(1)(iii)	Number of Hopping Channels	**PASS**
15.247(b)(1)	Maximum Peak Output Power	**PASS**
15.247(d)	Conducted Band Edges and Conducted Spurious Emission	**PASS**
15.203	Antenna Requirement	**PASS**

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

3. GENERAL INFORMATION

3.1. Description of EUT

Product	UHF Single-lane Security Gate
Model Number	SUG-100-04
Serial Number	N/A
Brand Name	ClarIDy
Applicant	ClarIDy Solutions, Inc. No. 187, Sec. 2, Tiding Blvd., Neihu Dist., Taipei, Taiwan (R.O.C)
Manufacture	ClarIDy Solutions, Inc. 1F, No.29, Industry E. 9th Rd., Hsinchu 30075, Taiwan
RF Features	RF ID
Transmit Type	1T1R
Power Supply	SY, M/N YS04-120250D I/P: 100-240Vac, 50/60Hz 1.0A O/P: 12Vdc, 2500mA
	DC Power Cable: Unshielded, Undetachable, 2.0m, Bonded four ferrite cores
	AC Power Coed: Unshielded, Detachable, 1.8m (2C)
AC Power Coed	Unshielded, Detachable, 1.8m (3C)
BNC Cable	Unshielded, Detachable, 3.0m *4
Antenna Type	Patch Antenna
Antenna Gain	5.5dBi
Date of Receipt of Sample	2015. 10. 15

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

3.2. EUT Specifications Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (Mbps)
RF ID	902-928	50	FHSS	640kbps

Channel List			
RF ID			
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
1	902.75	26	915.25
2	903.25	27	915.75
3	903.75	28	916.25
4	904.25	29	916.75
5	904.75	30	917.25
6	905.25	31	917.75
7	905.75	32	918.25
8	906.25	33	918.75
9	906.75	34	919.25
10	907.25	35	919.75
11	907.75	36	920.25
12	908.25	37	920.75
13	908.75	38	921.25
14	909.25	39	921.75
15	909.75	40	922.25
16	910.25	41	922.75
17	910.75	42	923.25
18	911.25	43	923.75
19	911.75	44	924.25
20	912.25	45	924.75
21	912.75	46	925.25
22	913.25	47	925.75
23	913.75	48	926.25
24	914.25	49	926.75
25	914.75	50	927.25

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Fax: +886 2 26099303

3.3. Test Configuration

Mode	Duty Cycle (x)	T (ms)	Duty Cycle Factor (dB)
RF ID	0.98	N/A	N/A

Note: When duty cycle is less than 98% (0.98) that duty cycle factor 10log(1/x) is needed to add in conducted test items measured in average detector.

AC Conduction	
Test Case	Normal operation

Item		Test Channel
Radiated Test Case	Radiated Spurious Emission Note1	1/25/50
Conducted Test Case Note2	20dB Bandwidth	1/25/50
	Carrier Frequency Separation	1/25/50
	Time of Occupancy	1/25/50
	Number of Hopping Channels	1/25/50
	Maximum Peak Output Power	1/25/50
	Band Edges	1/50
	Spurious Emission	1/25/50

Note 1:
■Mobile Device
□Portable Device, and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow:
- □ Lie
- □ Side
- □ Stand

Note 2: We performed testing of the highest and lowest data rate.

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3.4. Tested Supporting System List

3.4.1. Support Peripheral Unit

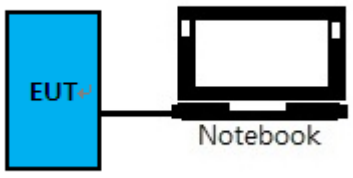
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Notebook PC	acer	MS2362	N/A	PPD-AAR5B225

3.4.2. Cable Lists

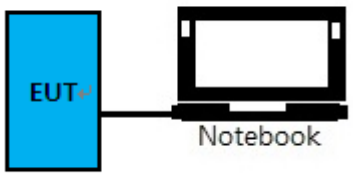
No.	Cable Description Of The Above Support Units
1.	USB Cable: Shielded, Detachable, 1.8m Adapter: Chicony, M/N CPA09-A065N1, DC Cord: Shielded, Undetachable, 1.8m Bonded a ferrite core AC Power Cord: Non-Shielded, Detachable, 1.8m

3.5. Setup Configuration

3.5.1. EUT Configuration for Power Line and Radiated Emission



3.5.2. EUT Configuration for Conducted Test Item



3.6. Operating Condition of EUT

Test program “CSL CALLBACK API DEMO” is used for enabling EUT RF function under continues transmitting and choosing data rate / channel.

