

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

Yun Tong Electronic(shenzhen) Co.,Ltd.

Soundbar with W-TX

Model Number: SLIM-PWR-44

FCC ID: P44SLIM-PWR44

Prepared for : Yun Tong Electronic(shenzhen) Co.,Ltd.
#1 HuaXing Road ,Shang Heng Lang, Da Lang Street, Bao An
District, Shen Zhen City, Guang Dong Province, China.

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F14277
Date of Test : Sep.10 ~ Nov.17, 2014
Date of Report : Nov.27, 2014

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TEST REPORT CERTIFICATION

Applicant : Yun Tong Electronic(shenzhen) Co.,Ltd.
Manufacturer : Yun Tong Electronic(shenzhen) Co.,Ltd.
EUT Description : Soundbar with W-TX
FCC ID : P44SLIM-PWR44
(A) MODEL NO. : SLIM-PWR-44
(B) SERIAL NO. : N/A
(C) POWER SUPPLY : AC 100~240V~, 50/60Hz
(D) TEST VOLTAGE : AC 120V/60Hz

Tested for comply with:

FCC Rules and Regulations Part 15 Subpart C: 2013

Test procedure used:
ANSI C63.10:2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : Sep.10 ~ Nov.17, 2014 Report of date: Nov.27, 2014Prepared by : April Tseng
April Tseng / AssistantReviewed by : Sunny Lu
Sunny Lu / Assistant Manager

pproved & Authorized Signer :



David Jin / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Power Line Conducted Emission	FCC Part 15: 15.207 ANSI C63.10: 2009	PASS
Radiated Emission	FCC Part 15: 15.209 ANSI C63.10: 2009	PASS
Band Edge Compliance	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Conducted spurious emissions	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
6dB Bandwidth	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Peak Output Power	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Power Spectral Density	FCC Part 15: 15.247 ANSI C63.10: 2009	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

2. GENERAL INFORMATION

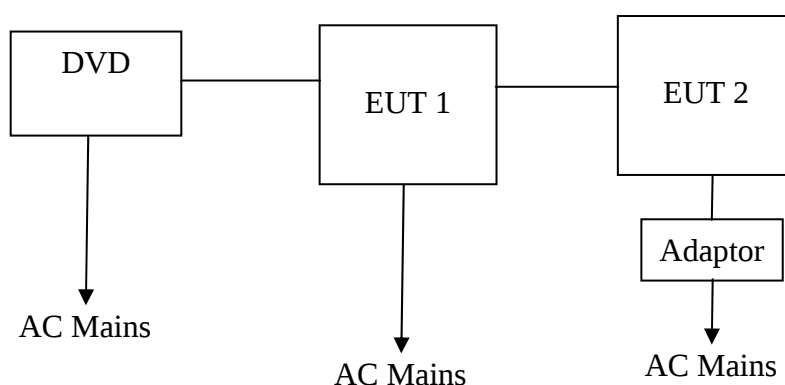
2.1. Description of Device (EUT)

Product Name	: Soundbar with W-TX
Model No.	: SLIM-PWR-44
FCC ID	: P44SLIM-PWR44
Radio	: Bluetooth V3.0+EDR; 5.8GHz Transmitter.
Operation Frequency	: Bluetooth :2402-2480MHz; 5.8GHz: 5736MHz—5814MHz
Modulation Technology	: 5.8GHz: OFDM(64QAM, 16QAM, QPSK, BPSK) Bluetooth V3.0+EDR: GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Assembly Gain	: Bluetooth: Dipole antenna, 3dBi 5.8GHz: PCB antenna, 9dBi
Applicant	: Yun Tong Electronic(shenzhen) Co.,Ltd. #1 HuaXing Road ,Shang Heng Lang, Da Lang Street, Bao An Distrct, Shen Zhen City, Guang Dong Province, China.
Manufacturer	: Yun Tong Electronic(shenzhen) Co.,Ltd. #1 HuaXing Road ,Shang Heng Lang, Da Lang Street, Bao An Distrct, shen Zhen City, Guang Dong Province, China.
Power Cord	: Shield, Detectable, 1.8m
Audio In Cable	: Unshield, Detectable, 1.05m
Remote Controller	: Brand: TRUAUDIO, Model Number: SLIM-PWR-44
Date of Test	: Sep.10 ~ Nov.17, 2014
Date of Receipt	: Sep.08, 2014
Sample Type	: Prototype production

