



RADIO TEST REPORT

Test Report No. : 10762853S-A

Applicant : Audio-Technica Corporation
Type of Equipment : UHF SYNTHESIZED WIRELESS TRANSMITTER
Model No. : ATW-T6002 S
Test regulation : FCC part 74 Subpart H: 2014
FCC ID : JFZT6002S
Test Result : Complied

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Date of test: April 29 to May 20, 2015

Representative test engineer:

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Leader
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UL Japan, Inc.

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13-EM-F0429

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SECTION 1: Customer information

Company Name : Audio-Technica Corporation
Address : 2-46-1 Nishi-naruse, Machida, Tokyo 194-8666, Japan
Telephone Number : +81-42-739-9148
Facsimile Number : +81-42-739-9160
Contact Person : Takashi Iwasa

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : UHF SYNTHESIZED WIRELESS TRANSMITTER
Model Number : ATW-T6002 S
Serial Number : Refer to Section 4.2
Rating : DC 3 V (battery)
Country of Mass-production : Japan
Condition of EUT : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Receipt Date of Sample : April 20, 2015
Modification of EUT : The test lab did not make the modification to the EUT supplied from the customer to have it pass the tests.

2.2 Product Description

Model: ATW-T6002 S (referred to as the EUT in this report) is a UHF SYNTHESIZED WIRELESS TRANSMITTER.

General Specification

Clock frequency(ies) in the system : 26 MHz (VCTCXO), 24 MHz (MPU clock)

Radio Specification

Radio Type : Transmitter
Frequency of Operation : 946.125 MHz to 949.875 MHz
Modulation : Frequency modulation
Emission designator : 62K5F3E
Necessary Bandwidth : 62.5 kHz = 2M + 2D
where M: Maximum modulation frequency = 15 kHz
D: Peak deviation = 16.25 kHz
Channel spacing : 125 kHz
Power Supply (RF part input) : DC 3.3 V
Antenna name : HH WL0709PL
Antenna Gain : 1.5 dBi max
Antenna Connector Type : SMA *1)
Operating Temperature : +5 deg.C to +45 deg.C

*1) The antenna connector is in the inside of EUT and end user cannot access the antenna connector.

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SECTION 3: Test specification, procedures and results

3.1 Test Specification

Test Specification : FCC Part 74: 2014, final revised on August 15, 2014
Title : EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

Test Specification : FCC Part 2: 2014, final revised on December 2, 2014
Title : FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	RF Output Power	FCC section 2.1046, TIA-603-D 2.2.1, 2.2.17 and 2.2.12	FCC section 74.861(e)(1), FCC part 2, section 2.1046	Conducted	N/A	-	Complied
2	Modulation Characteristics	FCC section 2.1047(a) and (b), TIA-603-D 2.2.3, 2.2.6	FCC section 74.861(e)(3), FCC part 2, section 2.1047	-	N/A	-	Complied
3	Emission Bandwidth	FCC section 2.1049, TIA-603-D 2.2.11, 1.3.4.4	FCC section 74.861(e)(5), FCC part 2, section 2.1049	Radiated	N/A	-	Complied
4	Spurious Emission at Antenna Terminals	FCC section 2.1051, TIA-603-D 2.2.13	FCC section 74.861(e)(6), FCC part 2, section 2.1051	Conducted	N/A	-	Complied
5	Field Strength of Spurious Emission	FCC section 2.1053, TIA-603-D 2.2.12	FCC section 74.861(e)(6), FCC part 2, section 2.1053	Radiated	N/A	22.7 dB (1899.750 MHz, Horizontal, Tx 949.875 MHz, High power)	Complied
6	Frequency Stability	FCC section 2.1055, TIA-603-D 2.2.2	FCC section 74.861(e)(4), FCC part 2, section 2.1055	-	N/A	-	Complied

Note: UL Japan, Inc.'s EMI Work Test Procedure 13-EM-W0420.

*1) These tests were also referred to "Land Mobile FM or PM Communications Equipment Measurement and Performance Standards" (TIA-603-D: 2010)

*2) This EUT does not have receiving part. Therefore Receiver Spurious Emission test was not performed.

Supplied Voltage Information

This EUT provides stable voltage (DC 3.3 V) constantly to RF Part regardless of input voltage.

Antenna Information

The antenna is not removable from the EUT, because the antenna is mounted inside of the EUT.

3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

3.4 Confirmation

UL Japan, Inc. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC part 74.

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3.5 Uncertainty

EMI

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor k=2.

(EMI measurement)

Item	Frequency range	No.1 SAC ^{*1} (±)	No.2 SAC(±)	No.3 SAC (±)
Radiated emission (Measurement distance: 3m)	9 kHz - 30 MHz	3.7 dB	3.5 dB	3.5 dB
	30 MHz - 300 MHz	4.9 dB	4.9 dB	4.7 dB
	300 MHz - 1 GHz	5.0 dB	5.0 dB	4.8 dB
	1 GHz - 18 GHz	4.9 dB	4.9 dB	4.9 dB

(Substitution measurement)

Item	Frequency range	No.1 SAC ^{*1} (±)	No.2 SAC(±)	No.3 SAC (±)
Radiated emission (Substitution measurement;3m) (EUT height 0.8m)	30 MHz - 300 MHz	4.8 dB	4.8 dB	4.8 dB
	300 MHz - 1 GHz	3.7 dB	3.7 dB	3.7 dB
	1 GHz - 13 GHz	5.1 dB	5.1 dB	5.1 dB

*1: SAC=Semi-Anechoic Chamber

Radiated Emission Test

The data listed in this test report has enough margin, more than site margin.

Power Measurement uncertainty above 1 GHz for this test was: (±) 0.71 dB

Conducted emissions Measurement (below 1 GHz) uncertainty for this test was: (±) 1.5 dB

Conducted emissions, Power Density Measurement (1 GHz - 3 GHz) uncertainty for this test was: (±) 1.7 dB

Conducted emissions Measurement (3 GHz - 18 GHz) uncertainty for this test was: (±) 2.4 dB

Frequency Measurement uncertainty for this test was: (±) 5.3×10^{-6}

Bandwidth Measurement uncertainty for this test was: (±) 0.66 %

3.6 Test Location

UL Japan, Inc. Shonan EMC Lab.

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Telephone number : +81 463 50 6400

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JAB Accreditation No. : RTL02610

	IC Registration No.	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
☐ No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
☒ No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
☒ No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
☐ No.4 Semi-anechoic chamber	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
☐ No.1 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.2 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
☐ No.3 Shielded room	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
☐ No.4 Shielded room	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
☒ No.5 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
☐ No.6 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
☐ No.8 shielded room	-	3.45 x 5.5 x 2.4	3.45 x 5.5	-
☐ No.1 Measurement room	-	2.55 x 4.1 x 2.5	-	-

3.7 Data of EMI, Test instruments, Test set up

Refer to APPENDIX.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

Mode	Remarks
Transmitting (Tx), High power	less than 50 mW
Transmitting (Tx), Mid power	less than 10 mW
Transmitting (Tx), Low power	less than 2 mW
*Transmitting duty was 100% on all tests.	
*Power of the EUT was set by the software as follows; Power settings: High (50 mW), Mid (10 mW), Low (2 mW) Software: None *This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product without High or Middle or Low settings.	

*The details of Operating mode(s)

Test Item	Tested frequency	Power setting	AF input signal	Remarks
RF power output	946.125 MHz (Low) 949.875 MHz (High)	High power Middle power Low power	None (No modulation)	
Modulation Characteristics	946.125 MHz (Low) 949.875 MHz (High)	High power Low power	See data.	
Emission Bandwidth	946.125 MHz (Low) 949.875 MHz (High)	High power Low power	1.6 dBV, 2500 Hz, Sine wave *1)	
Spurious emissions at antenna terminals	946.125MHz (Low) 949.875MHz (High)	High power Low power	1.6 dBV, 2500 Hz, Sine wave *1)	
Field strength of spurious radiation	946.125 MHz (Low) 949.875 MHz (High)	High power Low power	None, 1.6 dBV, 2500 Hz, Sine wave *2)	
Frequency stability	946.125 MHz (Low) 949.875 MHz (High)	High power	None (No modulation)	
*1) When modulated by a 2500 Hz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. *2) As for near band measurements, EUT was modulated same as note *1).				

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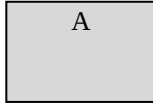
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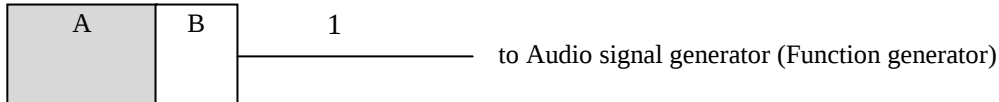
Facsimile: +81 463 50 6401

4.2. Configuration and peripherals

(1) None modulated



(2) Modulated



Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	UHF SYNTHESIZED WIRELESS TRANSMITTER	ATW-T6002 S	US003	Audio-Technica Corporation	EUT
B	AF input Jig	-	-	Audio-Technica Corporation	

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Audio	0.2	Shielded	Shielded	-

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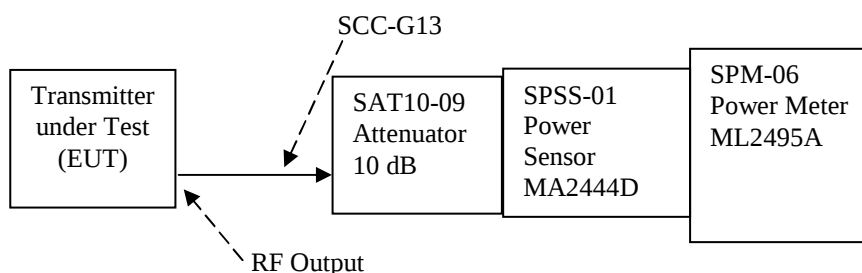
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SECTION 5: RF Output power

- 5.1 Test Procedure : FCC part 2 section 2.1046, TIA-603-D section 2.2.1
- 5.2 Test data : APPENDIX 1
- 5.3 Test result : Pass
- 5.4 Test instruments : SCC-G13, SAT10-09, SPSS-01, SPM-06
- 5.5 Measurement Block Diagram of RF power output



RF Power Measurement (FCC part 2 section 2.1046, TIA-603-D section 2.2.1)

SECTION 6: Modulation Characteristics

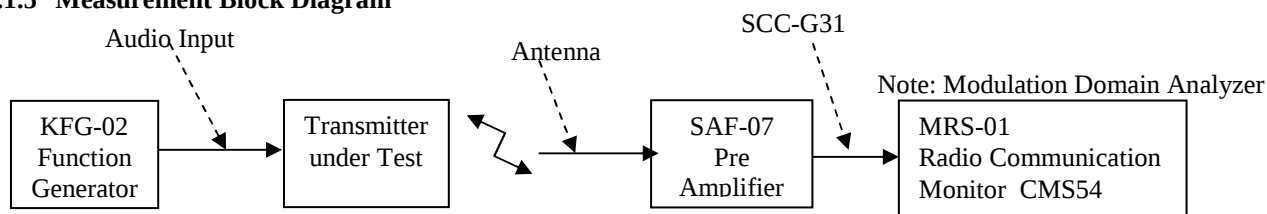
6.1 Transmitter Deviation for Input Level and Modulation frequency

- 6.1.1 Test Procedure : FCC part 2 section 2.1047, TIA-603-D section 2.2.3

- 1) The EUT was aligned for transmitter operation at full rated power.
- 2) When input Level from -63 dBV to +26 dBV is applied to audio via microphone jig input of EUT each modulation frequency 70 Hz, 100 Hz, 300 Hz, 500 Hz, 700 Hz, 1 kHz, 2.5 kHz, 5 kHz, 7 kHz, 10 kHz, 13 kHz, 15 kHz, frequency deviation is measured with MRS-01 (Model CMS54).

- 6.1.2 Test Data : APPENDIX 1
- 6.1.3 Test Result : Pass
- 6.1.4 Test Instrument : KFG-02, SAF-07, SCC-G31, MRS-01

6.1.5 Measurement Block Diagram



Modulation Characteristics (FCC part 2 section 2.1047, TIA-603-D section 2.2.3)

6.2 Audio frequency response

6.2.1 Test Procedure : FCC part 2 section 2.1047, TIA-603-D section 2.2.6

The audio input level was measured when frequency deviation indicates 50 % modulation which measured with Radio communication Service Monitor.

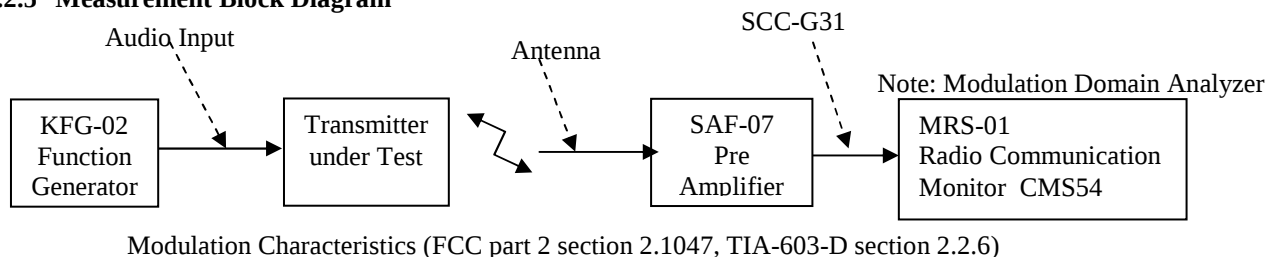
Audio frequency	70 Hz, 100 Hz, 300 Hz, 500 Hz, 700 Hz, 1 kHz, 2 kHz, 3 kHz, 5 kHz, 7 kHz, 10 kHz, 15 kHz
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6.2.2 Test Data : APPENDIX 1

6.2.3 Test Result : Pass

6.2.4 Test Instrument : KFG-02, SAF-07, SCC-G31, MRS-01

6.2.5 Measurement Block Diagram



6.3 Transmitter Deviation for Input Frequency Response

6.3.1 Test Procedure : FCC part 2 section 2.1047, TIA-603-D section 2.2.6

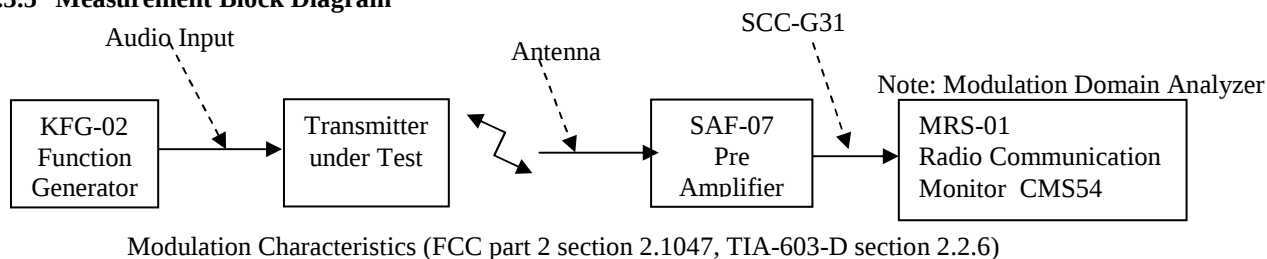
- 1) The EUT was aligned for transmitter operation at full rated power.
- 2) When frequency from 20 Hz to 18 kHz is applied to audio (microphone) input of EUT each input level -23 dBV, -18 dBV and -13 dBV, frequency deviation is measured with MRS-01 (Model CMS54).

6.3.2 Test Data : APPENDIX 1

6.3.3 Test Result : Pass

6.3.4 Test Instrument : KFG-02, SAF-07, SCC-G31, MRS-01

6.3.5 Measurement Block Diagram



SECTION 7: Emission Bandwidth and Field strength of spurious radiation (emission masks)

7.1 Test Procedure : FCC part 2 section 2.1049, TIA-603-D section 2.2.11

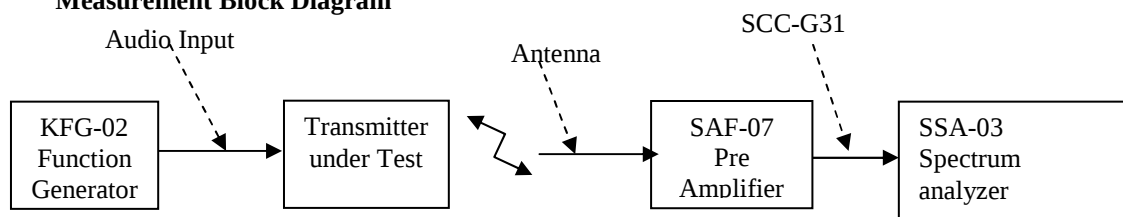
- 1) Set the reference level the spectrum analyzer to the unmodulation carrier level on the EUT
 - 2) The Carrier is modulated by a 2.5 kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. The input level shall be established at the frequency of maximum response of the audio modulation.
- *) The measurement was performed with Peak and Max Hold since the modulation method was frequency modulation.