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

3.7. Description of Test Facility

Test Firm Name	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	**No. 8 Shielded Room** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan **Semi-Anechoic Chamber** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan May 06, 2015 File on Federal Communication Commission Registration Number: 90993
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

3.8. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conduction Test	150kHz~30MHz	±3.5dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 2.91dB
	300MHz~1000MHz	± 2.74dB
	Above 1GHz	± 5.02dB

Remark：Uncertainty = $ku_c(y)$

Test Item	Uncertainty
20dB Bandwidth	±0.2kHz
Carrier Frequency Separation	±0.2kHz
Time of Occupancy	±0.03sec
Maximum peak Output power	± 0.52dB
Conducted Emission Limitations	± 0.13dB

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

4. MEASUREMENT EQUIPMENT LIST

4.1. Conducted Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Test Receiver	R&S	ESR3	101774	2015. 02. 06	1 Year
2	A.M.N.	R&S	ENV4200	100169	2015. 05. 08	1 Year
3	L.I.S.N.	Kyoritsu	KNW-407	8-855-9	2014. 12. 26	1 Year
4	Pulse Limiter	R&S	ESH3-Z2	100354	2015. 01. 17	1 Year

4.2. Radiated Emission Measurement

4.2.1. Frequency Range 30MHz~1000MHz

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2015. 09. 14	1 Year
2	Test Receiver	R & S	ESCS30	100338	2015. 06. 24	1 Year
3	Amplifier	HP	8447D	2944A06305	2015. 02. 12	1 Year
4	Bilog Antenna	CHASE	CBL6112D	33821	2015. 02. 27	1 Year

4.2.2. Frequency Range Above 1000MHz

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2015. 09. 14	1 Year
2	Amplifier	Agilent	8449B	3008A00529	2015. 01. 22	1 Year
3	2.4GHz Notch Filter	K&L	7NSL10-2441 .5E130.5-00	1	2015. 07. 22	1 Year
4	3G High Pass Filter	Microware Circuits	H3G018G1	484796	2015. 08. 24	1 Year
5	Horn Antenna	EMCO	3115	9609-4927	2015. 06. 22	1 Year
6	Horn Antenna	EMCO	3116	2653	2015. 10. 20	1 Year

4.3. RF Conducted Measurement

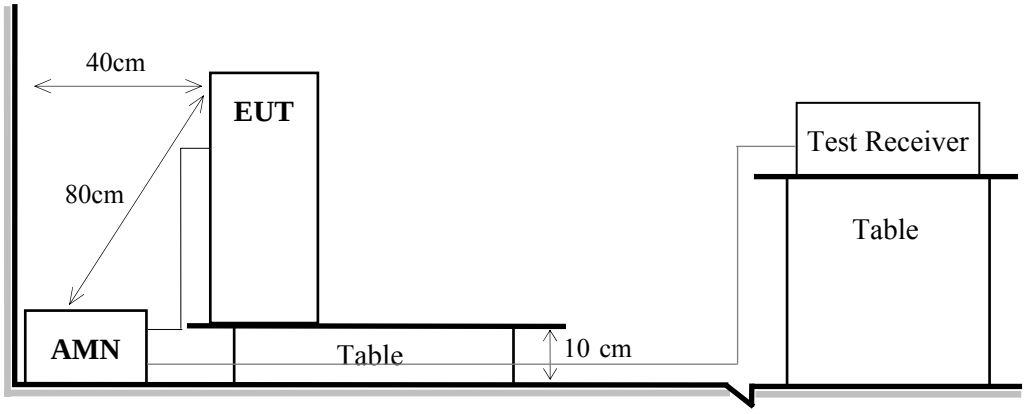
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1	Spectrum Analyzer	Agilent	N9030A-526	MY53310269	2015. 11. 07	1 Year

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

5. CONDUCTED EMISSION MEASUREMET

5.1. Block Diagram of Test Setup

Shielded Room Setup Diagram



Ground Plane

5.2. Power Line Conducted Emission Limit

Frequency	Conducted Limit	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dBμV	56 ~ 46 dBμV
500kHz ~ 5MHz	56 dBμV	46 dBμV
5MHz ~ 30MHz	60 dBμV	50 dBμV

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.
2.: The lower limit applies to the band edges.

5.3. Test Procedure

5.3.1. To set up the EUT as indicated in ANSI C 63.10. The EUT was placed on the table which has 10 cm height to the ground and 40 cm distance to the conducting wall.

5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).

5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)

5.3.4. Checking frequency range from 150 kHz to 30 MHz and record the emission which does not have 20 dB below limit.

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

5.4. Conducted Emission Measurement Results

PASSED.

Test Date	2015/11/14	Temp./Hum.	26℃/57%
Test Voltage	DC 12V (Via Power Supply) & AC 120V/60Hz (Via AC Power Cord)		

AUDIX Technology Corp. EMC Department
No.53-11, Dingfu, Linkou Dist.,New Taipei City
244, Taiwan R.O.C.
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:emc@audixtech.com