2.2. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	DVD Player	ACS-EMC-DVD01	DENON	DVD-3910	4098400342E	☐ FCC ID ☐ BSMI ID
Data Cable: Shielded, Detachable, 1.8m Power Cable: Unshielded, Detachable, 1.8m						

2.3. Block Diagram of Test Setup



(EUT 1: Soundbar with W-TX; EUT 2: Wireless Receiver)

2.4. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block, Shenzhen
Science & Industrial Park, Nantou, Shenzhen,
Guangdong, China

3m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 90454
Valid Date: Feb.22, 2015

3m & 10m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 794232
Valid Date: Oct.31, 2015

EMC Lab. : Certificated by Industry Canada
Registration Number: IC 5183A-1
Valid Date: May.14, 2017

: Certificated by DAkkS, Germany
Registration No: D-PL-12151-01-00
Valid Date: Dec.15, 2016

: Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2015

2.5.Measurement Uncertainty (95% confidence levels, k=2)

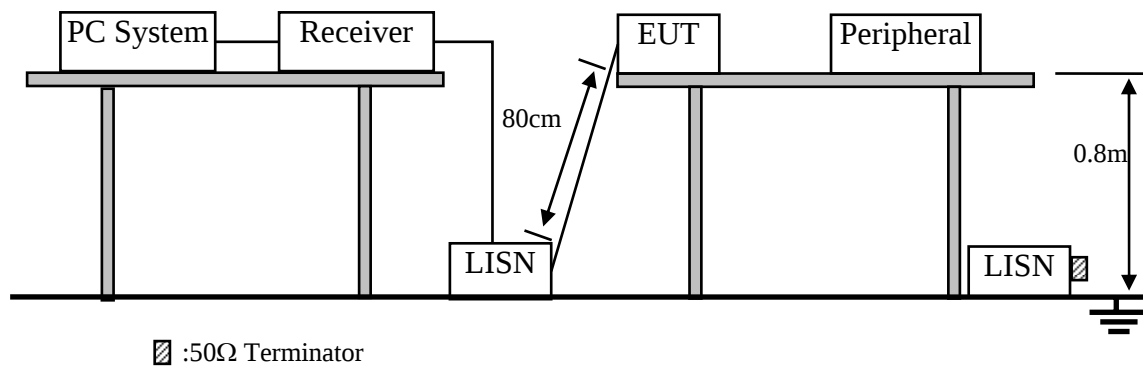
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.10dB (150kHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.22dB(30~200MHz, Polarize: H)
	3.23dB(30~200MHz, Polarize: V)
	3.49dB(200M~1GHz, Polarize: H)
	3.39dB(200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 3m chamber (1GHz-18GHz)	4.97dB (1~6GHz, Distance: 3m)
	4.99dB (6~18GHz, Distance: 3m)
Uncertainty for Radiated Spurious Emission test in RF chamber	3.57 dB
Uncertainty for Conduction Spurious emission test	2.00 dB
Uncertainty for Output power test	0.73 dB
Uncertainty for Bandwidth test	83 kHz
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.6℃
	3%

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# Shielding Room	AUDIX	N/A	N/A	Apr.17,14	1 Year
2.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 13	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	100429	Jan.22, 14	1 Year
4.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	Apr. 28,14	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 1	Apr. 28,14	1 Year
6.	Terminator	Hubersuhner	50Ω	No. 2	Apr. 28,14	1 Year
7.	RF Cable	Hubersuhner	RG58	0100.6954.20#	Jan. 22, 14	1Year
8.	Coaxial Switch	Anritsu	MP59B	6200298346	Apr. 28,14	1 Year
9.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	101838	Jan.22, 14	1 Year

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

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

2. The lower limit shall apply at the transition frequencies.

3.4.Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1.Soundbar with W-TX (EUT)

Model Number : SLIM-PWR-44

Serial Number : N/A

3.4.2.Support Equipment: As Tested Supporting System Details, in Section 2.2.