7.2 Test Data : APPENDIX 1

7.3 Test Result : Pass

7.4 Test Instrument : KFG-02, SAF-07, SCC-G31, SSA-03

7.5 Measurement Block Diagram



Emission Bandwidth (FCC part 2 section 2.1049, TIA-603-D section 2.2.11)

SECTION 8: Spurious emission at Antenna Terminals

8.1 Test Procedure : FCC part 2 section 2.1051, TIA-603-D section 2.2.13

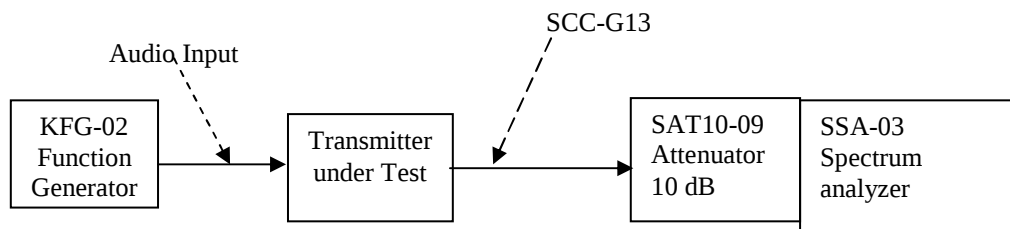
- 1) The EUT was aligned for transmitter operation at full rated power.
 - 2) Set the reference level the spectrum analyzer to the unmodulation carrier level on the EUT.
(Since spurious level was no difference between modulation mode and none-modulation mode)
 - 3) Output of EUT was connected with spectrum analyzer through attenuator 10 dB.
- *) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents.
Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart.
(9kHz-150kHz:RBW=200Hz, 150kHz-30MHz:RBW=10kHz)

8.2 Test Data : APPENDIX 1

8.3 Test result : Pass

8.4 Test Instrument : KFG-02, SCC-G13, SAT10-09, SSA-03

8.5 Measurement Block Diagram



Spurious Emission at Antenna Terminals (FCC part 2 section 2.1051, TIA-603-D section 2.2.13)

SECTION 9: Field Strength of Spurious Emission (except emission masks)

9.1 Test Procedure : FCC part 2 section 2.1053, TIA-603-D section 2.2.12

(Above 30MHz)

- 1) EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The Radiated Electric Field Strength has been measured in semi anechoic chamber at a distance of 3 m. The measuring antenna height was varied between 1 m to 4 m and the turn table was rotated a full revolution in order to obtain the maximum value of the electric field strength. The measurements were performed for both vertical and horizontal antenna polarization. Spurious emissions were observed with enough time according to the test standard.
- 2) Exchanged the EUT to the Substitution Antenna, the measurement was set for the same height 0.8 m as the EUT. The frequency below 1 GHz of the Substitution Antenna was used the Half wave dipole Antenna, which was tuned the measured frequency in 1). The frequency above 1 GHz of the Substitution Antenna was used Horn Antenna. The Substitution Antenna was connected to the Signal Generator, and the polarized electromagnetic radiation of the Substitution Antenna was matched with the one of the measuring Antenna, which was set with the Signal Generator to the measured frequency in 1). Then, we set with the Output power (CW) of the Signal Generator where the measuring electromagnetic field strength is equal to the measured value in 1) by means of varying the measuring antenna height between 1 m to 4 m to obtain maximum receiving level. Its Output power of Signal Generator was recorded.
- 3) Effective radiated power was calculated by subtracting the cable loss and the attenuator loss connected between the Signal Generator and the Substitution Antenna from the Output power of the Signal Generator recorded in 2). For the usage of the Antenna (Horn Antenna) except for the Half wave dipole Antenna (2.15 dBi) for the Substitution Antenna, the Effective radiated power was calculated by compensating the finite difference in the Antenna gain of the Half wave dipole Antenna, and Substitution Antenna.

Frequency	Below 1 GHz	Above 1 GHz
Instrument used	Test Receiver	Spectrum Analyzer
IF Bandwidth	RMS Average: 120 kHz BW	RMS Average: RBW: 1 MHz/VBW: 3 MHz

(Below 30MHz)

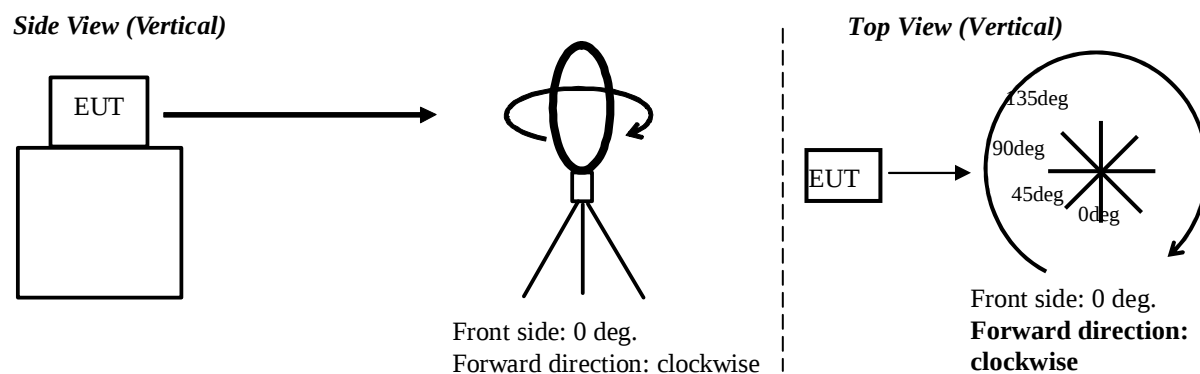
EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The Radiated Electric Field Strength has been measured in semi anechoic chamber at a distance of 3 m. The EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for vertical polarization (antenna angle: 0deg.to 360deg.) and horizontal polarization. Drawing of the antenna direction is shown in Figure 7.

Frequency	Below 150 kHz	150 kHz - 30 MHz
Instrument used	Test Receiver	Test Receiver
IF Bandwidth	RMS Average: 200 Hz BW	RMS Average: 9 kHz BW

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Measurement range : 9 kHz - 10 GHz
Test data : APPENDIX
Test result : Pass

Figure 7: Direction of the Loop Antenna



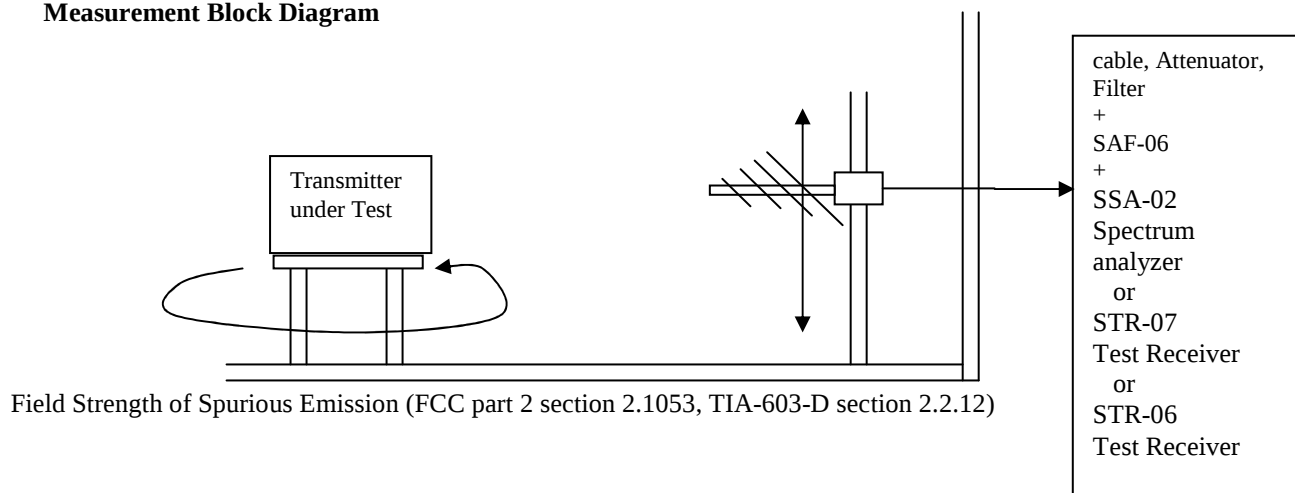
9.2 Test Data : APPENDIX 1

9.3 Test Result : Pass
* Range of below 30MHz was no-detect signal or noise.

9.4 Test Instrument :

[9 kHz - 30 MHz]: SAEC-03, SLP-02, SAT6-08, SCC-C1/C2/C3/C4/C5/C10/SRSE-03, SAF-03, STR-06
[30 MHz - 1 GHz]: SAEC-02, SBA-02, SAT6-02, SCC-B1/B3/B5/B7/B8/B13/SRSE-02, SLA-02, SAT10-01, KAT3-11,
SCC-B2/B4/B6/B7/B8/B13/SRSE-02, SAF-02, STR-07, SDA-07, SDA-08, SCC-04, SSG-02
[1 GHz - 10 GHz]: SAEC-03, SHA-03, SCC-G04, SFL-01, SAT20-01, SAF-06, SCC-G23, SSA-02,
SHA-RS01, SCC-G16, SSG-02

9.5 Measurement Block Diagram



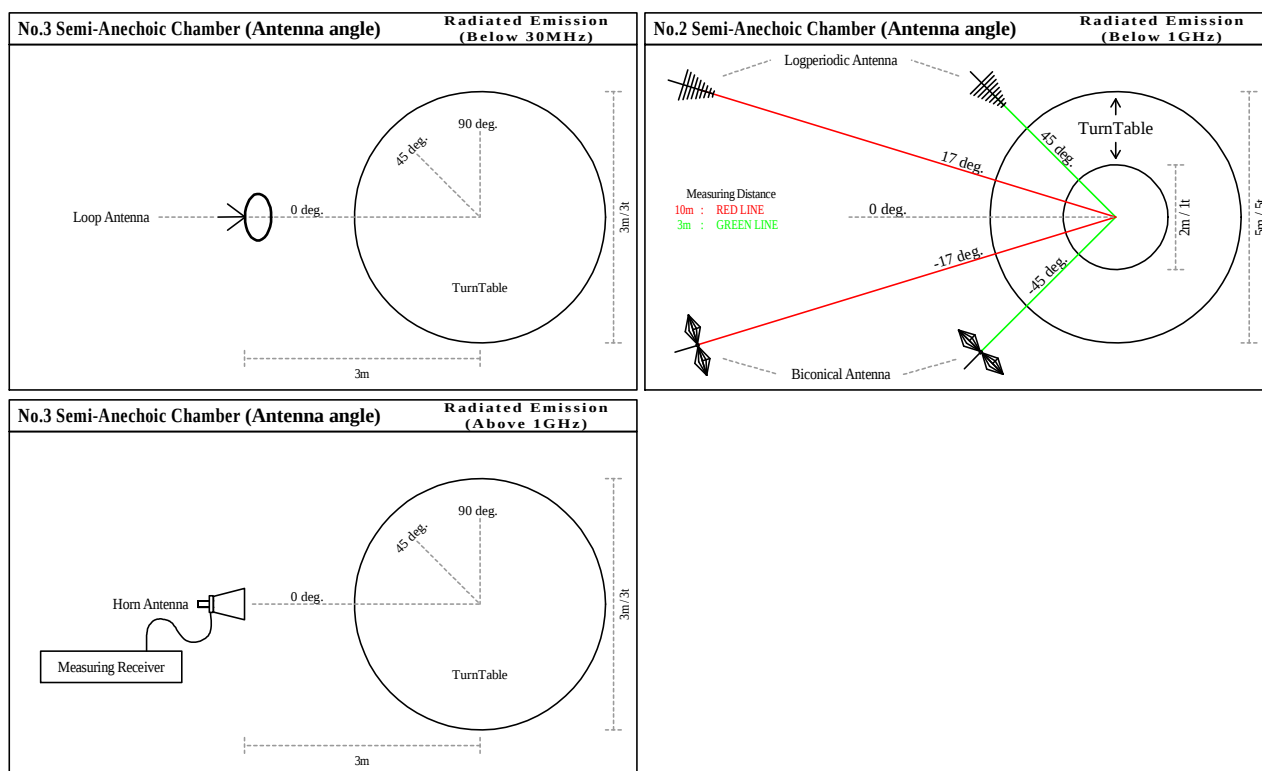
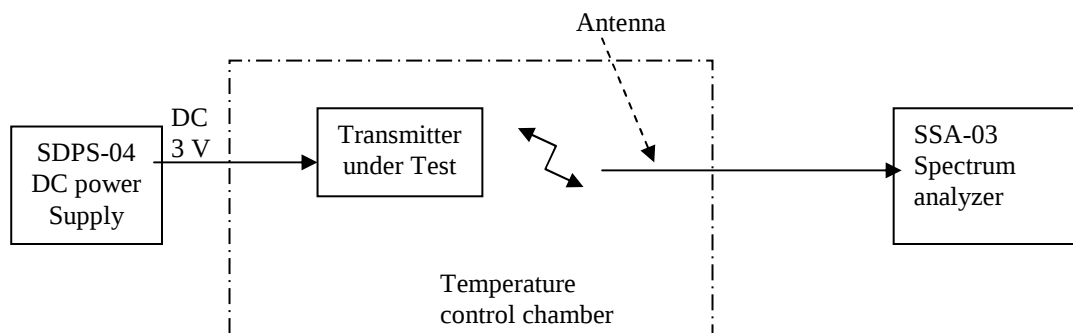


Figure 9. Antenna angle

SECTION 10: Frequency Stability

- 10.1 Test Procedure** : FCC part 2 section 2.1055, TIA-603-D section 2.2.2
* Used the spectrum analyzer, because the detecting phase was not able to be done correctly
- 10.2 Test Data** : APPENDIX 1
- 10.3 Test Result** : Pass
- 10.4 Test Instrument** : SCH-01, SCC-G13, SSA-03, STS-05

10.5 Measurement Block Diagram



Frequency Stability (FCC part 2 section 2.1055, TIA-603-D section 2.2.2)

Contents of APPENDIXES

APPENDIX 1: Data of Radio tests

RF output power

Modulation Characteristics

Emissions Bandwidth

Spurious emission at antenna terminal

Radiated Emission Test (Field Strength of Spurious Emission)

Field Strength of Spurious Emission (Emission masks)

Frequency stability

APPENDIX 2: Test instruments

Test instruments

APPENDIX 3: Photographs of test setup

Radiated emission

APPENDIX 1: Data of Radio tests

RF output power

UL Japan, Inc. Shonan EMC Lab.
No.5 Shielded Room

Company	Audio-Technica Corporation	Regulation	FCC part 74, section 74.861(d)(1)
Equipment	UHF SYNTHESIZED WIRELESS TRANSMITTER	Date	May 20, 2015
Model	ATW-T6002 S	Temperature	26 deg.C
Serial No.	US003	Humidity	50 %RH
Power	DC 3 V	ENGINEER	Kenichi Adachi
Mode	Transmitting		

(High power) (* P/M: Power Meter with power sensor, PK: Peak, AV: Average)

Freq. [MHz]	P/M (PK) Reading *1) [dBm]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result				Limit		Margin [dB]
					(Peak) *1)		(Average)		[dBm]	[mW]	
946.125	5.96	5.87	0.83	9.59	16.38	43.45	16.29	42.56	30.00	1000.00	13.71
948.000 *1)	5.89	5.81	0.83	9.59	16.31	42.76	16.23	41.98	30.00	1000.00	13.77
949.875	5.81	5.74	0.84	9.59	16.24	42.07	16.17	41.40	30.00	1000.00	13.83

(Middle power) (* P/M: Power Meter with power sensor, PK: Peak, AV: Average)

Freq. [MHz]	P/M (PK) Reading *1) [dBm]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result				Limit		Margin [dB]
					(Peak) *1)		(Average)		[dBm]	[mW]	
946.125	-0.73	-0.78	0.83	9.59	9.69	9.31	9.64	9.20	30.00	1000.00	20.36
948.000 *1)	-0.81	-0.85	0.83	9.59	9.61	9.14	9.57	9.06	30.00	1000.00	20.43
949.875	-0.88	-0.93	0.84	9.59	9.55	9.02	9.50	8.91	30.00	1000.00	20.50

(Low power) (* P/M: Power Meter with power sensor, PK: Peak, AV: Average)

Freq. [MHz]	P/M (PK) Reading *1) [dBm]	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result				Limit		Margin [dB]
					(Peak) *1)		(Average)		[dBm]	[mW]	
946.125	-7.66	-7.79	0.83	9.59	2.76	1.89	2.63	1.83	30.00	1000.00	27.37
948.000 *1)	-7.73	-7.84	0.83	9.59	2.69	1.86	2.58	1.81	30.00	1000.00	27.42
949.875	-7.80	-7.95	0.84	9.59	2.63	1.83	2.48	1.77	30.00	1000.00	27.52

Sample calculation:

Result [dBm] = P/M Reading [dBm] + Cable Loss [dB] + Atten. Loss [dB]

*1) Reference data.

Revised date : November 11, 2015

Data of Modulation Characteristics

(Deviation versus Audio input level and Audio Frequency)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 74, Section 74.861(e)(3)

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

TEST DISTANCE -

MODEL ATW-T6002 S

DATE April 30, 2015

S/ N US003

TEMPERATURE 26 deg.C

POWER DC 3 V

HUMIDITY 42 %RH

MODE Transmitting

ENGINEER Kenichi Adachi

946.125 MHz High power

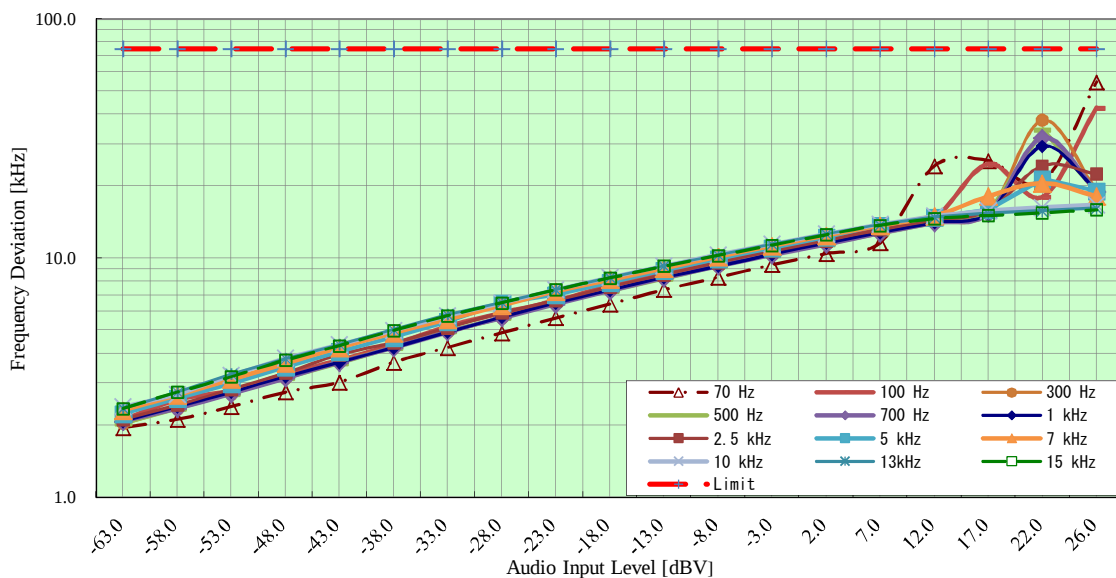
* CMS54 setting : filter OFF

* AF 2.5 kHz, Deviation 50 % (8.125 kHz) level:

-14.4 dBV

AF Input [dBV]	Deviation [kHz] (Peak)												Limit [kHz]
	70 Hz	100 Hz	300 Hz	500 Hz	700 Hz	1 kHz	2.5 kHz	5 kHz	7 kHz	10 kHz	13kHz	15 kHz	
-63.0	1.96	2.12	2.04	2.04	2.08	2.08	2.12	2.24	2.32	2.40	2.36	2.36	75.00
-58.0	2.12	2.56	2.36	2.36	2.36	2.40	2.44	2.60	2.68	2.69	2.76	2.76	75.00
-53.0	2.40	2.79	2.72	2.72	2.72	2.76	2.83	2.99	3.11	3.23	3.27	3.19	75.00
-48.0	2.76	3.27	3.15	3.15	3.15	3.19	3.31	3.51	3.63	3.83	3.79	3.75	75.00
-43.0	3.03	3.75	3.71	3.63	3.67	3.67	3.95	4.07	4.23	4.35	4.35	4.31	75.00
-38.0	3.67	4.35	4.27	4.23	4.23	4.23	4.43	4.67	4.87	4.99	5.03	4.99	75.00
-33.0	4.23	5.19	4.91	4.95	4.91	4.91	5.11	5.43	5.55	5.75	5.83	5.75	75.00
-28.0	4.87	5.91	5.63	5.63	5.63	5.67	5.91	6.51	6.35	6.51	6.55	6.51	75.00
-23.0	5.63	6.63	6.47	6.55	6.43	6.51	6.67	7.03	7.27	7.39	7.39	7.39	75.00
-18.0	6.43	7.67	7.35	7.31	7.31	7.35	7.59	7.90	8.14	8.30	8.30	8.26	75.00
-13.0	7.39	8.58	8.30	8.22	8.26	8.30	8.54	8.90	9.06	9.30	9.26	9.26	75.00
-8.0	8.30	9.62	9.30	9.30	9.26	9.26	9.58	9.94	10.14	10.34	10.30	10.26	75.00
-3.0	9.38	10.74	10.38	10.34	10.34	10.38	10.70	11.02	11.26	11.42	11.42	11.34	75.00
2.0	10.46	11.94	11.50	11.42	11.42	11.58	11.82	12.22	12.42	12.66	12.62	12.54	75.00
7.0	11.62	13.29	12.85	12.74	12.74	12.81	13.17	13.73	13.69	13.89	13.81	13.73	75.00
12.0	24.27	14.73	14.13	14.01	14.05	14.09	14.45	14.81	15.01	15.05	14.81	14.61	75.00
17.0	25.55	24.79	15.49	15.33	15.37	15.41	15.81	16.01	18.12	15.81	15.37	15.09	75.00
22.0	20.76	18.04	37.72	34.57	31.90	29.42	24.35	21.40	20.60	16.25	15.73	15.45	75.00
26.0	54.49	42.60	19.20	19.00	19.00	19.28	22.48	19.12	18.12	16.65	16.13	15.93	75.00

Deviation versus Audio input level and Audio Frequency



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Revised date : November 11, 2015

Data of Modulation Characteristics

(Deviation versus Audio input level and Audio Frequency)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 74, Section 74.861(e)(3)

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

TEST DISTANCE -

MODEL ATW-T6002 S

DATE April 30, 2015

S/ N US003

TEMPERATURE 26 deg.C

POWER DC 3 V

HUMIDITY 42 %RH

MODE Transmitting

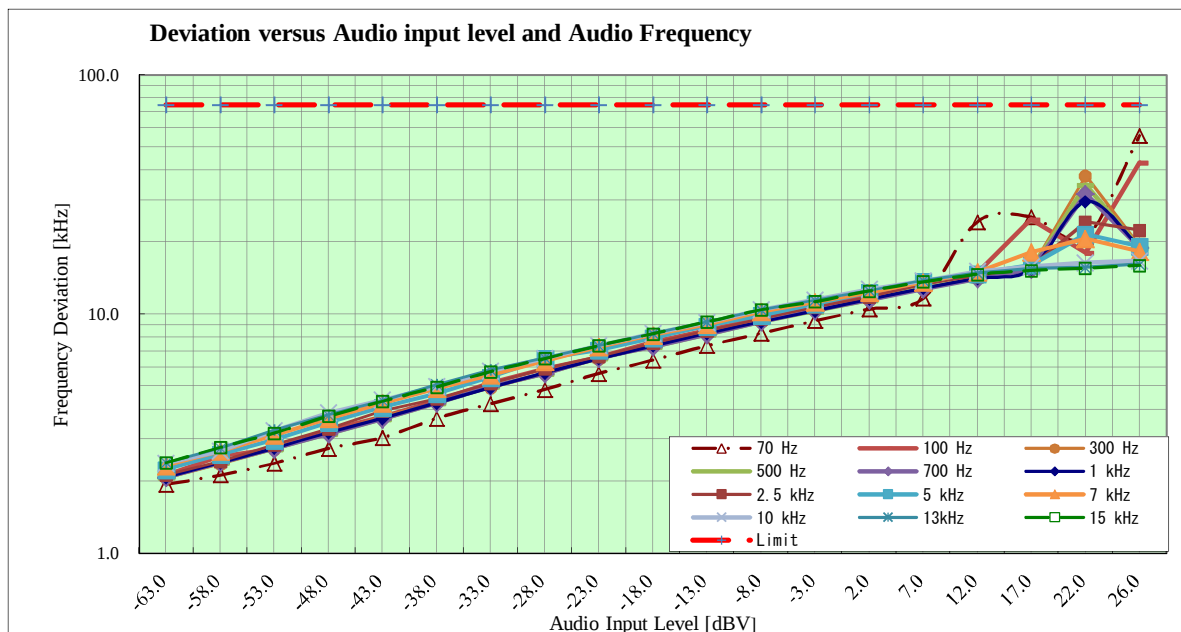
ENGINEER Kenichi Adachi

946.125 MHz Low power

* CMS54 setting : filter OFF

* AF 2.5 kHz, Deviation 50 % (8.125 kHz) level: -14.4 dBV

AF Input [dBV]	Deviation [kHz] (Peak)												Limit [kHz]
	70 Hz	100 Hz	300 Hz	500 Hz	700 Hz	1 kHz	2.5 kHz	5 kHz	7 kHz	10 kHz	13kHz	15 kHz	
-63.0	1.94	2.13	2.07	2.08	2.08	2.08	2.12	2.24	2.33	2.39	2.39	2.39	75.00
-58.0	2.12	2.54	2.37	2.39	2.39	2.39	2.42	2.59	2.68	2.68	2.76	2.77	75.00
-53.0	2.38	2.75	2.72	2.73	2.73	2.76	2.85	2.98	3.12	3.26	3.28	3.19	75.00
-48.0	2.74	3.27	3.18	3.16	3.16	3.20	3.32	3.52	3.67	3.87	3.79	3.75	75.00
-43.0	3.05	3.74	3.74	3.64	3.64	3.67	3.95	4.08	4.25	4.37	4.35	4.32	75.00
-38.0	3.67	4.35	4.26	4.25	4.25	4.25	4.44	4.67	4.89	4.97	5.08	4.97	75.00
-33.0	4.22	5.18	4.92	4.97	4.97	4.92	5.15	5.45	5.57	5.76	5.84	5.75	75.00
-28.0	4.84	5.91	5.63	5.64	5.64	5.67	5.92	6.52	6.36	6.52	6.57	6.52	75.00
-23.0	5.64	6.63	6.48	6.55	6.55	6.52	6.67	7.07	7.28	7.38	7.39	7.39	75.00
-18.0	6.42	7.67	7.35	7.32	7.32	7.37	7.60	7.94	8.18	8.32	8.31	8.28	75.00
-13.0	7.38	8.59	8.31	8.21	8.21	8.31	8.54	8.92	9.08	9.25	9.27	9.27	75.00
-8.0	8.31	9.63	9.31	9.31	9.26	9.28	9.57	9.88	10.22	10.46	10.42	10.43	75.00
-3.0	9.38	10.78	10.36	10.28	10.34	10.34	10.67	11.06	11.24	11.48	11.46	11.28	75.00
2.0	10.49	11.97	11.48	11.45	11.42	11.57	11.78	12.32	12.34	12.69	12.57	12.49	75.00
7.0	11.64	13.32	12.82	12.87	12.74	12.84	13.37	13.67	13.63	13.78	13.82	13.67	75.00
12.0	24.32	14.78	14.24	14.04	14.05	14.14	14.42	14.78	15.04	15.07	14.84	14.67	75.00
17.0	25.45	24.82	15.53	15.38	15.37	15.46	15.78	16.04	18.22	15.78	15.47	15.22	75.00
22.0	20.89	18.09	37.78	34.67	31.90	29.48	24.32	21.56	20.67	16.33	15.67	15.57	75.00
26.0	55.65	43.11	19.20	19.00	19.00	19.24	22.43	19.24	18.24	16.63	16.14	15.97	75.00



UL Japan, Inc.

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Revised date : November 11, 2015

Data of Modulation Characteristics

(Deviation versus Audio input level and Audio Frequency)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 74, Section 74.861(e)(3)

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

TEST DISTANCE -

MODEL ATW-T6002 S

DATE April 30, 2015

S/ N US003

TEMPERATURE 26 deg.C

POWER DC 3 V

HUMIDITY 42 %RH

MODE Transmitting

ENGINEER Kenichi Adachi

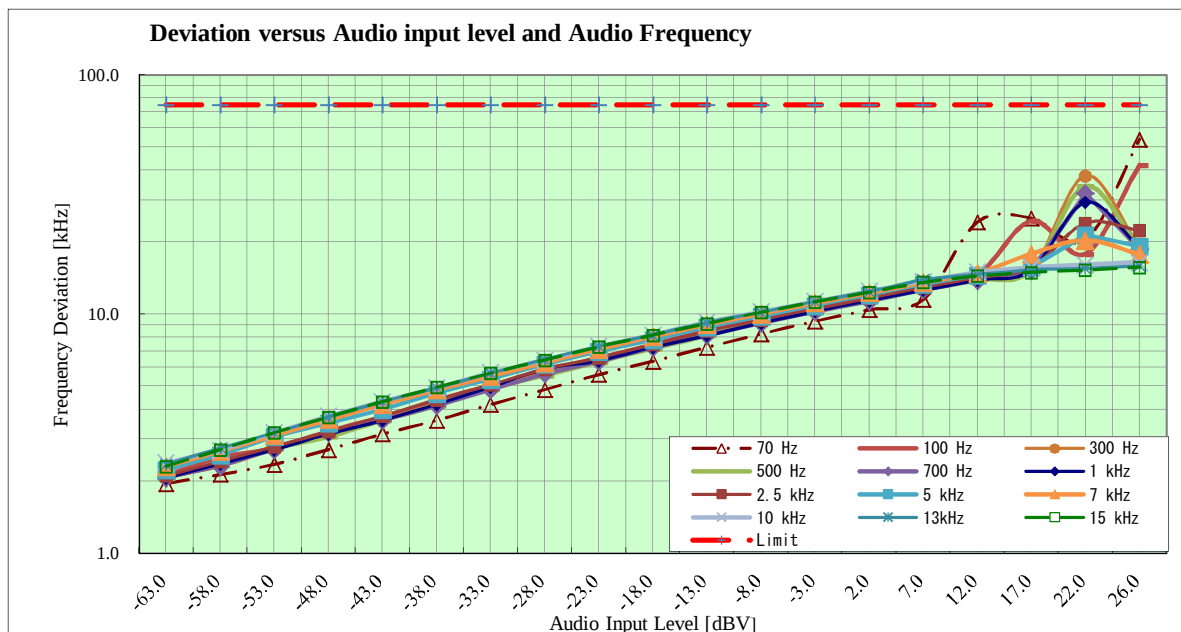
949.875 MHz High power

* CMS54 setting : filter OFF

* AF 2.5 kHz, Deviation 50 % (8.125 kHz) level:

-14.4 dBV

AF Input [dBV]	Deviation [kHz] (Peak)												Limit [kHz]
	70 Hz	100 Hz	300 Hz	500 Hz	700 Hz	1 kHz	2.5 kHz	5 kHz	7 kHz	10 kHz	13kHz	15 kHz	
-63.0	1.96	2.11	2.07	2.07	2.07	2.07	2.11	2.23	2.32	2.40	2.36	2.32	75.00
-58.0	2.14	2.52	2.32	2.40	2.32	2.37	2.42	2.58	2.68	2.69	2.76	2.72	75.00
-53.0	2.36	2.76	2.72	2.76	2.72	2.72	2.79	3.07	3.11	3.19	3.19	3.19	75.00
-48.0	2.72	3.23	3.15	3.07	3.19	3.15	3.23	3.51	3.63	3.75	3.71	3.71	75.00
-43.0	3.15	3.71	3.59	3.59	3.59	3.59	3.75	3.99	4.19	4.31	4.31	4.31	75.00
-38.0	3.59	4.31	4.23	4.15	4.15	4.19	4.39	4.67	4.83	4.91	4.91	4.95	75.00
-33.0	4.19	5.03	4.83	4.87	4.83	4.95	5.07	5.35	5.51	5.71	5.67	5.67	75.00
-28.0	4.83	5.79	5.79	5.55	5.63	5.89	5.89	6.19	6.27	6.43	6.47	6.43	75.00
-23.0	5.59	6.55	6.39	6.31	6.35	6.39	6.59	6.99	7.15	7.35	7.35	7.31	75.00
-18.0	6.35	7.47	7.27	7.19	7.27	7.27	7.47	7.82	8.06	8.18	8.18	8.18	75.00
-13.0	7.27	8.50	8.22	8.14	8.14	8.14	8.50	8.82	9.06	9.26	9.22	9.14	75.00
-8.0	8.26	9.54	9.18	9.46	9.18	9.18	9.46	9.82	10.02	10.22	10.18	10.18	75.00
-3.0	9.34	10.62	10.26	10.22	10.22	10.30	10.54	10.86	11.14	11.30	11.30	11.26	75.00
2.0	10.42	11.82	11.38	11.70	11.30	11.38	11.66	12.06	12.30	12.50	12.42	12.34	75.00
7.0	11.50	13.21	12.66	12.66	12.62	12.62	12.97	13.37	13.57	13.73	13.93	13.57	75.00
12.0	24.23	14.53	13.93	13.85	13.81	13.89	14.21	14.53	14.85	14.97	14.65	14.45	75.00
17.0	25.19	24.55	15.33	15.21	15.21	15.29	15.69	15.81	17.88	15.65	15.29	14.93	75.00
22.0	20.40	17.88	37.92	34.25	31.94	29.34	24.03	21.44	20.36	16.05	15.57	15.29	75.00
26.0	53.85	42.04	19.08	18.88	18.72	19.08	22.36	19.16	17.80	16.41	15.93	15.69	75.00



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Revised date : November 11, 2015

Data of Modulation Characteristics

(Deviation versus Audio input level and Audio Frequency)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 74, Section 74.861(e)(3)

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

TEST DISTANCE -

MODEL ATW-T6002 S

DATE April 30, 2015

S/ N US003

TEMPERATURE 26 deg.C

POWER DC 3 V

HUMIDITY 42 %RH

MODE Transmitting

ENGINEER Kenichi Adachi

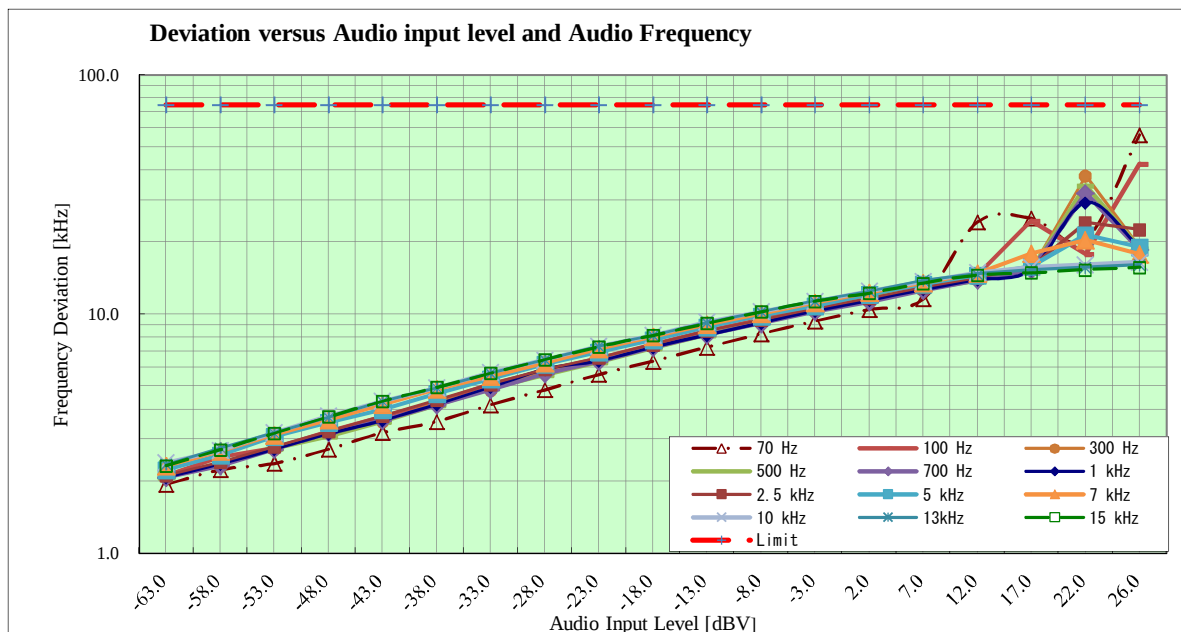
949.875 MHz Low power

* CMS54 setting : filter OFF

* AF 2.5 kHz, Deviation 50 % (8.125 kHz) level:

-14.4 dBV

AF Input [dBV]	Deviation [kHz] (Peak)												Limit [kHz]
	70 Hz	100 Hz	300 Hz	500 Hz	700 Hz	1 kHz	2.5 kHz	5 kHz	7 kHz	10 kHz	13kHz	15 kHz	
-63.0	1.94	2.12	2.08	2.08	2.08	2.08	2.12	2.24	2.32	2.39	2.35	2.33	75.00
-58.0	2.23	2.52	2.32	2.38	2.32	2.36	2.41	2.57	2.67	2.69	2.75	2.71	75.00
-53.0	2.38	2.76	2.73	2.74	2.72	2.72	2.80	3.09	3.13	3.20	3.19	3.18	75.00
-48.0	2.72	3.24	3.19	3.08	3.20	3.16	3.24	3.52	3.62	3.74	3.72	3.72	75.00
-43.0	3.19	3.72	3.55	3.55	3.60	3.59	3.75	3.99	4.19	4.32	4.32	4.32	75.00
-38.0	3.55	4.31	4.27	4.17	4.16	4.19	4.39	4.66	4.86	4.92	4.92	4.94	75.00
-33.0	4.18	5.09	4.82	4.88	4.84	4.95	5.09	5.35	5.51	5.71	5.67	5.67	75.00
-28.0	4.83	5.80	5.79	5.55	5.62	5.88	5.89	6.19	6.26	6.43	6.46	6.45	75.00
-23.0	5.59	6.53	6.39	6.31	6.35	6.38	6.58	6.97	7.15	7.36	7.35	7.31	75.00
-18.0	6.35	7.46	7.28	7.19	7.27	7.27	7.46	7.83	8.08	8.14	8.14	8.14	75.00
-13.0	7.27	8.51	8.22	8.18	8.18	8.18	8.51	8.81	9.07	9.28	9.25	9.16	75.00
-8.0	8.28	9.51	9.18	9.47	9.14	9.19	9.46	9.84	10.08	10.24	10.24	10.22	75.00
-3.0	9.36	10.64	10.24	10.24	10.26	10.34	10.56	10.82	11.16	11.28	11.34	11.32	75.00
2.0	10.46	11.84	11.34	11.72	11.24	11.43	11.68	12.08	12.34	12.45	12.49	12.24	75.00
7.0	11.57	13.24	12.63	12.68	12.56	12.68	12.92	13.34	13.52	13.67	13.88	13.48	75.00
12.0	24.24	14.56	13.91	13.78	13.89	13.94	14.24	14.54	14.83	14.92	14.69	14.57	75.00
17.0	25.14	24.53	15.36	15.30	15.26	15.34	15.72	15.83	17.92	15.68	15.32	14.88	75.00
22.0	20.46	17.84	37.89	34.46	31.98	29.26	24.09	21.46	20.43	16.09	15.64	15.34	75.00
26.0	56.17	42.56	19.02	18.89	18.67	19.12	22.48	19.12	17.84	16.48	16.03	15.72	75.00



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Revised date : November 11, 2015

Data of Modulation Characteristics (Audio Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation
EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER
MODEL ATW-T6002 S
S/ N US003
POWER DC 3 V
MODE Transmitting

TEST DISTANCE -
DATE April 30, 2015
TEMPERATURE 26 deg.C
HUMIDITY 42 %RH
ENGINEER Kenichi Adachi

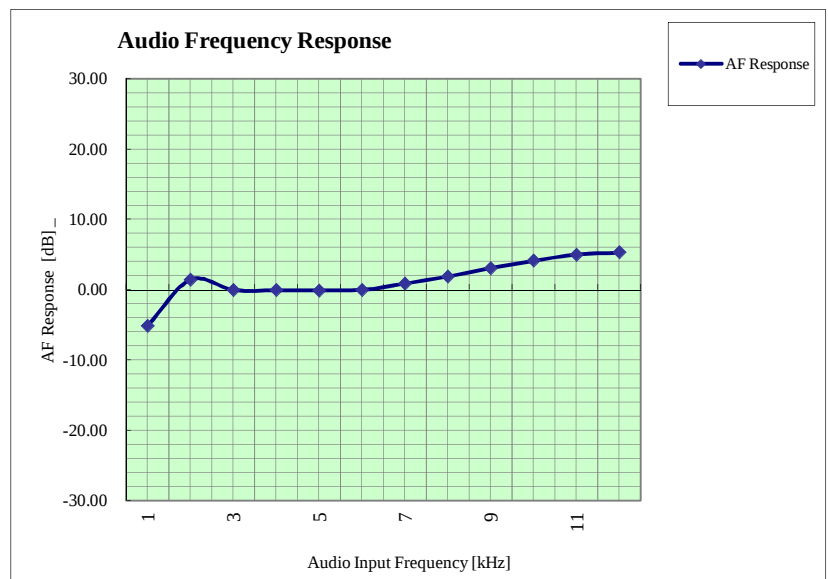
946.125 MHz, High power

* CMS54 setting : filter OFF

AF Freq. [Hz]	AF level [mV]	AF Response [dB]
70	384.00	-5.08
100	181.00	1.45
300	214.00	0.00
500	215.00	-0.04
700	216.00	-0.08
1000	214.00	0.00
2000	193.00	0.90
3000	172.00	1.90
5000	150.00	3.09
7000	133.00	4.13
10000	120.00	5.02
15000	116.00	5.32

Calculation formula:

$$\text{AF Response} = 20 \times \log (\text{AF Level of 1 kHz} / \text{AF Level})$$



* The Audio input level was measured when frequency deviation indicates 50% modulation which measured with Radio communication service monitor.

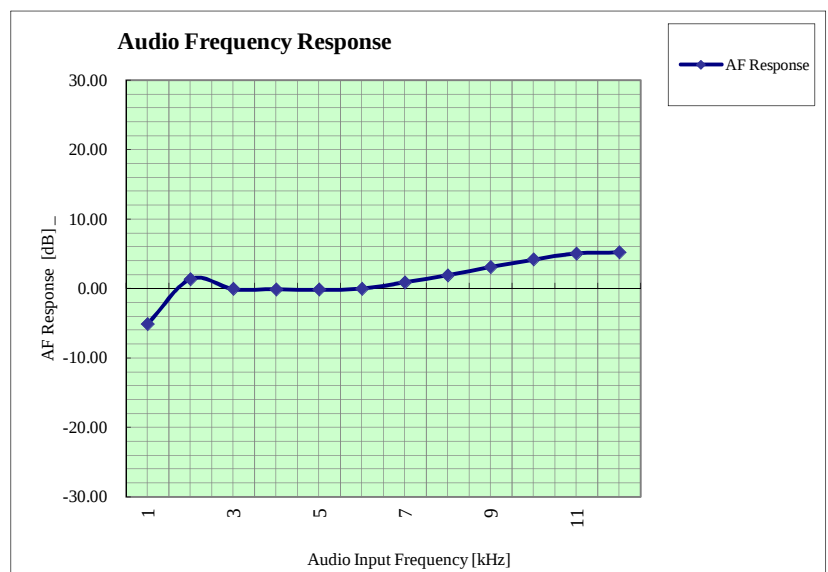
946.125 MHz, Low power

* CMS54 setting : filter OFF

AF Freq. [Hz]	AF level [mV]	AF Response [dB]
70	385.00	-5.10
100	182.00	1.41
300	215.00	-0.04
500	216.00	-0.08
700	217.00	-0.12
1000	214.00	0.00
2000	192.00	0.94
3000	171.00	1.95
5000	149.00	3.14
7000	132.00	4.20
10000	119.00	5.10
15000	117.00	5.24

Calculation formula:

$$\text{AF Response} = 20 \times \log (\text{AF Level of 1 kHz} / \text{AF Level})$$



* The Audio input level was measured when frequency deviation indicates 50% modulation which measured with Radio communication service monitor.

UL Japan, Inc.**Shonan EMC Lab.**

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Data of Modulation Characteristics (Audio Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation
EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER
MODEL ATW-T6002 S
S/ N US003
POWER DC 3 V
MODE Transmitting

TEST DISTANCE -
DATE April 30, 2015
TEMPERATURE 26 deg.C
HUMIDITY 42 %RH
ENGINEER Kenichi Adachi

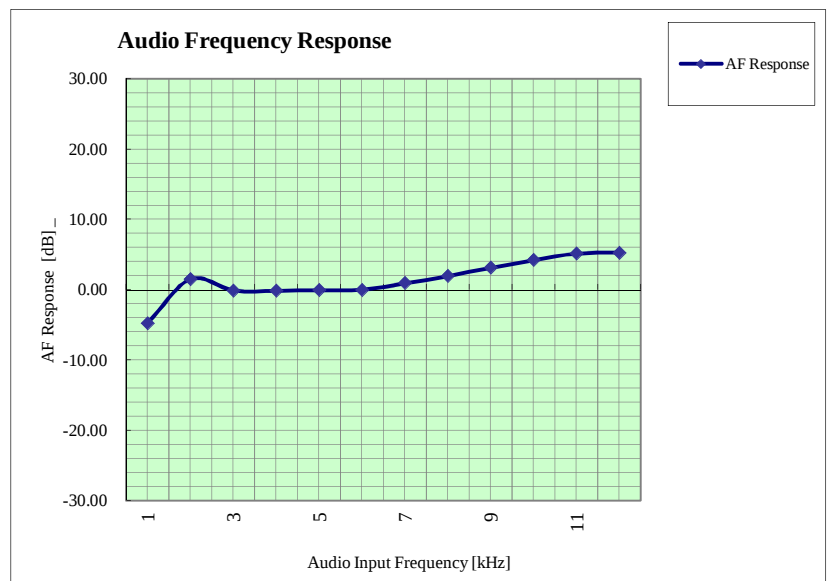
949.875 MHz, High power

* CMS54 setting : filter OFF

AF Freq. [Hz]	AF level [mV]	AF Response [dB]
70	385.00	-4.74
100	187.00	1.53
300	225.00	-0.08
500	226.00	-0.12
700	224.00	-0.04
1000	223.00	0.00
2000	200.00	0.95
3000	178.00	1.96
5000	155.00	3.16
7000	137.00	4.23
10000	123.00	5.17
15000	121.00	5.31

Calculation formula:

$$\text{AF Response} = 20 \times \log (\text{AF Level of 1 kHz} / \text{AF Level})$$



* The Audio input level was measured when frequency deviation indicates 50% modulation which measured with Radio communication service monitor.

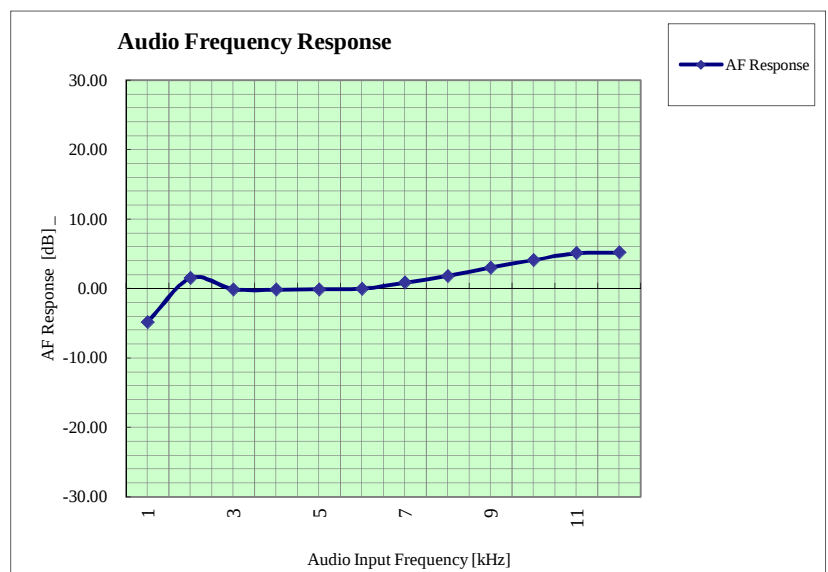
949.875 MHz, Low power

* CMS54 setting : filter OFF

AF Freq. [Hz]	AF level [mV]	AF Response [dB]
70	386.00	-4.80
100	186.00	1.54
300	224.00	-0.08
500	225.00	-0.12
700	224.00	-0.08
1000	222.00	0.00
2000	201.00	0.86
3000	179.00	1.87
5000	156.00	3.06
7000	138.00	4.13
10000	123.00	5.13
15000	122.00	5.20

Calculation formula:

$$\text{AF Response} = 20 \times \log (\text{AF Level of 1 kHz} / \text{AF Level})$$



* The Audio input level was measured when frequency deviation indicates 50% modulation which measured with Radio communication service monitor.

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Data of Modulation Characteristics

(Transmitter Deviation for Input Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

MODEL ATW-T6002 S

S/ N US003

POWER DC 3 V

MODE Transmitting

946.125 MHz High power

* CMS54 setting : filter OFF

TEST DISTANCE -

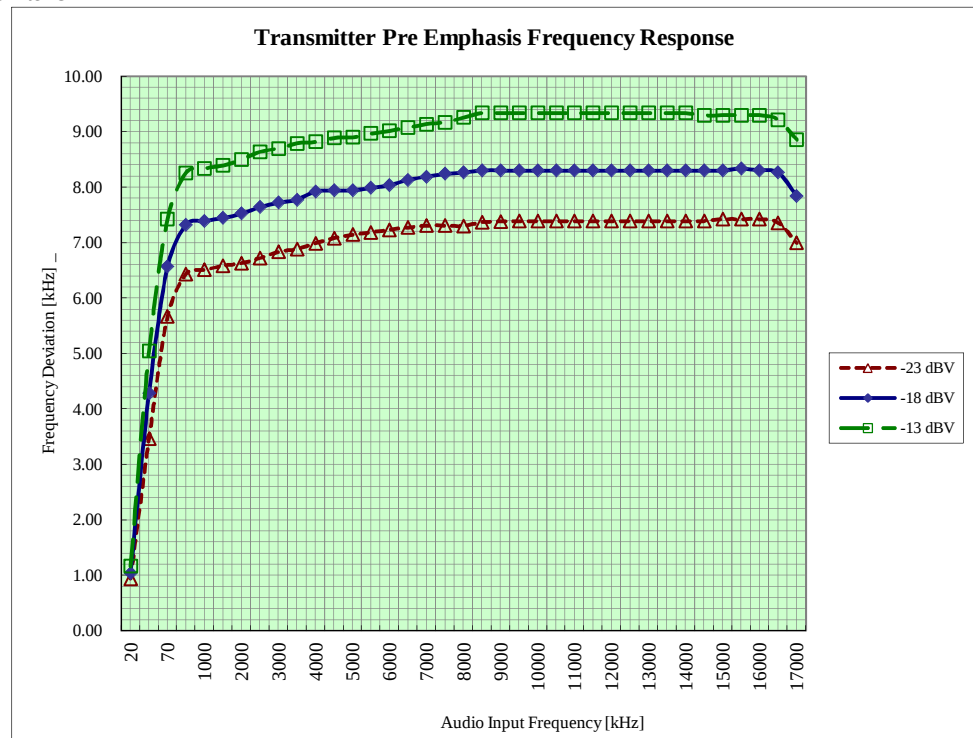
DATE April 30, 2015

TEMPERATURE 26 deg.C

HUMIDITY 42 %RH

ENGINEER Kenichi Adachi

Input Freq	Deviation [kHz] (Peak)		
	-23 dBV	-18 dBV	-13 dBV
20	0.94	1.05	1.17
50	3.47	4.29	5.05
70	5.67	6.57	7.43
500	6.44	7.33	8.26
1000	6.51	7.39	8.34
1500	6.59	7.45	8.39
2000	6.63	7.53	8.50
2500	6.72	7.64	8.64
3000	6.84	7.72	8.70
3500	6.89	7.78	8.79
4000	6.99	7.93	8.82
4500	7.09	7.94	8.89
5000	7.15	7.94	8.90
5500	7.19	7.99	8.97
6000	7.24	8.04	9.02
6500	7.28	8.14	9.08
7000	7.31	8.19	9.14
7500	7.31	8.24	9.18
8000	7.31	8.27	9.26
8500	7.37	8.31	9.34
9000	7.39	8.31	9.34
9500	7.39	8.31	9.34
10000	7.39	8.31	9.34
10500	7.39	8.31	9.34
11000	7.39	8.31	9.34
11500	7.39	8.31	9.34
12000	7.39	8.31	9.34
12500	7.39	8.31	9.34
13000	7.39	8.31	9.34
13500	7.39	8.31	9.34
14000	7.39	8.31	9.34
14500	7.39	8.31	9.30
15000	7.43	8.31	9.30
15500	7.43	8.34	9.30
16000	7.43	8.31	9.30
16500	7.36	8.27	9.22
17000	7.00	7.85	8.86



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Data of Modulation Characteristics

(Transmitter Deviation for Input Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

MODEL ATW-T6002 S

S/ N US003

POWER DC 3 V

MODE Transmitting

946.125 MHz Low power

* CMS54 setting : filter OFF

TEST DISTANCE

-

DATE

April 30, 2015

TEMPERATURE

26 deg.C

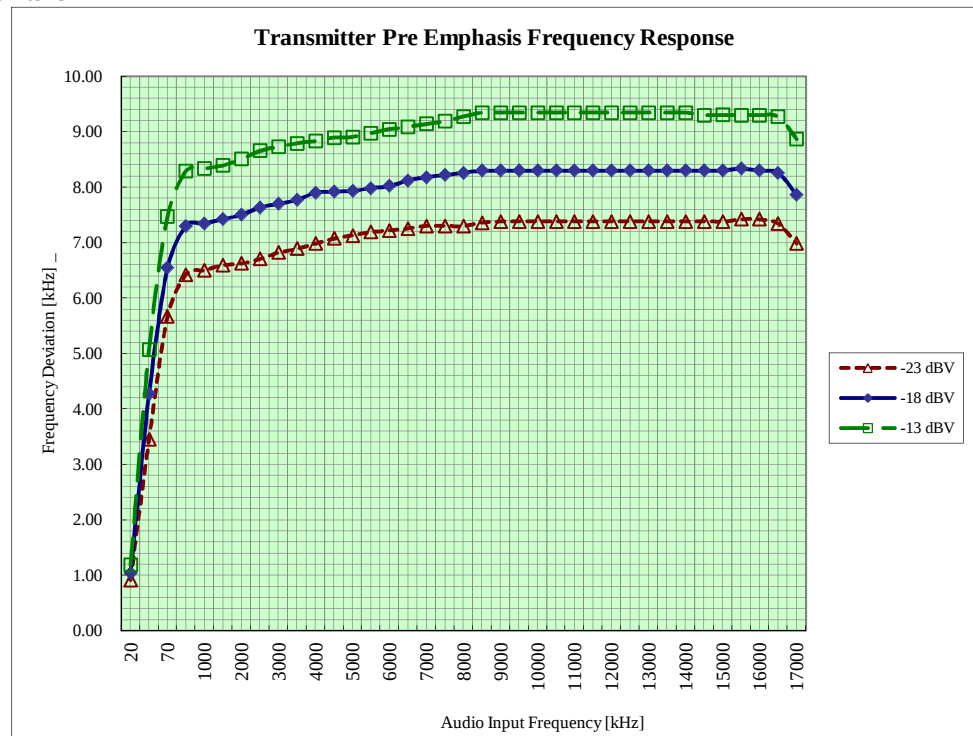
HUMIDITY

42 %RH

ENGINEER

Kenichi Adachi

Input Freq	Deviation [kHz] (Peak)		
	-23 dBV	-18 dBV	-13 dBV
20	0.92	1.05	1.19
50	3.46	4.27	5.08
70	5.67	6.55	7.47
500	6.43	7.31	8.29
1000	6.51	7.35	8.34
1500	6.60	7.43	8.40
2000	6.63	7.51	8.51
2500	6.71	7.64	8.66
3000	6.83	7.71	8.73
3500	6.89	7.77	8.80
4000	6.99	7.90	8.84
4500	7.08	7.92	8.90
5000	7.13	7.94	8.91
5500	7.19	7.99	8.98
6000	7.22	8.02	9.05
6500	7.26	8.12	9.09
7000	7.31	8.18	9.15
7500	7.31	8.22	9.19
8000	7.31	8.26	9.28
8500	7.37	8.30	9.35
9000	7.39	8.30	9.35
9500	7.39	8.30	9.35
10000	7.39	8.30	9.35
10500	7.39	8.30	9.35
11000	7.39	8.30	9.35
11500	7.39	8.30	9.35
12000	7.39	8.30	9.35
12500	7.39	8.30	9.35
13000	7.39	8.30	9.35
13500	7.39	8.30	9.35
14000	7.39	8.30	9.35
14500	7.39	8.30	9.30
15000	7.39	8.30	9.31
15500	7.43	8.34	9.30
16000	7.43	8.30	9.30
16500	7.35	8.26	9.27
17000	6.99	7.86	8.87