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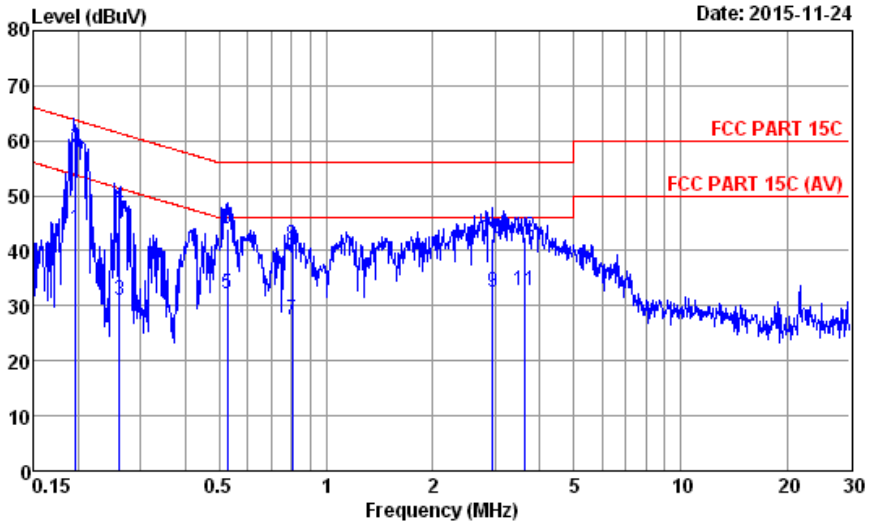

Site no. : No.8 Shielded Room
Condition : ENV4200 358 (H)
Limit : FCC PART 15C
Env. / Ins. : 26°C / 57% ESR3 (1774)
EUT : SUG-100-04
Power Rating : 120Vac/60Hz
Test Mode : Operating

Data no. : 2
Phase : NEUTRAL
Engineer : Tim

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.196	10.27	0.03	9.87	23.69	43.86	53.77	9.91	Average
2	0.196	10.27	0.03	9.87	38.63	58.80	63.77	4.97	QP
3	0.262	10.25	0.03	9.87	10.81	30.96	51.38	20.42	Average
4	0.262	10.25	0.03	9.87	27.86	48.01	61.38	13.37	QP
5	0.527	10.20	0.04	9.88	12.08	32.20	46.00	13.80	Average
6	0.527	10.20	0.04	9.88	23.98	44.10	56.00	11.90	QP
7	0.804	10.19	0.05	9.87	7.32	27.43	46.00	18.57	Average
8	0.804	10.19	0.05	9.87	20.78	40.89	56.00	15.11	QP
9	2.946	10.20	0.11	9.88	12.30	32.49	46.00	13.51	Average
10	2.946	10.20	0.11	9.88	21.93	42.12	56.00	13.88	QP
11	3.623	10.20	0.12	9.88	12.51	32.71	46.00	13.29	Average
12	3.623	10.20	0.12	9.88	22.23	42.43	56.00	13.57	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

AUDIX Technology Corp. EMC Department
No.53-11, Dingfu, Linkou Dist.,New Taipei City 244, Taiwan R.O.C.
Tel:+886-2-26092133 Fax:+886-2-26099303
Email:emc@audixtech.com

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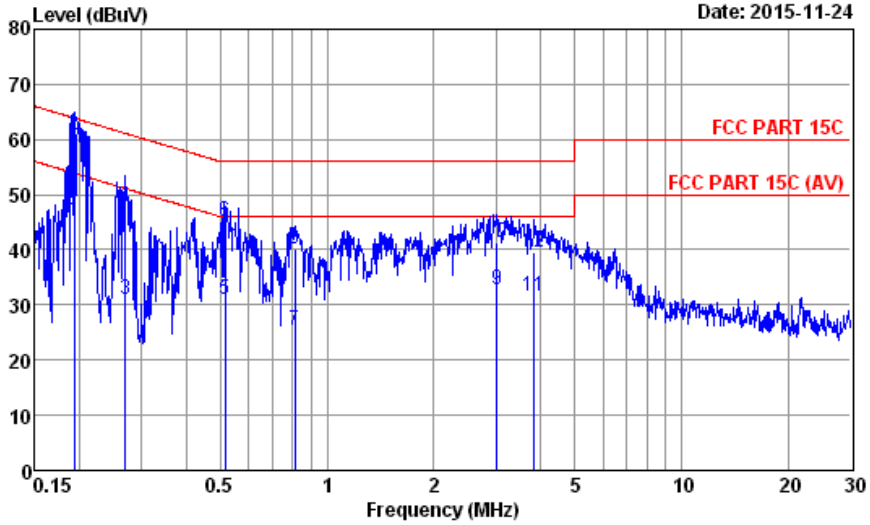


Site no. : No.8 Shielded Room
Data no. : 1
Condition : ENV4200 358 (H)
Phase : LINE
Limit : FCC PART 15C
Env. / Ins. : 26°C / 57% ESR3 (1774)
Engineer : Tim
EUT : SUG-100-04
Power Rating : 120Vac/60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.193	10.29	0.03	9.87	24.96	45.15	53.89	8.74	Average
2	0.193	10.29	0.03	9.87	40.59	60.78	63.89	3.11	QP
3	0.270	10.26	0.03	9.87	10.95	31.11	51.11	20.00	Average
4	0.270	10.26	0.03	9.87	27.54	47.70	61.11	13.41	QP
5	0.516	10.22	0.04	9.88	10.84	30.98	46.00	15.02	Average
6	0.516	10.22	0.04	9.88	25.09	45.23	56.00	10.77	QP
7	0.813	10.21	0.05	9.87	5.40	25.53	46.00	20.47	Average
8	0.813	10.21	0.05	9.87	19.91	40.04	56.00	15.96	QP
9	3.009	10.21	0.11	9.88	12.53	32.73	46.00	13.27	Average
10	3.009	10.21	0.11	9.88	21.24	41.44	56.00	14.56	QP
11	3.840	10.21	0.13	9.88	11.46	31.68	46.00	14.32	Average
12	3.840	10.21	0.13	9.88	19.25	39.47	56.00	16.53	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