3.5.Operating Condition of EUT

3.5.1.Setup the EUT and simulator as shown as Section 3.2.

3.5.2.Turned on the power of all equipment.

3.5.3.PC run test software to control EUT work in Tx mode.

3.6.Test Procedure

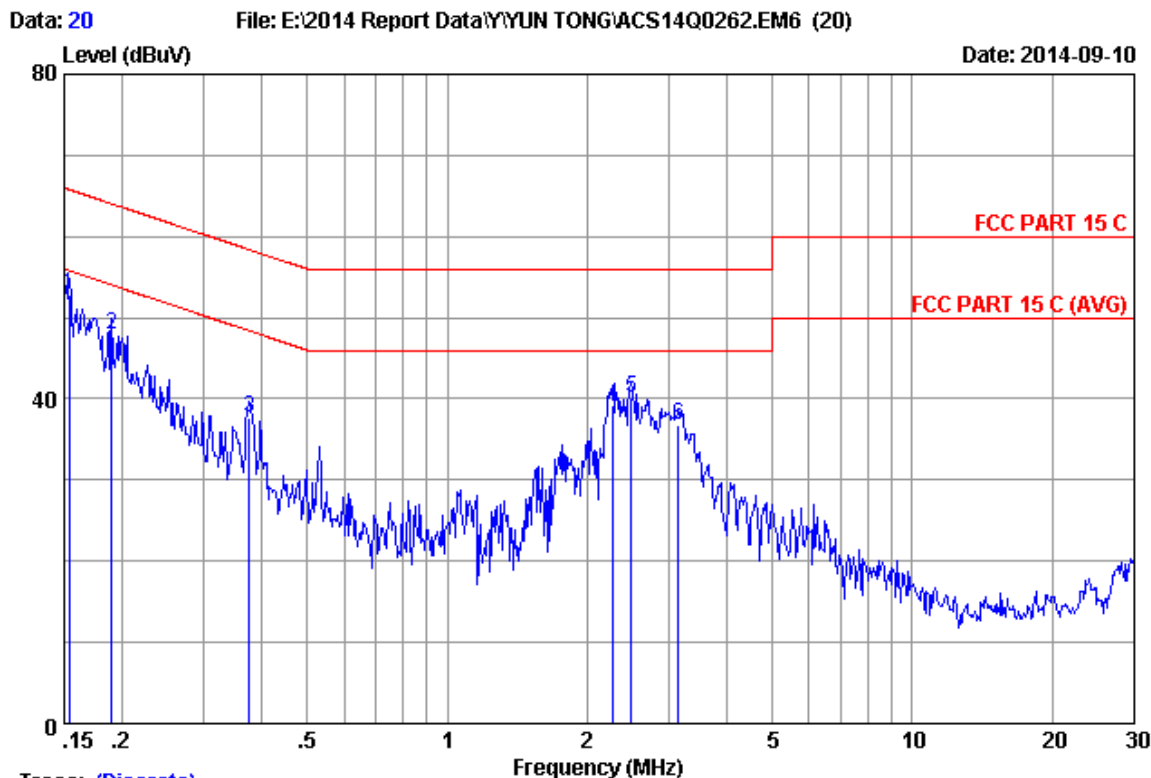
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7.Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)



Trace: (Discrete)