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Data of Modulation Characteristics

(Transmitter Deviation for Input Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

MODEL ATW-T6002 S

S/ N US003

POWER DC 3 V

MODE Transmitting

949.875 MHz High power

* CMS54 setting : filter OFF

TEST DISTANCE

-

DATE

April 30, 2015

TEMPERATURE

26 deg.C

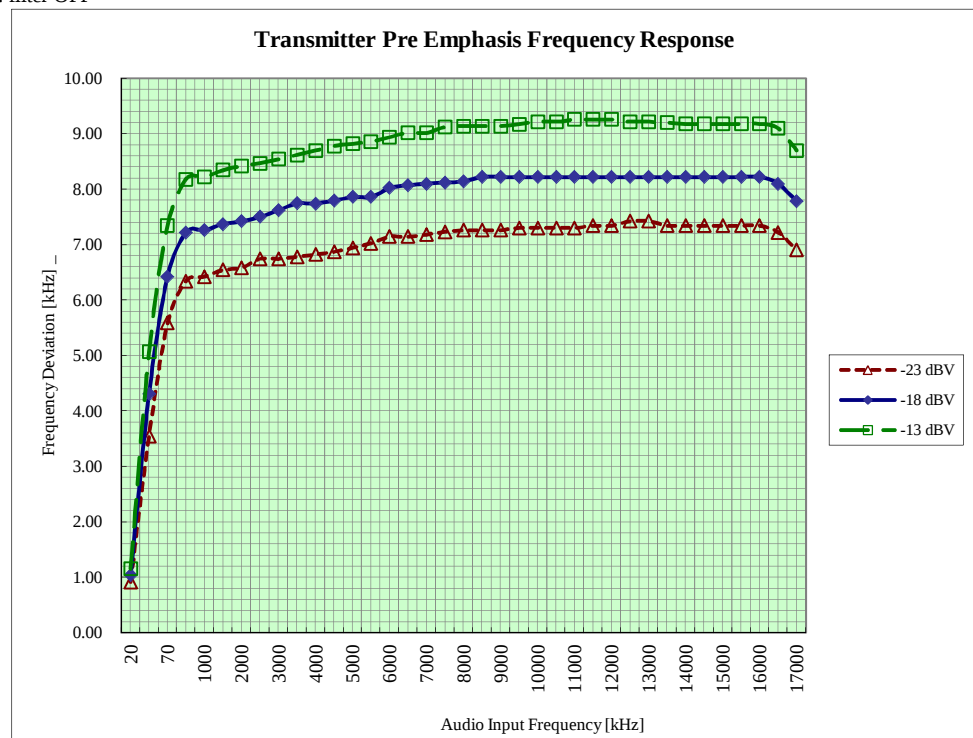
HUMIDITY

42 %RH

ENGINEER

Kenichi Adachi

Input Freq	Deviation [kHz] (Peak)		
	-23 dBV	-18 dBV	-13 dBV
20	0.92	1.04	1.16
50	3.55	4.31	5.07
70	5.59	6.43	7.35
500	6.35	7.23	8.18
1000	6.43	7.27	8.22
1500	6.55	7.37	8.35
2000	6.59	7.43	8.42
2500	6.75	7.51	8.47
3000	6.75	7.63	8.54
3500	6.78	7.75	8.62
4000	6.83	7.75	8.70
4500	6.87	7.80	8.78
5000	6.95	7.86	8.82
5500	7.03	7.86	8.86
6000	7.15	8.02	8.94
6500	7.15	8.07	9.02
7000	7.19	8.10	9.02
7500	7.24	8.12	9.12
8000	7.27	8.14	9.14
8500	7.27	8.22	9.14
9000	7.27	8.22	9.14
9500	7.31	8.22	9.17
10000	7.31	8.22	9.22
10500	7.31	8.22	9.22
11000	7.31	8.22	9.26
11500	7.35	8.22	9.26
12000	7.35	8.22	9.26
12500	7.43	8.22	9.22
13000	7.43	8.22	9.22
13500	7.35	8.22	9.20
14000	7.35	8.22	9.18
14500	7.35	8.22	9.18
15000	7.35	8.22	9.18
15500	7.35	8.22	9.18
16000	7.35	8.22	9.18
16500	7.23	8.10	9.10
17000	6.91	7.78	8.70



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Data of Modulation Characteristics

(Transmitter Deviation for Input Frequency Response)

UL Japan, Inc. Shonan EMC Lab.

No.5 Shielded Room

REGULATION

FCC part 2, section 2.1047

COMPANY Audio-Technica Corporation

EQUIPMENT UHF SYNTHESIZED WIRELESS TRANSMITTER

MODEL ATW-T6002 S

S/ N US003

POWER DC 3 V

MODE Transmitting

949.875 MHz Low power

* CMS54 setting : filter OFF

TEST DISTANCE -

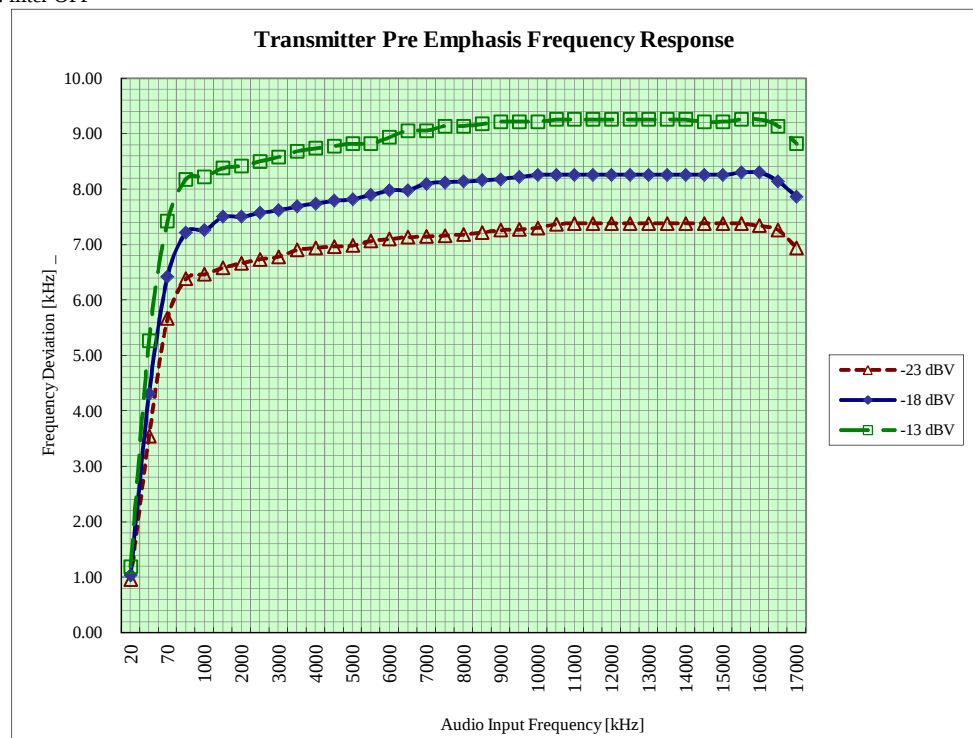
DATE April 30, 2015

TEMPERATURE 26 deg.C

HUMIDITY 42 %RH

ENGINEER Kenichi Adachi

Input Freq	Deviation [kHz] (Peak)		
	-23 dBV	-18 dBV	-13 dBV
20	0.96	1.04	1.20
50	3.55	4.31	5.27
70	5.67	6.43	7.43
500	6.39	7.23	8.18
1000	6.47	7.27	8.22
1500	6.59	7.51	8.38
2000	6.67	7.51	8.42
2500	6.74	7.58	8.51
3000	6.79	7.63	8.58
3500	6.90	7.69	8.69
4000	6.95	7.75	8.74
4500	6.97	7.79	8.78
5000	6.99	7.82	8.82
5500	7.07	7.90	8.82
6000	7.11	7.98	8.94
6500	7.14	7.99	9.06
7000	7.15	8.10	9.06
7500	7.17	8.13	9.14
8000	7.19	8.14	9.14
8500	7.22	8.17	9.18
9000	7.27	8.18	9.22
9500	7.28	8.22	9.22
10000	7.31	8.26	9.22
10500	7.37	8.26	9.26
11000	7.39	8.26	9.26
11500	7.39	8.26	9.26
12000	7.39	8.26	9.26
12500	7.39	8.26	9.26
13000	7.39	8.26	9.26
13500	7.39	8.26	9.26
14000	7.39	8.26	9.26
14500	7.39	8.26	9.22
15000	7.39	8.26	9.22
15500	7.39	8.30	9.26
16000	7.35	8.30	9.26
16500	7.27	8.14	9.14
17000	6.95	7.86	8.82



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Revised date : November 11, 2015

Emission Bandwidth

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting
 modulation at 2.5kHz at 16dB over 50%

UL Japan, Inc. Shonan EMC Lab.
 No.5 Shielded Room

Regulation FCC part 74, section 74.861(e)(5)
 Date May 1, 2015
 Temperature 25 deg.C
 Humidity 47 %RH
 ENGINEER Kenichi Adachi

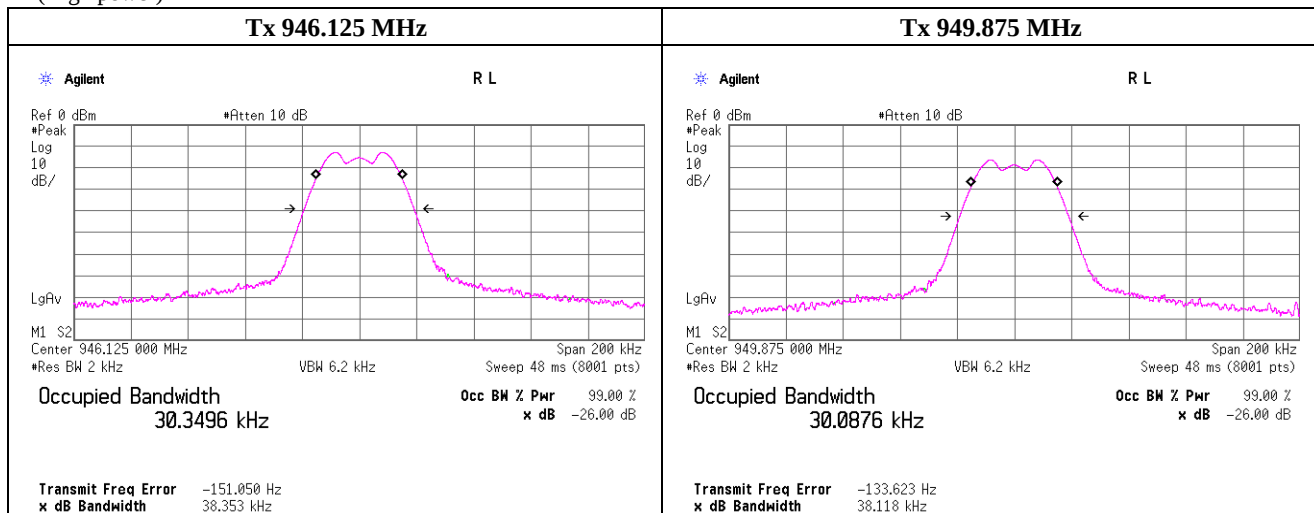
Freq. [MHz]	99% Occupied bandwidth		Limit [kHz]
	High power [kHz]	Low power [kHz]	
946.1250	30.3496	30.2815	< 200.0
949.8750	30.0876	30.0611	< 200.0

(reference)

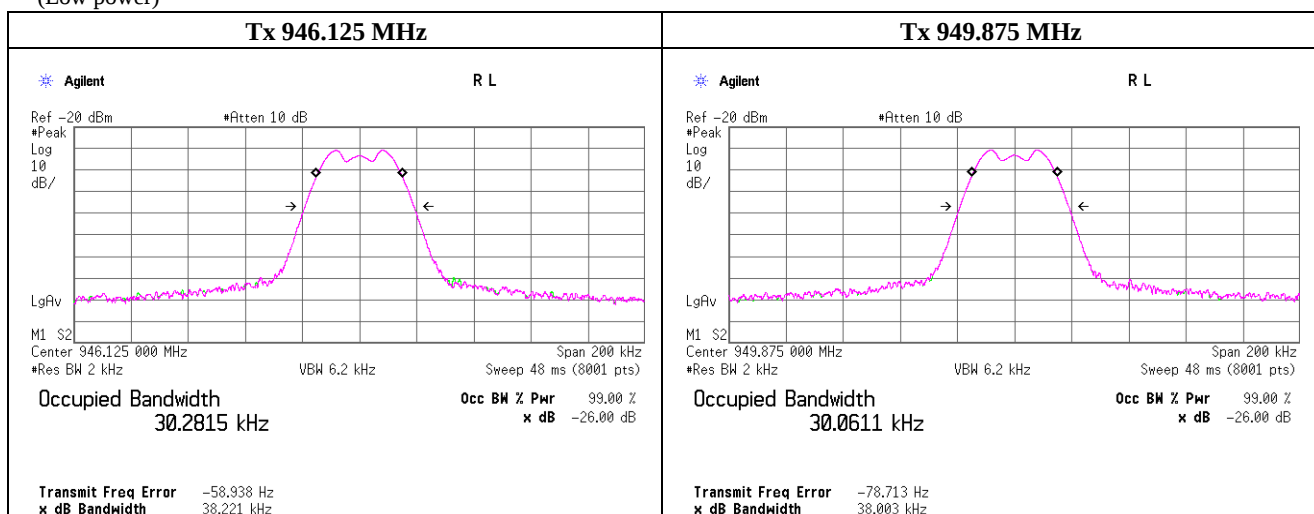
Necessary bandwidth ($B_n = 2M + 2D$)

Bn [kHz]	M [kHz]	D [kHz]
62.5	15	16.25

(High power)



(Low power)



UL Japan, Inc.