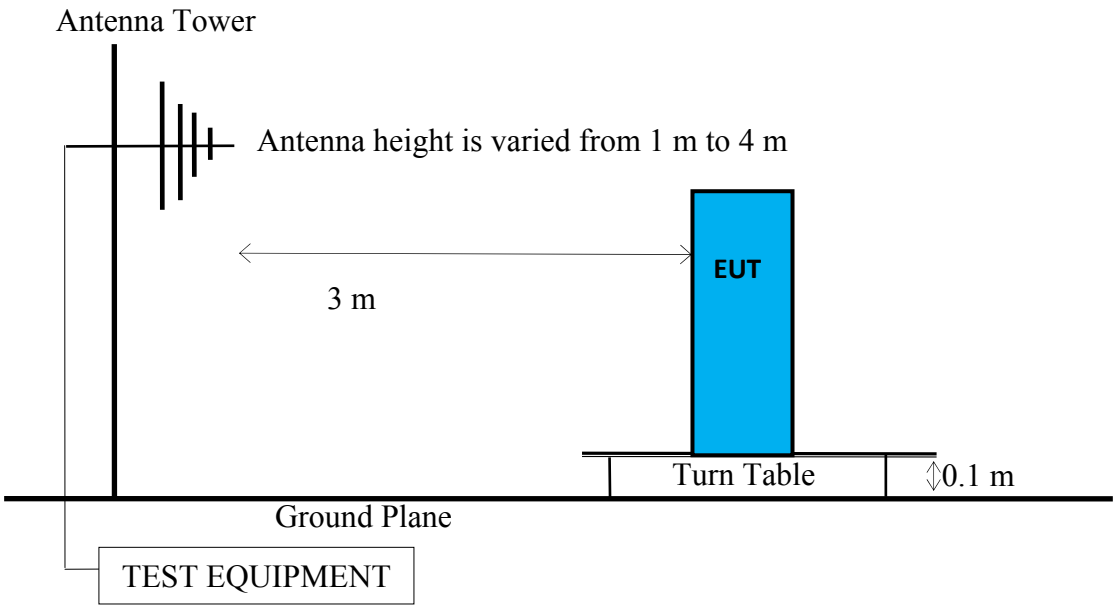
6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup

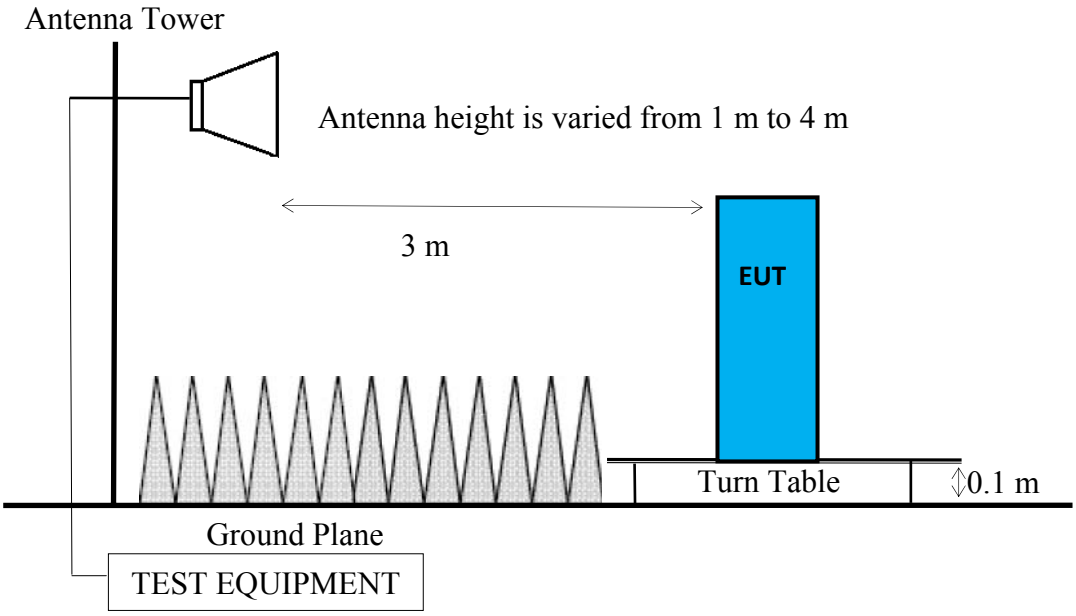
6.1.1. Block Diagram of EUT

Indicated as section 3.6

6.1.2. Setup Diagram for 30-1000 MHz



6.1.3. Semi-Anechoic Chamber (3m) Setup Diagram for above 1GHz



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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

6.2. Radiated Emission Limits

6.2.1. General Limit

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with section 6.2.2. Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Distance (m)	Field Strengths Limits	
		μV/m	dBμV/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)	

Remark：(1) dBμV/m = 20 log (μV/m)

(2) The tighter limit applies to the edge between two frequency bands.