Site no	:1# Conduction	Data No	:20
Dis./Ant.	:2014 ESH2-Z5 LINE		
Limit	:FCC PART 15 C		
Env./Ins.	:24.6°C/50%	Engineer	:Nick_Huang
EUT	:Soundbar with W-TX		
Power Rating	:AC 120V/60Hz		
Test Mode	:Tx Mode		
	M/N:SLIM-PWR-44		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15403	0.14	9.89	42.88	52.91	65.78	12.87	QP
2	0.18938	0.13	9.90	37.81	47.84	64.06	16.22	QP
3	0.37512	0.51	9.90	27.21	37.62	58.39	20.77	QP
4	2.273	0.19	9.93	29.09	39.21	56.00	16.79	QP
5	2.487	0.20	9.93	30.03	40.16	56.00	15.84	QP
6	3.140	0.20	9.94	26.70	36.84	56.00	19.16	QP

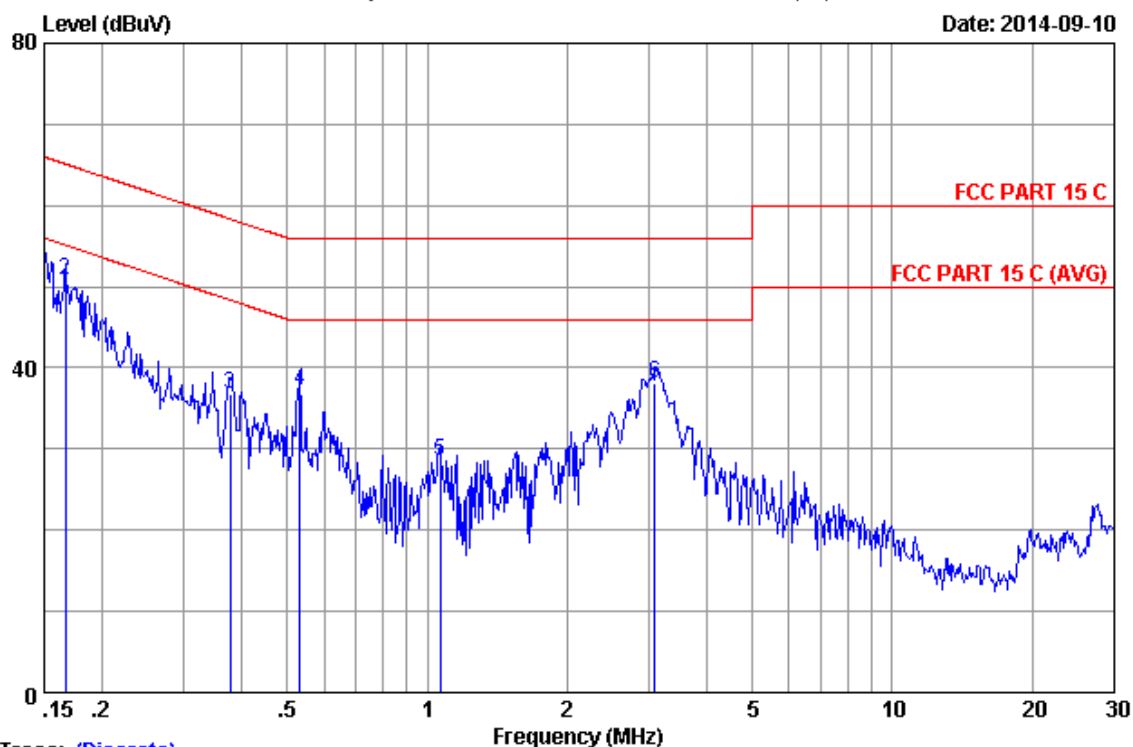
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

Data: 19

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Date: 2014-09-10



Trace: (Discrete)

Site no :1# Conduction
Dis./Ant. :2014 ESH2-Z5 NEUTRAL
Limit :FCC PART 15 C
Env./Ins. :24.6°C/50%
EUT :Soundbar with W-TX
Power Rating :AC 120V/60Hz
Test Mode :Tx Mode
M/N:SLIM-PWR-44