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Revised date : November 11, 2015

Spurious emission at antenna terminalUL Japan, Inc. Shonan EMC Lab.
No.5 Shielded Room

Company	Audio-Technica Corporation	Regulation	FCC part 74, section 74.861(e)(6)
Equipment	UHF SYNTHESIZED WIRELESS TRANSMITTER	Date	May 20, 2015
Model	ATW-T6002 S	Temperature	26 deg.C
Serial No.	US003	Humidity	50 %RH
Power	DC 3 V	ENGINEER	Kenichi Adachi
Mode	Transmitting High power modulation at 2.5kHz at 16dB over 50%		

(Freq. = Frequency)

Power setting	Channel	Tested Freq. [MHz]	Reading Freq. [MHz]	Level [dBm]	Cable loss [dB]	Attenuator loss [dB]	Reult [dBm]	Limit [dBm]	Margin [dB]
High power	Low	946.125	0.014	-100.62	0.01	9.50	-91.11	-13.00	78.11
			0.213	-89.66	0.01	9.50	-80.15	-13.00	67.15
			295.650	-78.23	0.47	9.53	-68.22	-13.00	55.22
			650.500	-67.32	0.67	9.54	-57.11	-13.00	44.11
			1892.200	-56.34	1.10	9.57	-45.67	-13.00	32.67
			7125.625	-64.60	2.31	9.26	-53.02	-13.00	40.02
	High	949.875	0.009	-99.02	0.01	9.50	-89.51	-13.00	76.51
			0.180	-88.95	0.01	9.50	-79.44	-13.00	66.44
			296.860	-77.63	0.48	9.53	-67.62	-13.00	54.62
			653.000	-67.78	0.67	9.54	-57.57	-13.00	44.57
			1899.500	-56.63	1.11	9.57	-45.96	-13.00	32.96
Low power	Low	946.125	0.010	-99.13	0.01	9.50	-89.62	-13.00	76.62
			0.165	-90.88	0.01	9.50	-81.37	-13.00	68.37
			287.140	-82.44	0.46	9.53	-72.44	-13.00	59.44
			650.500	-78.87	0.67	9.54	-68.66	-13.00	55.66
			3157.000	-67.07	1.45	9.57	-56.05	-13.00	43.05
	High	949.875	7133.750	-65.66	2.31	9.26	-54.08	-13.00	41.08
			0.013	-98.80	0.01	9.50	-89.29	-13.00	76.29
			0.161	-90.12	0.01	9.50	-80.61	-13.00	67.61
			261.780	-81.78	0.43	9.53	-71.81	-13.00	58.81
			653.000	-81.97	0.67	9.54	-71.76	-13.00	58.76
			3121.000	-65.90	1.44	9.57	-54.89	-13.00	41.89
			7007.500	-65.93	2.29	9.26	-54.37	-13.00	41.37

Calculation formula:

Result = Reading + Cable loss + Attenuator loss

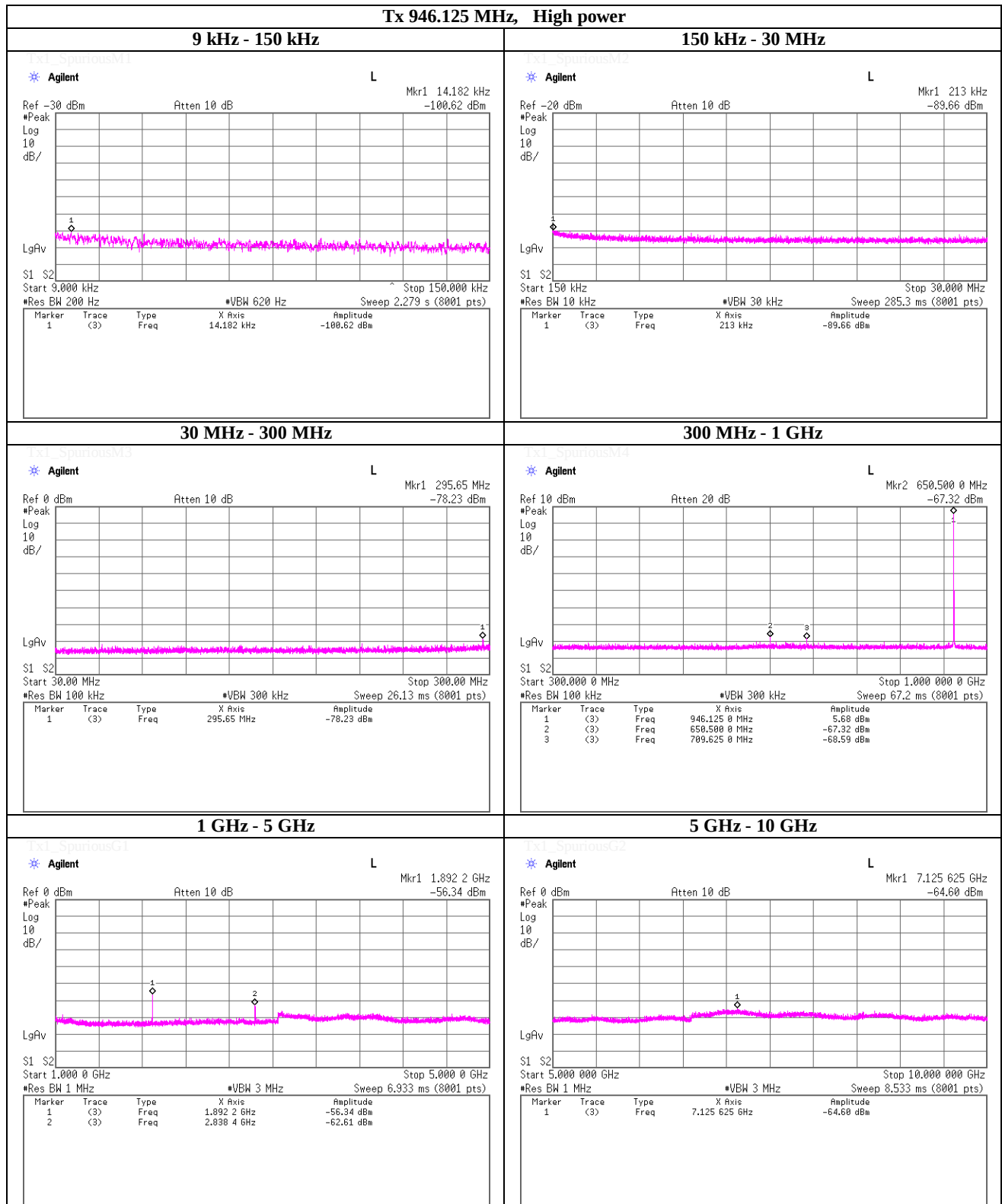
Limit = mean output power in dBm - (43 + 10 log10 (mean output power in watts)) dB = -13 dBm

There might be some 0.01 dB difference between plots and above table due to the calculation to two decimal places.

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Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date May 20, 2015 (Serial No. US003)
 Temperature / Humidity 26 deg.C , 50 %RH
 Engineer Kenichi Adachi

Spurious emission at antenna terminal



UL Japan, Inc.

Shonan EMC Lab.

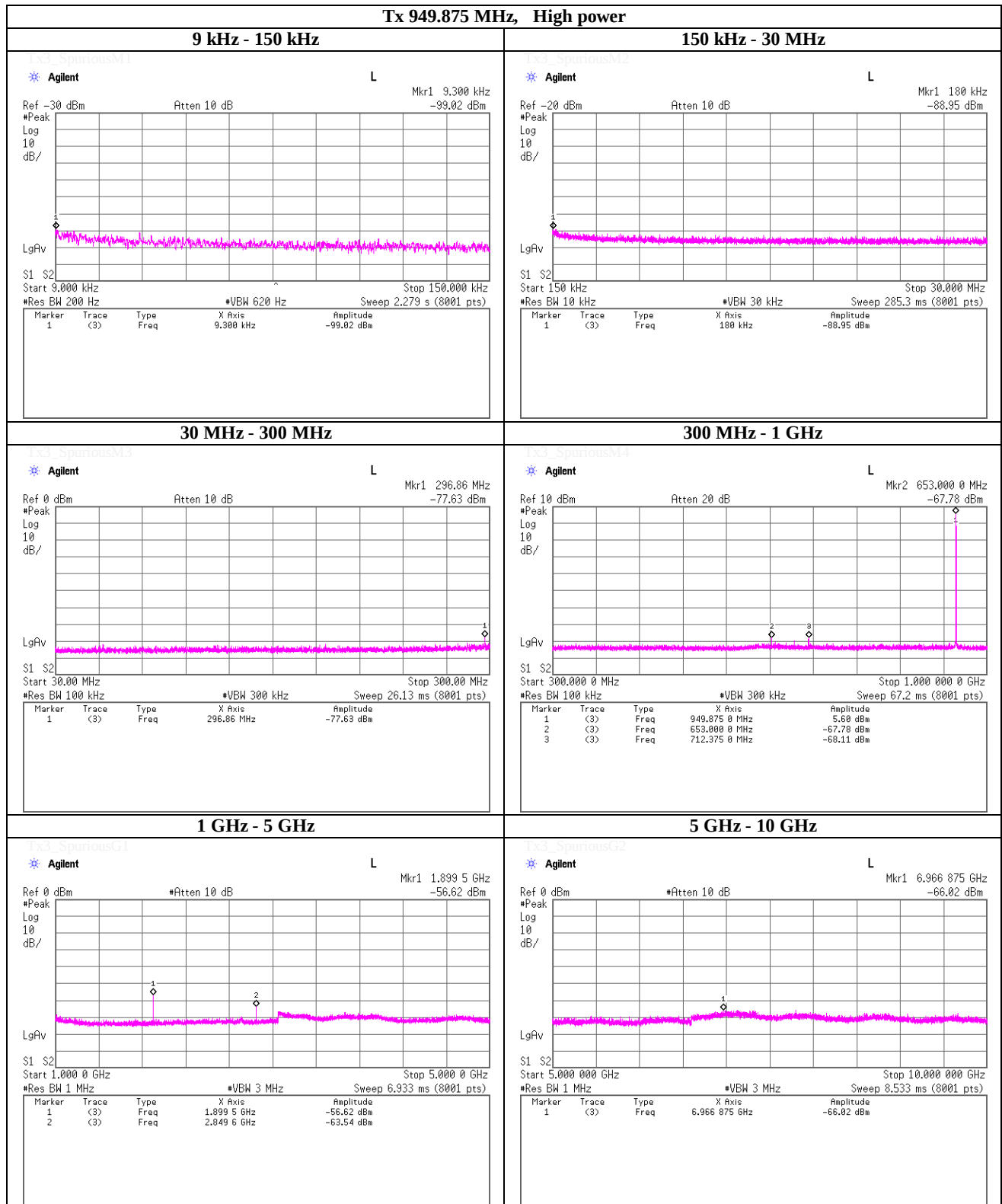
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Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date May 20, 2015 (Serial No. US003)
 Temperature / Humidity 26 deg.C , 50 %RH
 Engineer Kenichi Adachi

Spurious emission at antenna terminal



UL Japan, Inc.

Shonan EMC Lab.

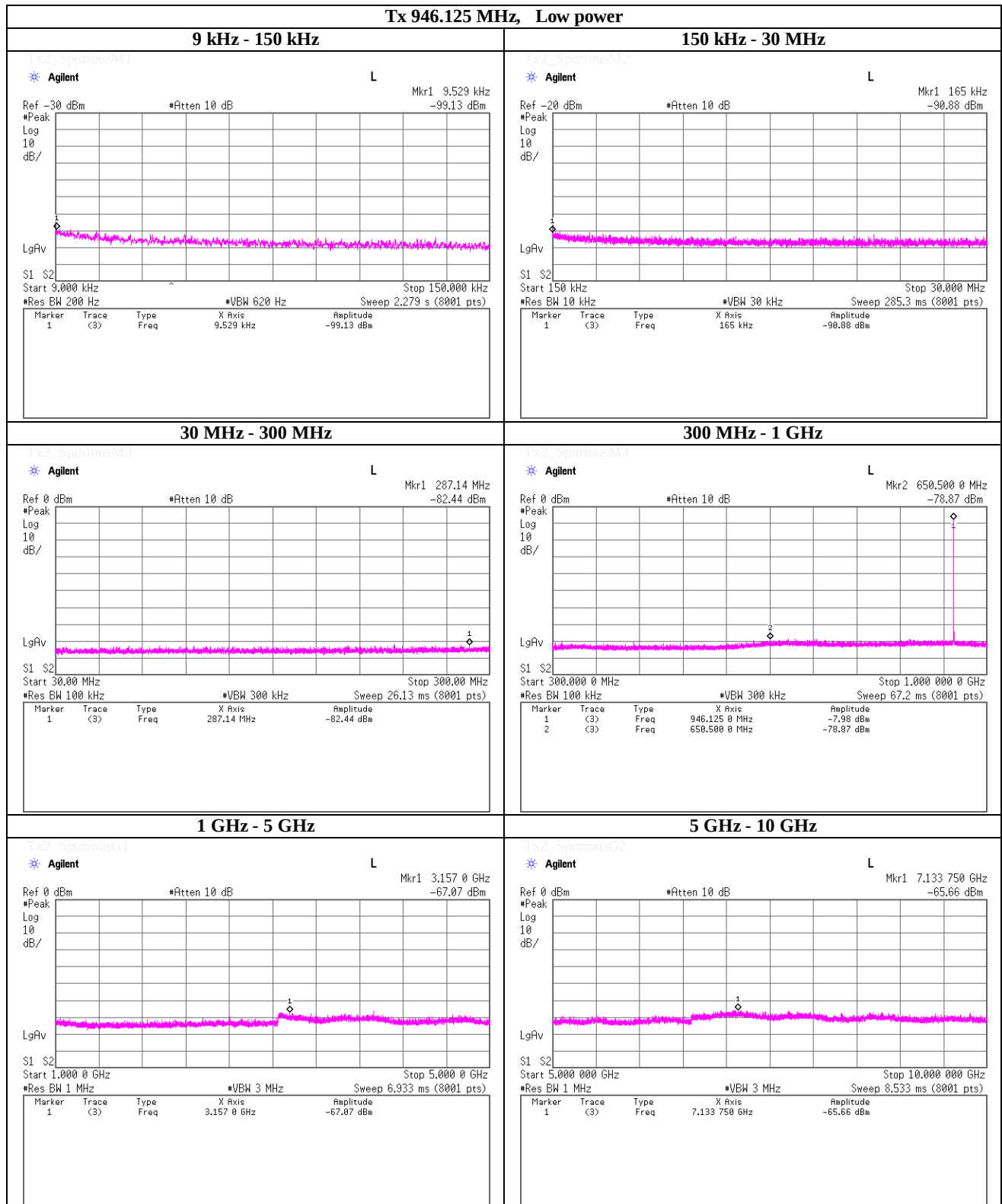
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date May 20, 2015 (Serial No. US003)
 Temperature / Humidity 26 deg.C , 50 %RH
 Engineer Kenichi Adachi

Spurious emission at antenna terminal



UL Japan, Inc.

Shonan EMC Lab.

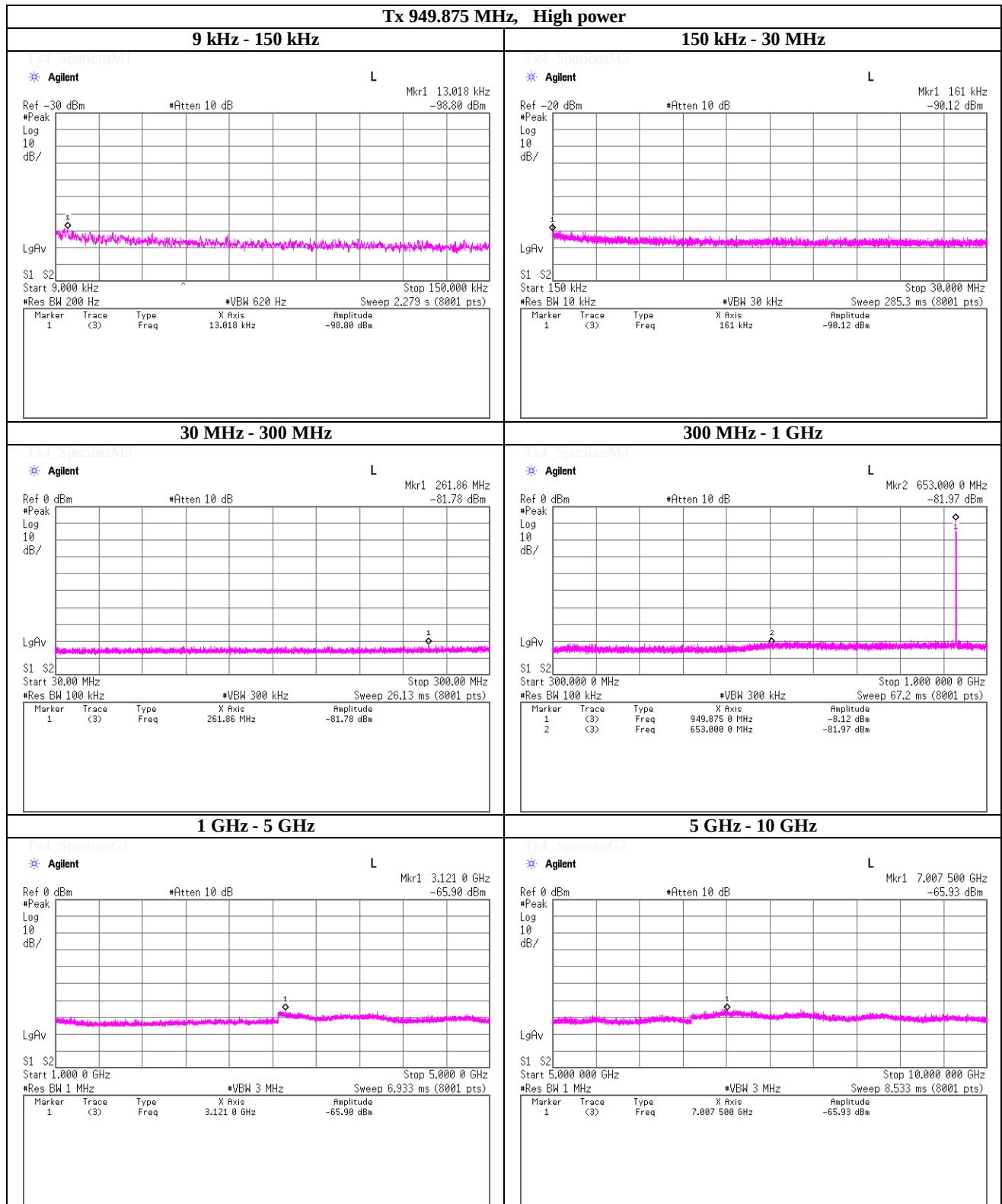
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date May 20, 2015 (Serial No. US003)
 Temperature / Humidity 26 deg.C , 50 %RH
 Engineer Kenichi Adachi

Spurious emission at antenna terminal



UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

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Facsimile : +81 463 50 6401

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2015/04/29

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 946.125 MHz (High power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 24 deg.C / 48 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	650.500	29.7	-50.1	2.2	16.1	-66.2	-13.0	53.2	Hori.	142	141	Dipol	RMS-av
2	709.625	28.7	-50.5	2.2	16.4	-66.9	-13.0	53.9	Hori.	127	306	Dipol	RMS-av
3	650.500	27.3	-50.2	2.2	16.1	-66.3	-13.0	53.3	Vert.	100	265	Dipol	RMS-av
4	709.625	26.0	-50.7	2.2	16.4	-67.1	-13.0	54.1	Vert.	159	257	Dipol	RMS-av

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2015/05/07

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 946.125 MHz (High power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 25 deg.C / 42 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	1892.250	48.4	-43.9	9.7	5.6	-42.0	-13.0	29.0	Hori.	100	248	Horn	X, Av-RMS-av
2	2838.375	38.5	-53.8	10.8	6.9	-52.1	-13.0	39.1	Hori.	100	246	Horn	X, Av-RMS-av
3	3784.500	37.0	-55.1	12.0	8.1	-53.4	-13.0	40.4	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
4	4730.625	36.8	-53.2	12.2	9.1	-52.3	-13.0	39.3	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
5	5676.750	36.0	-50.1	12.3	10.0	-50.0	-13.0	37.0	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
6	6622.875	36.1	-47.1	11.3	10.8	-48.8	-13.0	35.8	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
7	7569.000	37.2	-45.1	10.4	11.6	-48.5	-13.0	35.5	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
8	8515.125	38.2	-40.7	11.4	12.4	-43.9	-13.0	30.9	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
9	9461.250	38.3	-38.8	11.0	13.1	-43.1	-13.0	30.1	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
10	1892.250	46.3	-48.1	9.7	5.6	-46.2	-13.0	33.2	Vert.	119	291	Horn	Z, Av-RMS-av
11	2838.375	37.9	-59.2	10.8	6.9	-57.5	-13.0	44.5	Vert.	120	290	Horn	Z, Av-RMS-av
12	3784.500	36.9	-55.1	12.0	8.1	-53.4	-13.0	40.4	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
13	4730.625	36.7	-54.2	12.2	9.1	-53.3	-13.0	40.3	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
14	5676.750	35.9	-50.1	12.3	10.0	-50.0	-13.0	37.0	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
15	6622.875	36.0	-47.1	11.3	10.8	-48.8	-13.0	35.8	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
16	7569.000	37.1	-45.1	10.4	11.6	-48.5	-13.0	35.5	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
17	8515.125	38.1	-41.9	11.4	12.4	-45.1	-13.0	32.1	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
18	9461.250	38.2	-39.8	11.0	13.1	-44.1	-13.0	31.1	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level