(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(4) Fundamental and emission fall within operation band are exempted from this section.

(5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

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6.3. Test Procedure

The EUT setup on the turn table which has 0.1m height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.
Frequency below 1 GHz:
Spectrum Analyzer is used for pre-testing with following setting:

(1) RBW = 120KHz
(2) VBW ≥ 3 x RBW.
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.
(7) When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

Frequency above 1GHz to 10th harmonic:

Peak Detector:

(1) RBW = 1MHz
(2) VBW ≥ 3 x RBW.
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.
(7) When peak-detected value is lower than limit that the measurement using the average detector is not required. Otherwise using average for finally measurement.

Average Measurement:

☐**Option 1:**

(1) RBW = 1 MHz
(2) VBW =1/T
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.

■**Option 2:**

Average Emission Level= Peak Emission Level+ D.C.C.F.

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
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Fax: +886 2 26099303

6.4. Measurement Result Explanation

■Peak Emission Level=Antenna Factor + Cable Loss + Meter Reading
□Average Emission Level l=Antenna Factor + Cable Loss + Meter Reading
■Average Emission Level= Peak Emission Level+ DCCF
Duty Cycle Correction Factor (DCCF)= 20log (TX_{on}/100ms) presented in section 3.4
■EPR= Peak Emission Level-95.2dB-2.14dBi

6.5. Test Results

PASSED.

Test Date	2015/11/17, 2016/01/21	Temp./Hum.	22℃/45%, 20℃/55%
Test Voltage	AC 120V, 60Hz		

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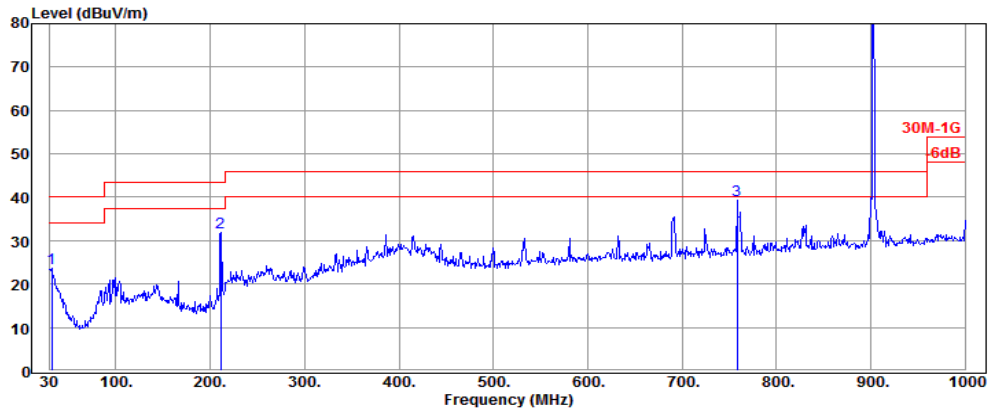
Tel: +886 2 26099301
Fax: +886 2 26099303

6.5.1. Emissions within Restricted Frequency Bands

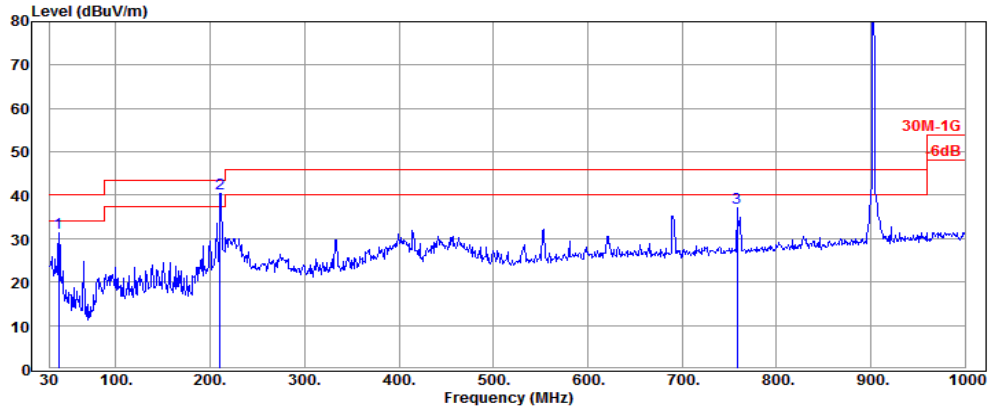
Mode	RF ID	Frequency	TX 902.75MHz

Antenna at Horizontal Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
31.94	17.52	2.37	3.78	23.67	40.00	16.33	Peak
211.39	10.05	4.07	17.87	31.99	43.50	11.51	Peak
758.47	19.51	6.99	12.71	39.21	46.00	6.79	Peak