Data No :19
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15000	0.13	9.89	42.29	52.31	66.00	13.69	QP
2	0.16677	0.13	9.89	40.79	50.81	65.12	14.31	QP
3	0.37711	0.15	9.90	26.82	36.87	58.34	21.47	QP
4	0.53215	0.16	9.90	27.12	37.18	56.00	18.82	QP
5	1.065	0.18	9.91	18.36	28.45	56.00	27.55	QP
6	3.090	0.22	9.94	28.02	38.18	56.00	17.82	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

2.If the average limit is met when using a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For frequency range 30MHz~1000MHz (At Anechoic Chamber)

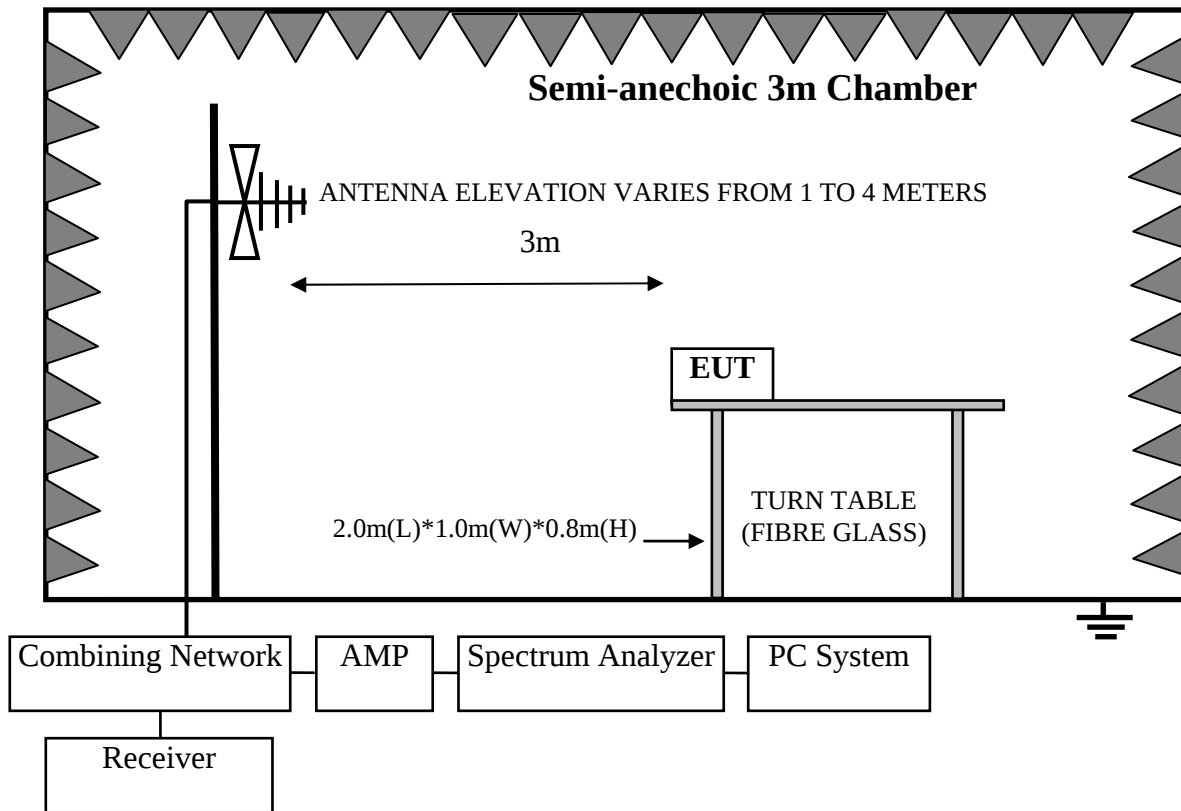
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Nov.24, 13	1 Year
2.	EMI Spectrum	Agilent	E4407B	MY41440292	Apr. 28,14	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	Apr. 28,14	1 Year
4.	Amplifier	HP	8447D	2648A04738	Apr. 28,14	1 Year
5.	Bilog Antenna	TESEQ	CBL6112D	35375	Jun. 18, 14	1 Year
6.	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	Apr. 28,14	1 Year
7.	Coaxial Switch	Anritsu	MP59B	6200313662	Apr. 28,14	1 Year