Calculation: Result [dBm] = SG level [dB] + Tx Ant Gain [dBi] - Tx Loss (Cable) [dB] - 2.15 [dB]
 Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2015/04/29

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 949.875 MHz (High power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 24 deg.C / 48 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	653.000	30.0	-50.0	2.2	16.1	-66.1	-13.0	53.1	Hori.	143	146	Dipol	RMS-av
2	712.375	28.7	-50.4	2.2	16.4	-66.8	-13.0	53.8	Hori.	126	307	Dipol	RMS-av
3	653.000	27.6	-50.6	2.2	16.1	-66.7	-13.0	53.7	Vert.	100	266	Dipol	RMS-av
4	712.375	25.9	-50.4	2.2	16.4	-66.8	-13.0	53.8	Vert.	154	255	Dipol	RMS-av

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2015/05/07

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 949.875 MHz (High power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 25 deg.C / 42 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	1899.750	54.9	-37.6	9.7	5.6	-35.7	-13.0	22.7	Hori.	100	242	Horn	X, Av-RMS-av
2	2849.625	40.8	-51.5	10.8	6.9	-49.8	-13.0	36.8	Hori.	100	239	Horn	X, Av-RMS-av
3	3799.500	37.5	-54.9	12.0	8.1	-53.2	-13.0	40.2	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
4	4749.375	37.1	-52.8	12.2	9.1	-51.9	-13.0	38.9	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
5	5699.250	36.1	-49.8	12.3	10.1	-49.8	-13.0	36.8	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
6	6649.125	35.7	-47.1	11.3	10.9	-48.9	-13.0	35.9	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
7	7599.000	37.0	-45.1	10.4	11.6	-48.5	-13.0	35.5	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
8	8548.875	38.4	-41.0	11.4	12.4	-44.2	-13.0	31.2	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
9	9498.750	38.3	-39.0	11.0	13.1	-43.3	-13.0	30.3	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
10	1899.750	51.0	-43.4	9.7	5.6	-41.5	-13.0	28.5	Vert.	118	291	Horn	Z, Av-RMS-av
11	2849.625	38.4	-58.8	10.8	6.9	-57.1	-13.0	44.1	Vert.	117	289	Horn	Z, Av-RMS-av
12	3799.500	37.4	-54.9	12.0	8.1	-53.2	-13.0	40.2	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
13	4749.375	37.0	-53.8	12.2	9.1	-52.9	-13.0	39.9	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
14	5699.250	36.0	-49.8	12.3	10.1	-49.8	-13.0	36.8	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
15	6649.125	35.8	-46.9	11.3	10.9	-48.7	-13.0	35.7	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
16	7599.000	37.1	-44.9	10.4	11.6	-48.3	-13.0	35.3	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
17	8548.875	38.5	-42.0	11.4	12.4	-45.2	-13.0	32.2	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
18	9498.750	38.4	-40.0	11.0	13.1	-44.3	-13.0	31.3	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level

Calculation: Result [dBm] = SG level [dB] + Tx Ant Gain [dBi] - Tx Loss (Cable) [dB] - 2.15 [dB]
 Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2015/04/29

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 946.125 MHz (Low power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 24 deg.C / 48 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	650.500	23.0	-67.4	2.2	16.1	-83.5	-13.0	70.5	Hori.	144	148	Dipol	RMS-av
2	709.625	21.5	-67.7	2.2	16.4	-84.1	-13.0	71.1	Hori.	126	303	Dipol	RMS-av
3	650.500	21.2	-67.7	2.2	16.1	-83.8	-13.0	70.8	Vert.	100	262	Dipol	RMS-av
4	709.625	19.6	-68.0	2.2	16.4	-84.4	-13.0	71.4	Vert.	155	252	Dipol	RMS-av

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2015/05/07

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 946.125 MHz (Low power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 25 deg.C / 42 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	1892.250	63.0	-49.8	9.7	5.6	-47.9	-13.0	34.9	Hori.	100	240	Horn	X, Av-RMS-av
2	2838.375	49.3	-59.4	10.8	6.9	-57.7	-13.0	44.7	Hori.	100	242	Horn	X, Av-RMS-av
3	3784.500	37.0	-76.3	12.0	8.1	-74.6	-13.0	61.6	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
4	4730.625	36.7	-76.5	12.2	9.1	-75.6	-13.0	62.6	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
5	5676.750	35.9	-70.3	12.3	10.0	-70.2	-13.0	57.2	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
6	6622.875	36.0	-66.4	11.3	10.8	-68.1	-13.0	55.1	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
7	7569.000	37.1	-65.3	10.4	11.6	-68.7	-13.0	55.7	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
8	8515.125	38.2	-63.8	11.4	12.4	-67.0	-13.0	54.0	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
9	9461.250	38.2	-61.5	11.0	13.1	-65.8	-13.0	52.8	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
10	1892.250	59.8	-55.0	9.7	5.6	-53.1	-13.0	40.1	Vert.	118	293	Horn	Z, Av-RMS-av
11	2838.375	48.0	-57.1	10.8	6.9	-55.4	-13.0	42.4	Vert.	119	294	Horn	Z, Av-RMS-av
12	3784.500	36.9	-76.8	12.0	8.1	-75.1	-13.0	62.1	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
13	4730.625	36.6	-76.5	12.2	9.1	-75.6	-13.0	62.6	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
14	5676.750	35.8	-70.3	12.3	10.0	-70.2	-13.0	57.2	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
15	6622.875	35.9	-66.4	11.3	10.8	-68.1	-13.0	55.1	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
16	7569.000	37.0	-65.3	10.4	11.6	-68.7	-13.0	55.7	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
17	8515.125	38.1	-64.8	11.4	12.4	-68.0	-13.0	55.0	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
18	9461.250	38.2	-62.9	11.0	13.1	-67.2	-13.0	54.2	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level

Calculation: Result [dBm] = SG level [dB] + Tx Ant Gain [dBi] - Tx Loss (Cable) [dB] - 2.15 [dB]
 Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.2 Semi-Anechoic Chamber
Date : 2015/04/30

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 949.875 MHz (Low power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 24 deg.C / 48 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	653.000	22.8	-67.7	2.2	16.1	-83.8	-13.0	70.8	Hori.	142	148	Dipol	RMS-av
2	712.375	21.3	-67.9	2.2	16.4	-84.3	-13.0	71.3	Hori.	127	309	Dipol	RMS-av
3	653.000	21.0	-68.3	2.2	16.1	-84.4	-13.0	71.4	Vert.	100	265	Dipol	RMS-av
4	712.375	19.5	-67.9	2.2	16.4	-84.3	-13.0	71.3	Vert.	153	257	Dipol	RMS-av

DATA OF RADIATED EMISSION (SUBSTITUTION) TESTUL Japan, Inc. Shonan EMC Lab. No.3 Semi-Anechoic Chamber
Date : 2015/05/07

Company : Audio-Technica Corporation
 Kind of EUT : UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model No. : ATW-T6002 S
 Serial No. : US003
 Remarks : EUT axis: H: X, V: Z

Mode : Tx, CW, 949.875 MHz (Low power)
 Order No. : 10762853S
 Power : DC 3 V (battery)
 Temp./Humi. : 25 deg.C / 42 %RH

Limit : FCC 74.861 (e) (6) -13dBm ERP

Engineer : Kenichi Adachi

<< ERP DATA >>

No.	Freq. [MHz]	Reading <AV> [dBuV]	SG Level [dBm]	TX Ant. Gain [dBi]	TX Loss [dB]	ERP		Margin [dB]	Pola.	Height [cm]	Angle [deg]	TX Ant. Type	Comment
						Result [dBm]	Limit [dBm]						
1	1899.750	69.0	-43.3	9.7	5.6	-41.4	-13.0	28.4	Hori.	100	243	Horn	X, Av-RMS-av
2	2849.625	58.3	-50.4	10.8	6.9	-48.7	-13.0	35.7	Hori.	100	244	Horn	X, Av-RMS-av
3	3799.500	37.4	-76.1	12.0	8.1	-74.4	-13.0	61.4	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
4	4749.375	37.2	-75.8	12.2	9.1	-74.9	-13.0	61.9	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
5	5699.250	36.2	-69.8	12.3	10.1	-69.8	-13.0	56.8	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
6	6649.125	35.8	-66.1	11.3	10.9	-67.9	-13.0	54.9	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
7	7599.000	37.1	-65.1	10.4	11.6	-68.5	-13.0	55.5	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
8	8548.875	38.5	-64.0	11.4	12.4	-67.2	-13.0	54.2	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
9	9498.750	38.4	-61.0	11.0	13.1	-65.3	-13.0	52.3	Hori.	100	0	Horn	X, Av-RMS-av, noise floor level
10	1899.750	65.9	-46.4	9.7	5.6	-44.5	-13.0	31.5	Vert.	118	293	Horn	Z, Av-RMS-av
11	2849.625	53.5	-51.6	10.8	6.9	-49.9	-13.0	36.9	Vert.	119	292	Horn	Z, Av-RMS-av
12	3799.500	37.3	-76.6	12.0	8.1	-74.9	-13.0	61.9	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
13	4749.375	37.1	-75.8	12.2	9.1	-74.9	-13.0	61.9	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
14	5699.250	36.1	-69.8	12.3	10.1	-69.8	-13.0	56.8	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
15	6649.125	35.7	-66.1	11.3	10.9	-67.9	-13.0	54.9	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
16	7599.000	37.0	-65.1	10.4	11.6	-68.5	-13.0	55.5	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
17	8548.875	38.4	-64.5	11.4	12.4	-67.7	-13.0	54.7	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level
18	9498.750	38.3	-63.0	11.0	13.1	-67.3	-13.0	54.3	Vert.	100	0	Horn	Z, Av-RMS-av, noise floor level

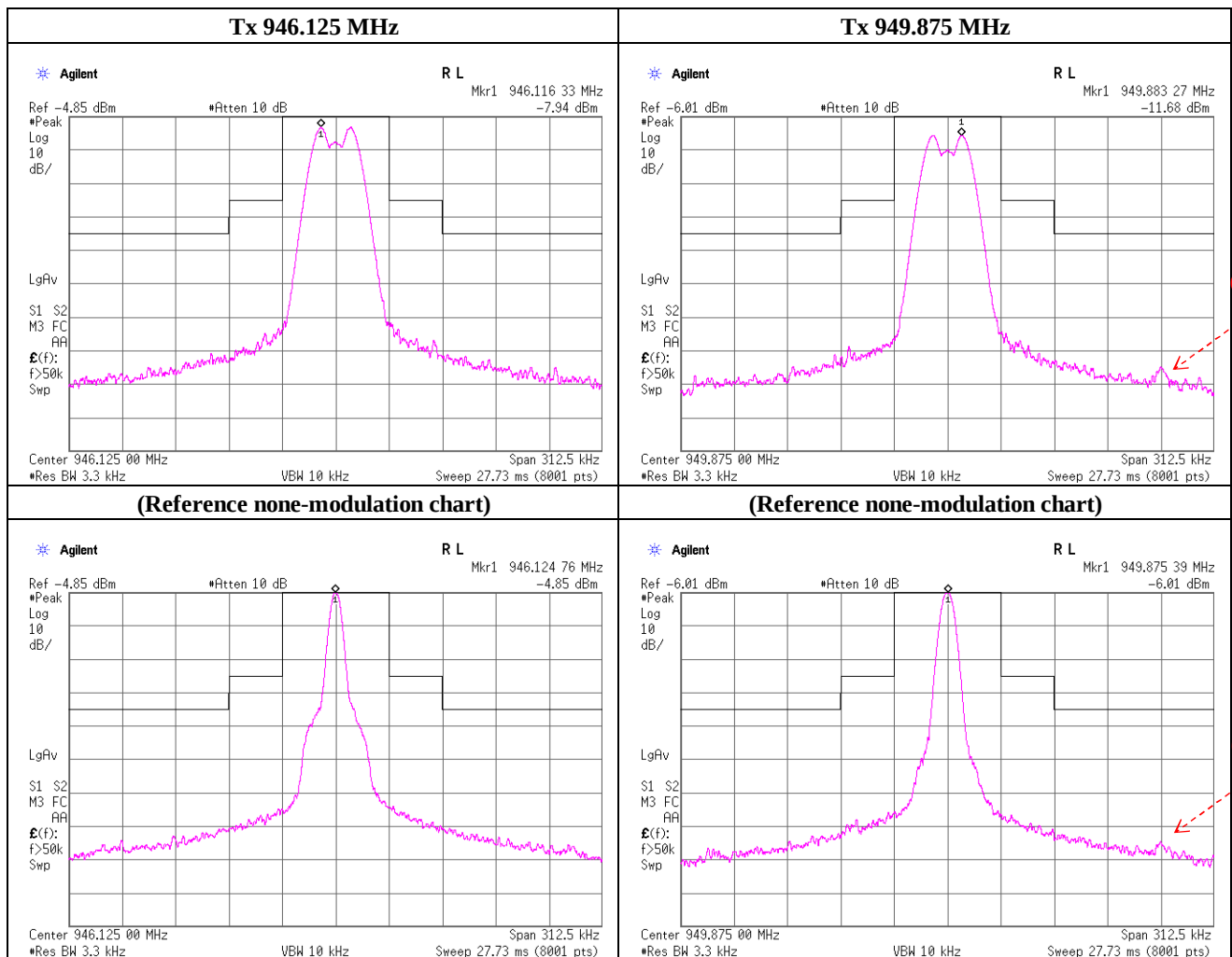
Calculation: Result [dBm] = SG level [dB] + Tx Ant Gain [dBi] - Tx Loss (Cable) [dB] - 2.15 [dB]
 Tx Antenna: Horn (1G-40G) / Rx-Antenna: Horn (1G-40G)

Field strength of spurious radiation (Emission masks)

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting High power
 modulation at 2.5kHz at 16dB over 50%

UL Japan, Inc. Shonan EMC Lab.
 No.5 Shielded Room

Regulation FCC part 74, section 74.861(e)(6)
 Date May 1, 2015
 Temperature 25 deg.C
 Humidity 47 %RH
 ENGINEER Kenichi Adachi



UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

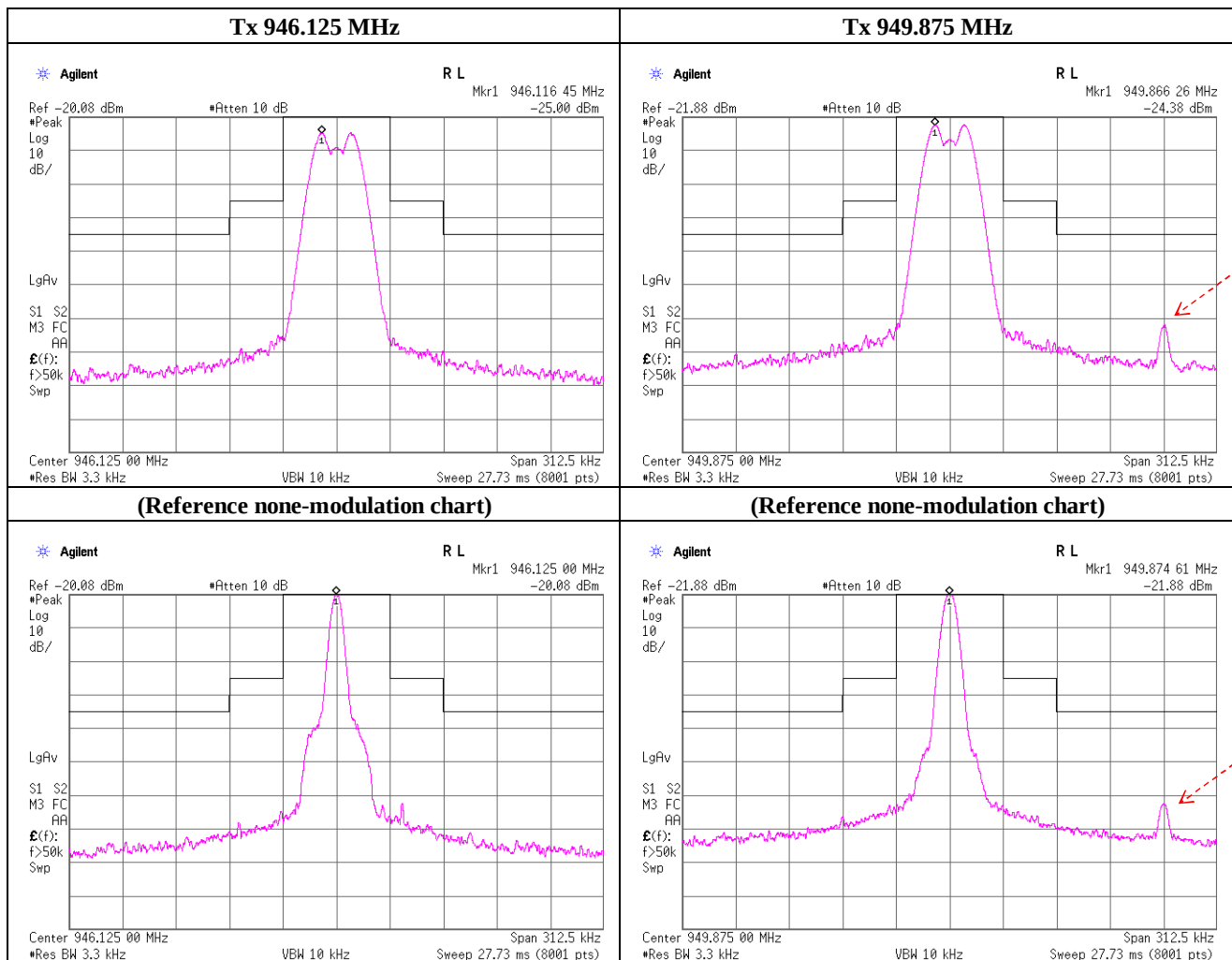
Facsimile : +81 463 50 6401

Field strength of spurious radiation (Emission masks)