Antenna at Vertical Polarization



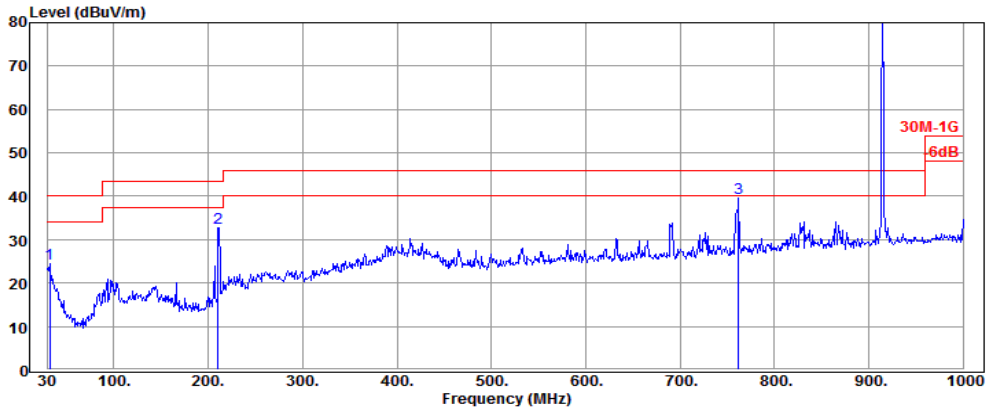
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
39.70	13.51	2.51	15.28	31.30	40.00	8.70	Peak
210.42	10.00	4.06	26.35	40.41	43.50	3.09	Peak
758.47	19.51	6.99	10.72	37.22	46.00	8.78	Peak

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

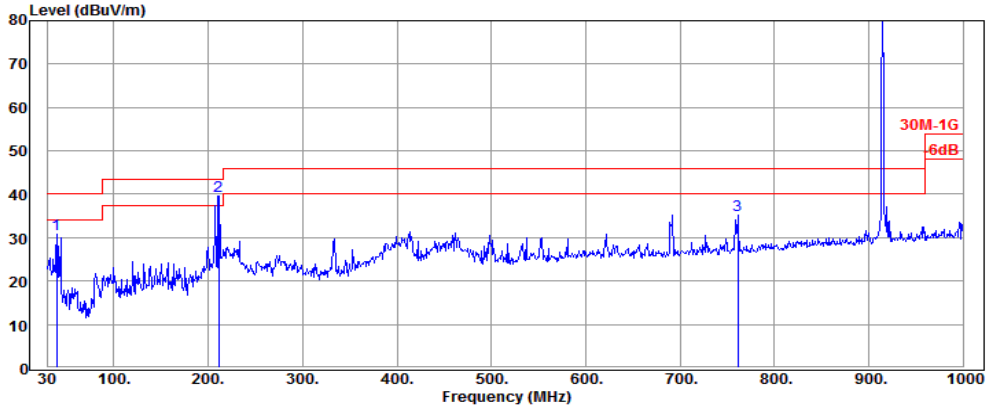
Mode	RF ID	Frequency	TX 914.75MHz

Antenna at Horizontal Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
31.94	17.52	2.37	4.44	24.33	40.00	15.67	Peak
210.42	10.00	4.06	18.57	32.63	43.50	10.87	Peak
762.35	19.58	7.01	13.11	39.70	46.00	6.30	Peak

Antenna at Vertical Polarization

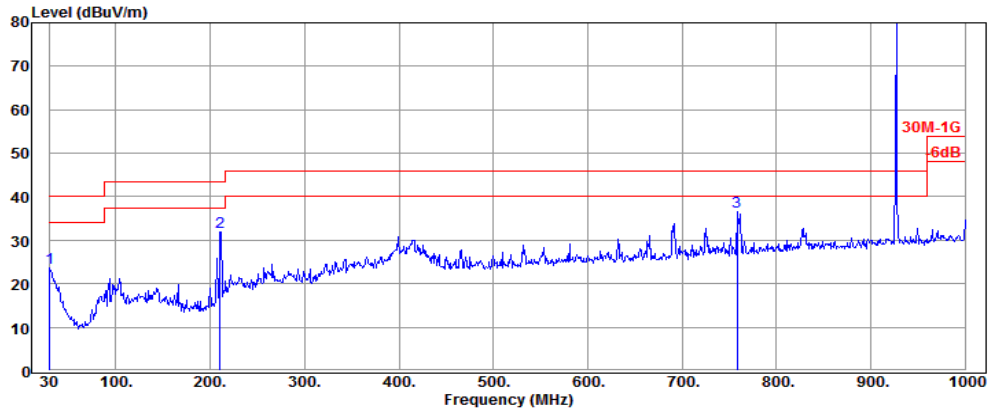


Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
39.70	13.51	2.51	14.82	30.84	40.00	9.16	Peak
211.39	10.05	4.07	25.50	39.62	43.50	3.88	Peak
761.38	19.54	7.00	8.57	35.11	46.00	10.89	Peak