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting Low power
 modulation at 2.5kHz at 16dB over 50%

UL Japan, Inc. Shonan EMC Lab.
 No.5 Shielded Room

Regulation FCC part 74, section 74.861(e)(6)
 Date May 1, 2015
 Temperature 25 deg.C
 Humidity 47 %RH
 ENGINEER Kenichi Adachi



UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Revised date : November 11, 2015

Frequency Stability

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting 946.125 MHz

UL Japan, Inc.
 Shonan EMC Lab. No.5 Shielded room
 Regulation FCC part 74 section 74.861(e)(4)
 Date May 10, 2015
 Temperature 25 deg.C
 Humidity 47 %RH
 ENGINEER Kenichi Adachi

High power (*High power mode and Low power mode same tolerance)

Temperature Variation: -30 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124796	-0.000204	-0.00002	0.005
after 2 minutes	946.1250	946.124777	-0.000223	-0.00002	0.005
after 5 minutes	946.1250	946.124758	-0.000242	-0.00003	0.005
after 10 minutes	946.1250	946.124972	-0.000028	0.00000	0.005

(reference)
 difference by
 data of normal
 condition
 0.0418 ppm
 0.0288 ppm
 0.0168 ppm
 0.2377 ppm

Temperature Variation: -20 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124523	-0.000477	-0.00005	0.005
after 2 minutes	946.1250	946.124543	-0.000457	-0.00005	0.005
after 5 minutes	946.1250	946.124594	-0.000406	-0.00004	0.005
after 10 minutes	946.1250	946.124626	-0.000374	-0.00004	0.005

-0.2465 ppm
 -0.2186 ppm
 -0.1560 ppm
 -0.1287 ppm

Temperature Variation: -10 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124573	-0.000427	-0.00005	0.005
after 2 minutes	946.1250	946.124562	-0.000438	-0.00005	0.005
after 5 minutes	946.1250	946.124550	-0.000450	-0.00005	0.005
after 10 minutes	946.1250	946.124532	-0.000468	-0.00005	0.005

-0.1945 ppm
 -0.1983 ppm
 -0.2029 ppm
 -0.2284 ppm

Temperature Variation: 0 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124720	-0.000280	-0.00003	0.005
after 2 minutes	946.1250	946.124682	-0.000318	-0.00003	0.005
after 5 minutes	946.1250	946.124660	-0.000340	-0.00004	0.005
after 10 minutes	946.1250	946.124634	-0.000366	-0.00004	0.005

-0.0393 ppm
 -0.0720 ppm
 -0.0871 ppm
 -0.1201 ppm

Temperature Variation: 10 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124792	-0.000208	-0.00002	0.005
after 2 minutes	946.1250	946.124800	-0.000200	-0.00002	0.005
after 5 minutes	946.1250	946.124792	-0.000208	-0.00002	0.005
after 10 minutes	946.1250	946.124783	-0.000217	-0.00002	0.005

0.0373 ppm
 0.0529 ppm
 0.0529 ppm
 0.0377 ppm

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Frequency Stability

Temperature Variation: 20 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124757	-0.000243	-0.00003	0.005
after 2 minutes	946.1250	946.124750	-0.000250	-0.00003	0.005
after 5 minutes	946.1250	946.124742	-0.000258	-0.00003	0.005
after 10 minutes	946.1250	946.124748	-0.000252	-0.00003	0.005

(reference)
difference by
data of normal
condition

Temperature Variation: 30 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124759	-0.000241	-0.00003	0.005
after 2 minutes	946.1250	946.124768	-0.000232	-0.00002	0.005
after 5 minutes	946.1250	946.124769	-0.000231	-0.00002	0.005
after 10 minutes	946.1250	946.124769	-0.000231	-0.00002	0.005

0.0021 ppm
0.0194 ppm
0.0286 ppm
0.0232 ppm

Temperature Variation: 40 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124617	-0.000383	-0.00004	0.005
after 2 minutes	946.1250	946.124622	-0.000378	-0.00004	0.005
after 5 minutes	946.1250	946.124621	-0.000379	-0.00004	0.005
after 10 minutes	946.1250	946.124619	-0.000381	-0.00004	0.005

-0.1477 ppm
-0.1352 ppm
-0.1277 ppm
-0.1359 ppm

Temperature Variation: 50 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124516	-0.000484	-0.00005	0.005
after 2 minutes	946.1250	946.124503	-0.000497	-0.00005	0.005
after 5 minutes	946.1250	946.124487	-0.000513	-0.00005	0.005
after 10 minutes	946.1250	946.124477	-0.000523	-0.00006	0.005

-0.2547 ppm
-0.2608 ppm
-0.2693 ppm
-0.2858 ppm

UL Japan, Inc.

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Revised date : November 11, 2015

Frequency Stability

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting 949.875 MHz

UL Japan, Inc.
 Shonan EMC Lab. No.5 Shielded room
 Regulation FCC part 74 section 74.861(e)(4)

Date May 10, 2015
 Temperature 25 deg.C
 Humidity 47 %RH
 ENGINEER Kenichi Adachi

High power (*High power mode and Low power mode same tolerance)

Temperature Variation: -30 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874787	-0.000213	-0.00002	0.005
after 2 minutes	949.8750	949.874835	-0.000165	-0.00002	0.005
after 5 minutes	949.8750	949.874854	-0.000146	-0.00002	0.005
after 10 minutes	949.8750	949.874907	-0.000093	-0.00001	0.005

(reference)
 difference by
 data of normal
 condition
 0.0332 ppm
 0.0798 ppm
 0.1086 ppm
 0.1659 ppm

Temperature Variation: -20 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874571	-0.000429	-0.00005	0.005
after 2 minutes	949.8750	949.874579	-0.000421	-0.00004	0.005
after 5 minutes	949.8750	949.874615	-0.000385	-0.00004	0.005
after 10 minutes	949.8750	949.874646	-0.000354	-0.00004	0.005

-0.1945 ppm
 -0.1888 ppm
 -0.1432 ppm
 -0.1089 ppm

Temperature Variation: -10 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874599	-0.000401	-0.00004	0.005
after 2 minutes	949.8750	949.874588	-0.000412	-0.00004	0.005
after 5 minutes	949.8750	949.874573	-0.000427	-0.00004	0.005
after 10 minutes	949.8750	949.874560	-0.000440	-0.00005	0.005

-0.1648 ppm
 -0.1794 ppm
 -0.1866 ppm
 -0.1994 ppm

Temperature Variation: 0 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874634	-0.000366	-0.00004	0.005
after 2 minutes	949.8750	949.874631	-0.000369	-0.00004	0.005
after 5 minutes	949.8750	949.874629	-0.000371	-0.00004	0.005
after 10 minutes	949.8750	949.874628	-0.000372	-0.00004	0.005

-0.1286 ppm
 -0.1344 ppm
 -0.1277 ppm
 -0.1280 ppm

Temperature Variation: 10 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874772	-0.000228	-0.00002	0.005
after 2 minutes	949.8750	949.874782	-0.000218	-0.00002	0.005
after 5 minutes	949.8750	949.874780	-0.000220	-0.00002	0.005
after 10 minutes	949.8750	949.874773	-0.000227	-0.00002	0.005

0.0170 ppm
 0.0240 ppm
 0.0307 ppm
 0.0248 ppm

Frequency Stability

Temperature Variation: 20 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874756	-0.000244	-0.00003	0.005
after 2 minutes	949.8750	949.874759	-0.000241	-0.00003	0.005
after 5 minutes	949.8750	949.874751	-0.000249	-0.00003	0.005
after 10 minutes	949.8750	949.874749	-0.000251	-0.00003	0.005

(reference)
difference by
data of normal
condition

Temperature Variation: 30 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874761	-0.000239	-0.00003	0.005
after 2 minutes	949.8750	949.874768	-0.000232	-0.00002	0.005
after 5 minutes	949.8750	949.874767	-0.000233	-0.00002	0.005
after 10 minutes	949.8750	949.874765	-0.000235	-0.00002	0.005

0.0061 ppm
0.0095 ppm
0.0172 ppm
0.0167 ppm

Temperature Variation: 40 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874660	-0.000340	-0.00004	0.005
after 2 minutes	949.8750	949.874640	-0.000360	-0.00004	0.005
after 5 minutes	949.8750	949.874631	-0.000369	-0.00004	0.005
after 10 minutes	949.8750	949.874623	-0.000377	-0.00004	0.005

-0.1013 ppm
-0.1249 ppm
-0.1255 ppm
-0.1329 ppm

Temperature Variation: 50 deg.C

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874466	-0.000534	-0.00006	0.005
after 2 minutes	949.8750	949.874475	-0.000525	-0.00006	0.005
after 5 minutes	949.8750	949.874459	-0.000541	-0.00006	0.005
after 10 minutes	949.8750	949.874447	-0.000553	-0.00006	0.005

-0.3052 ppm
-0.2985 ppm
-0.3070 ppm
-0.3181 ppm

Revised date : November 11, 2015

Frequency Stability

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting 946.125 MHz

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Regulation FCC part 74 section 74.861(e)(4)

Date May 10, 2015

Temperature 25 deg.C

Humidity 47 %RH

ENGINEER Kenichi Adachi

High power (*High power mode and Low power mode same tolerance)

Voltage Variation: DC 3.45 V (Reference data)**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124805	-0.000195	-0.00002	0.005
after 2 minutes	946.1250	946.124804	-0.000196	-0.00002	0.005
after 5 minutes	946.1250	946.124801	-0.000199	-0.00002	0.005
after 10 minutes	946.1250	946.124796	-0.000204	-0.00002	0.005

(reference)
 difference by
 data of normal
 condition
 0.0509 ppm
 0.0572 ppm
 0.0619 ppm
 0.0513 ppm

Voltage Variation: DC 3 V**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124757	-0.000243	-0.00003	0.005
after 2 minutes	946.1250	946.124750	-0.000250	-0.00003	0.005
after 5 minutes	946.1250	946.124742	-0.000258	-0.00003	0.005
after 10 minutes	946.1250	946.124748	-0.000252	-0.00003	0.005

Voltage Variation: DC 2.55 V (Reference data)**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	946.1250	946.124812	-0.000188	-0.00002	0.005
after 2 minutes	946.1250	946.124816	-0.000184	-0.00002	0.005
after 5 minutes	946.1250	946.124809	-0.000191	-0.00002	0.005
after 10 minutes	946.1250	946.124802	-0.000198	-0.00002	0.005

0.0586 ppm
 0.0703 ppm
 0.0713 ppm
 0.0571 ppm

Voltage Variation (end point voltage) : DC 1.4 V**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance Limit	Limit
startup	946.1250	946.124454	-0.000546	-0.00006	0.005
after 2 minutes	946.1250	946.124521	-0.000479	-0.00005	0.005
after 5 minutes	946.1250	946.124519	-0.000481	-0.00005	0.005
after 10 minutes	946.1250	946.124468	-0.000532	-0.00006	0.005

-0.3196 ppm
 -0.2421 ppm
 -0.2357 ppm
 -0.2956 ppm

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Revised date : November 11, 2015

Frequency Stability

Company Audio-Technica Corporation
 Equipment UHF SYNTHESIZED WIRELESS TRANSMITTER
 Model ATW-T6002 S
 Serial No. US003
 Power DC 3 V
 Mode Transmitting 949.875 MHz

UL Japan, Inc.

Shonan EMC Lab. No.5 Shielded room

Regulation FCC part 74 section 74.861(e)(4)

Date May 10, 2015

Temperature 25 deg.C

Humidity 47 %RH

ENGINEER Kenichi Adachi

High power (*High power mode and Low power mode same tolerance)

Voltage Variation: DC 3.45 V (Reference data)**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874808	-0.000192	-0.00002	0.005
after 2 minutes	949.8750	949.874812	-0.000188	-0.00002	0.005
after 5 minutes	949.8750	949.874806	-0.000194	-0.00002	0.005
after 10 minutes	949.8750	949.874802	-0.000198	-0.00002	0.005

(reference)

difference by
data of normal
condition

0.0555 ppm

0.0556 ppm

0.0585 ppm

0.0553 ppm

Voltage Variation: DC 3 V**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874756	-0.000244	-0.00003	0.005
after 2 minutes	949.8750	949.874759	-0.000241	-0.00003	0.005
after 5 minutes	949.8750	949.874751	-0.000249	-0.00003	0.005
after 10 minutes	949.8750	949.874749	-0.000251	-0.00003	0.005

Voltage Variation: DC 2.55 V (Reference data)**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance (%)	Limit (%)
startup	949.8750	949.874803	-0.000197	-0.00002	0.005
after 2 minutes	949.8750	949.874806	-0.000194	-0.00002	0.005
after 5 minutes	949.8750	949.874803	-0.000197	-0.00002	0.005
after 10 minutes	949.8750	949.874801	-0.000199	-0.00002	0.005

0.0497 ppm

0.0493 ppm

0.0555 ppm

0.0545 ppm

Voltage Variation (end point voltage) : DC 1.4 V**Temperature Variation: 20 deg.C**

Test Conditions	Original Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (MHz)	Frequency tolerance Limit	Limit
startup	949.8750	949.874215	-0.000785	-0.00008	0.005
after 2 minutes	949.8750	949.874346	-0.000654	-0.00007	0.005
after 5 minutes	949.8750	949.874445	-0.000555	-0.00006	0.005
after 10 minutes	949.8750	949.874483	-0.000517	-0.00005	0.005

-0.5694 ppm

-0.4343 ppm

-0.3216 ppm

-0.2806 ppm

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APPENDIX 2

Test Instruments

EMI test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT	2015/04/07 * 12
SPSS-01	Power Sensor	Anritsu	MA2444D	0738366	AT	2015/04/07 * 12
SAEC-02(NSA)	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	RE	2014/07/08 * 12
SBA-02	Biconical Antenna	Schwarzbeck	BBA9106	91032665	RE	2014/11/22 * 12
SAT6-02	Attenuator	JFW	50HF-006N	-	RE	2015/02/18 * 12
SCC-B1/B3/B5 /B7/B8/B13/S RSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/ Suhner/Suhner/Suhner/ TOYO	8D2W/12DSFA/14 1PE/141PE/141PE /141PE/NS4906	-/0901-270(RF Selector)	RE	2015/04/17 * 12
SLA-02	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0893	RE	2014/11/22 * 12
KAT3-11	Attenuator	JFW IND. INC.	50HF-003N	-	RE	2014/08/27 * 12
SAT10-01	Attenuator	JFW	50HF-010N	-	RE	2015/02/18 * 12
SCC-B2/B4/B6 /B7/B8/B13/S RSE-02	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/ Suhner/Suhner/Suhner/ TOYO	8D2W/12DSFA/14 1PE/141PE/141PE /141PE/NS4906	-/0901-270(RF Selector)	RE	2015/04/17 * 12
SAF-02	Pre Amplifier	SONOMA	310N	290212	RE	2015/02/18 * 12
STR-07	Test Receiver	Rohde & Schwarz	ESU26	100484	RE	2014/09/03 * 12
SOS-03	Humidity Indicator	A&D	AD-5681	4063325	RE	2014/10/30 * 12
SJM-14	Measure	ASKUL	-	-	RE	-
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE, RF, MF)	-	RE	-
SSG-02	Signal Generator	Agilent	E8257D-540	MY48051404	RE	2015/03/02 * 12
SCC-07	Coaxial Cable	Fujikura	5D2W	-	RE	2014/09/09 * 12
SDA-08	Dipole Antenna	Schwarzbeck	UHAP	1158	RE	2015/03/11 * 12
MRS-01	Radiocommunication Service Monitor	Rohde & Schwarz	CMS54	840.0009.54	TF	2015/03/10 * 12
SCC-G31	Coaxial Cable	Junkosha	MWX241-01000KM SKMS	OCT-08-13-04 6	TF	2015/04/09 * 12
SAF-07	Pre Amplifier	TSJ	MLA-8k03-D01-35	081212	TF	2014/06/12 * 12
KFG-02	Programmable Function Generator	Thurlby Thandar	TG1304	156125	TF	Pre Check
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	TF, AT	2015/02/24 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	TF, AT	2014/12/24 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2014/07/14 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2014/08/12 * 12
SCC-G04	Coaxial Cable	Junkosha	J12J102207-00	JUN-12-14-018	RE	2014/06/24 * 12
SAT20-01	Attenuator(above1GHz)	Agilent	8493C-020	74889	RE	2014/11/21 * 12
SFL-01	Highpass Filter	MICRO-TRONICS	HPM50115	001	RE	2014/11/21 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2014/05/23 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2014/05/15 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE	2015/03/26 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2014/10/30 * 12
SJM-15	Measure	ASKUL	-	-	RE	-

The expiration date of the calibration is the end of the expired month .

As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards .

Test Item :

RE: Radiated emission tests ,

TF: Test fixture tests ,

AT: Antenna terminal conducted tests

APPENDIX 2

Test Instruments

EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SCC-G16	Coaxial Cable	Suhner	SUCOFLEX 102	32704/2	RE	2015/03/11 * 12
SHA-RS01	Horn Antenna	Schwarzbeck	BBHA9120D	770	RE	2014/08/12 * 12
SLP-02	Loop Antenna	Rohde & Schwarz	HFH2-Z2	100218	RE	2014/11/30 * 12
SAT6-08	Attenuator	HIROSE ELECTRIC CO.,LTD.	AT-406(40)	-	RE	2014/08/27 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2015/04/17 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2015/02/18 * 12
STR-06	Test Receiver	Rohde & Schwarz	ESCI	101259	RE	2015/03/24 * 12
SCC-G13	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	TF, AT	2015/03/11 * 12
SCH-01	Temperature and Humidity Chamber	Espec	PL-1KT	14020837	TF	2015/04/22 * 12
STS-05	Digital Hitester	Hioki	3805-50	080997828	TF	2014/11/11 * 12
SAT10-09	Attenuator	Weinschel Corp.	54A-10	W5692	AT	2014/11/21 * 12

The expiration date of the calibration is the end of the expired month .

As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with valid calibrations . Each measurement data is traceable to the national or international standards .

Test Item :

RE: Radiated emission tests ,

TF: Test fixture tests ,

AT: Antenna terminal conducted tests