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

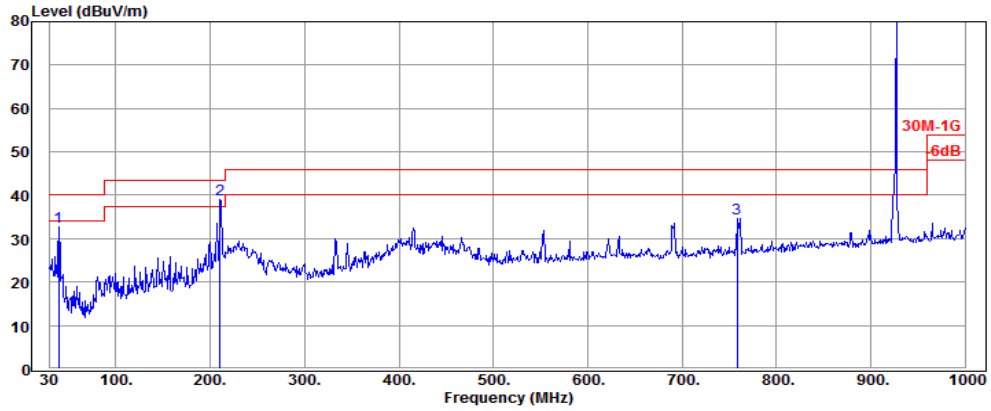
Mode	RF ID	Frequency	TX 927.75MHz

Antenna at Horizontal Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
30.00	18.62	2.32	2.59	23.53	40.00	16.47	Peak
210.42	10.00	4.06	17.88	31.94	43.50	11.56	Peak
758.47	19.51	6.99	10.13	36.63	46.00	9.37	Peak

Antenna at Vertical Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
39.70	13.51	2.51	16.79	32.81	40.00	7.19	Peak
210.42	10.00	4.06	24.85	38.91	43.50	4.59	Peak
758.47	19.51	6.99	8.21	34.71	46.00	11.29	Peak

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

6.5.2. Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	RF ID	Frequency	TX 902.75MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1806.00	27.09	3.59	9.27	39.95	54.00	14.05	Peak
2708.00	29.21	5.81	11.09	46.11	54.00	7.89	Peak
2964.00	30.00	6.29	11.93	48.22	54.00	5.78	Peak
3610.00	31.40	7.33	8.33	47.06	54.00	6.94	Peak
4515.00	32.36	7.77	8.54	48.67	54.00	5.33	Peak
5955.00	34.28	9.08	7.79	51.15	54.00	2.85	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1806.00	27.09	3.59	10.54	41.22	54.00	12.78	Peak
2108.00	28.12	4.82	19.16	52.10	54.00	1.90	Peak
2708.00	29.21	5.81	9.53	44.55	54.00	9.45	Peak
3610.00	31.40	7.33	7.87	46.60	54.00	7.40	Peak
4515.00	32.36	7.77	8.73	48.86	54.00	5.14	Peak
5970.00	34.29	9.08	8.80	52.17	54.00	1.83	Peak

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

Mode	RF ID	Frequency	TX 914.75MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1830.00	27.19	3.75	9.01	39.95	54.00	14.05	Peak
2238.00	28.25	5.02	13.37	46.64	54.00	7.36	Peak
2744.00	29.31	5.88	9.24	44.43	54.00	9.57	Peak
3660.00	31.54	7.35	9.05	47.94	54.00	6.06	Peak
4575.00	32.48	7.84	8.12	48.44	54.00	5.56	Peak
6790.00	34.76	9.69	8.15	52.60	54.00	1.40	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1830.00	27.19	3.75	13.54	44.48	54.00	9.52	Peak
2126.00	28.14	4.85	17.33	50.32	54.00	3.68	Peak
2744.00	29.31	5.88	9.59	44.78	54.00	9.22	Peak
3660.00	31.54	7.35	8.96	47.85	54.00	6.15	Peak
4575.00	32.48	7.84	7.45	47.77	54.00	6.23	Peak
6075.00	34.27	9.17	7.45	50.89	54.00	3.11	Peak

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

Mode	RF ID	Frequency	TX 927.75MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1854.00	27.32	3.87	8.87	40.06	54.00	13.94	Peak
2410.00	28.42	5.27	13.55	47.24	54.00	6.76	Peak
2782.00	29.44	5.96	10.19	45.59	54.00	8.41	Peak
3710.00	31.68	7.37	9.09	48.14	54.00	5.86	Peak
4635.00	32.63	7.90	7.63	48.16	54.00	5.84	Peak
5360.00	33.91	8.60	9.13	51.64	54.00	2.36	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
1854.00	27.32	3.87	8.73	39.92	54.00	14.08	Peak
2102.00	28.11	4.81	12.87	45.79	54.00	8.21	Peak
2782.00	29.44	5.96	10.39	45.79	54.00	8.21	Peak
3710.00	31.68	7.37	9.04	48.09	54.00	5.91	Peak
4635.00	32.63	7.90	8.23	48.76	54.00	5.24	Peak
5980.00	34.29	9.10	8.28	51.67	54.00	2.33	Peak

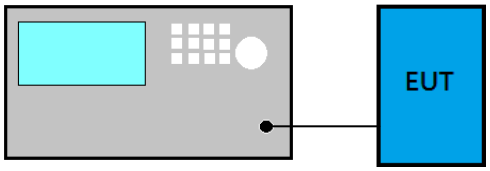
6.5.3. Emissions in Non-restricted Frequency Bands

All emission levels below the 15.209 general radiated emissions limits is not required.

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

7. 20dB BANDWIDTH MEASUREMENT

7.1. Block Diagram of Test Setup



7.2. Specification Limits

Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

7.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Set RBW close to1% of OBW.
(2) Set VBW≥RBW.
(3) Detector = Peak.
(4) Trace mode = max hold.
(5) Sweep = auto couple.
(6) Allow the trace to stabilize.
(7) Setting channel bandwidth function x dB to -20 dB to record the final bandwidth.

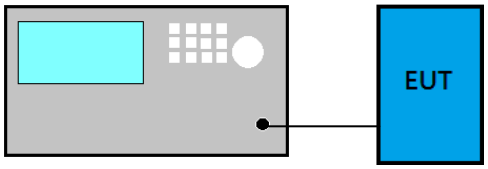
7.4. Test Results

Please refer to Appendix A

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

8. CARRIER FREQUENCY SEPARATION MEASUREMENT

8.1. Block Diagram of Test Setup



8.2. Specification Limits

Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output no greater than 125mW.

8.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Span = wide enough to capture the peaks of two adjacent channels
(2) RBW ≥ 1% of the span
(3) VBW≥ RBW
(4) Sweep = auto
(5) Detector function = peak
(6) Trace = max hold

8.4. Test Results

Please refer to Appendix A

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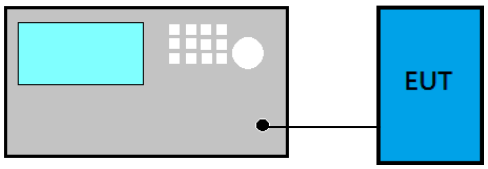
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

9. TIME OF OCCUPANCY MEASUREMENT

9.1. Block Diagram of Test Setup



9.2. Specification Limits

Frequency hopping systems in the 2400-2483.5MHz shall use at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by number of hopping channels employed.

9.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Span = zero span, centered on a hopping channel
(2) RBW = 1 MHz
(3) VBW ≥ RBW
(4) Sweep = as necessary to capture the entire dwell time per hopping channel
(5) Detector function = peak
(6) Trace = max hold

9.4. Test Results

Please refer to Appendix A

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No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
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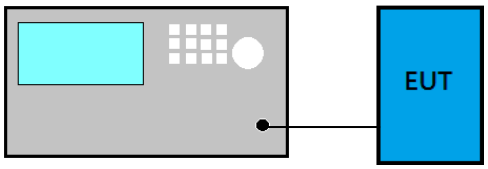
10. NUMBER OF HOPPING CHANNELS MEASUREMENT

10.1. Block Diagram of Test Setup



10.2. Specification Limits

Frequency hopping systems which use fewer than 20 hopping frequencies may employ intelligent hopping techniques to avoid interference to other transmissions. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 non-overlapping channels.

10.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Span = the frequency band of operation
(2) RBW ≥ 1% of the span
(3) VBW ≥ RBW
(4) Sweep = auto
(5) Detector function = peak
(6) Trace = max hold

10.4. Test Results

Please refer to Appendix A

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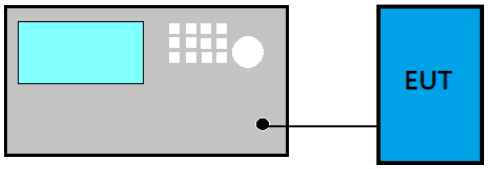
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

11. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

11.1. Block Diagram of Test Setup



11.2. Specification Limits

The Limits of maximum Peak Output Power for frequency hopping systems in 902-928MHz is: 1Watt. (30dBm)

11.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel
(2) RBW ≥ 1% of the span
(3) VBW ≥ RBW
(4) Sweep = auto
(5) Detector function = peak
(6) Trace = max hold

11.4. Test Results

Please refer to Appendix A

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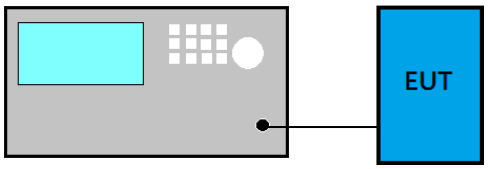
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

12. EMISSION LIMITATIONS MEASUREMENT

12.1. Block Diagram of Test Setup



12.2. Specification Limits

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).

12.3. Test Procedure

Following measurement procedure is reference to DA00-705:

(1) Set span wide enough to capture the peak level of the in-band emission and all spurious emissions; up to 10th harmonic.
(2) RBW = 100 kHz
(3) VBW ≥ RBW
(4) Sweep = auto
(5) Detector function = peak
(6) Trace = max hold

12.4. Test Results

Please refer to Appendix A

AUDIX Technology Corp.
No. 53-11, Dingfu, Linkou, Dist.,
New Taipei City244, Taiwan
Tel: +886 2 26099301
Fax: +886 2 26099303

13. DEVIATION TO TEST SPECIFICATIONS

【NONE】