4.1.2. For frequency range 1GHz~40GHz (At Anechoic Chamber)

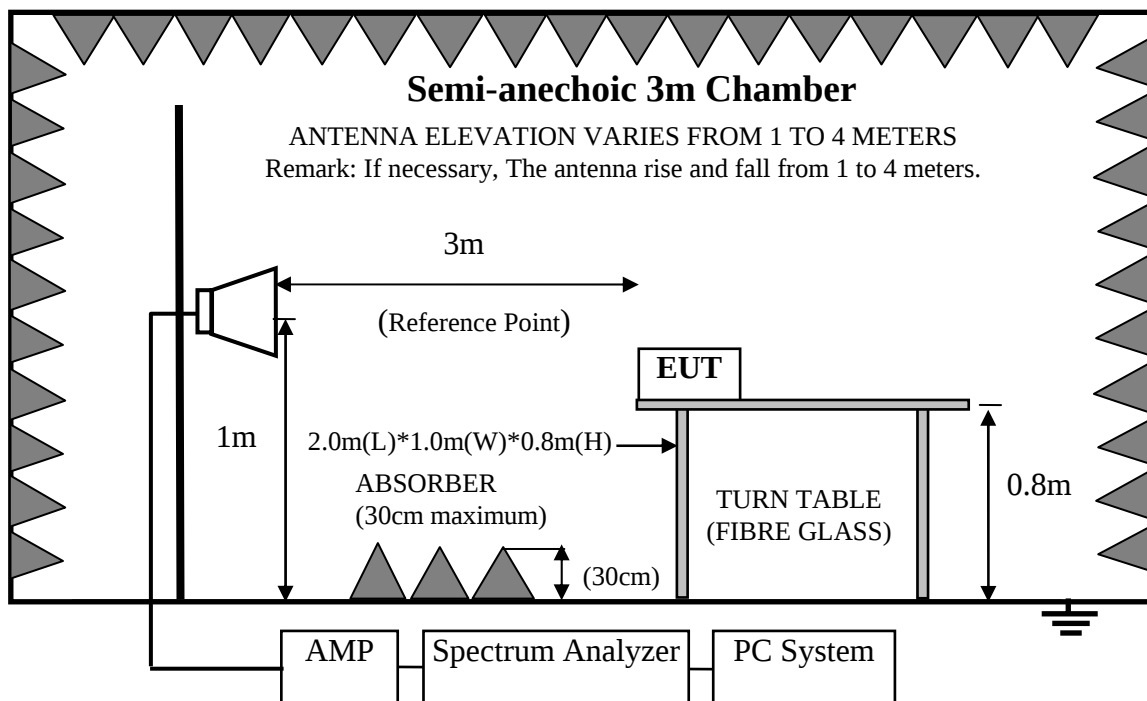
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Nov.02, 14	1 Year
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	Apr. 28,14	1 Year
2.	Horn Antenna	ETS	3115	9607-4877	Sep.20, 14	1 Year
3.	Horn Antenna	ETS	3116	00060089	Sep.20, 14	1 Year
4.	Amplifier	Agilent	8449B	3008A00863	Apr. 28,14	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	Apr. 28,14	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX106	28616/2	Apr. 28,14	1 Year

4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000MHz



For frequency range 1GHz-40GHz



4.3.Radiated Emission Limit

4.3.1. 15.247&209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Remark : (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.3.2. 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.4.EUT Configuration on Test

The configurations of EUT are listed in Section 3.4.

4.5.Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.5. except the test set up replaced by Section 4.2.

4.6.Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as test photo indicated.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10th harmonic (40GHz) are checked. and no any emissions were found from 18GHz to 40 GHz, So the radiated emissions from 18GHz to 40GHz were not record.

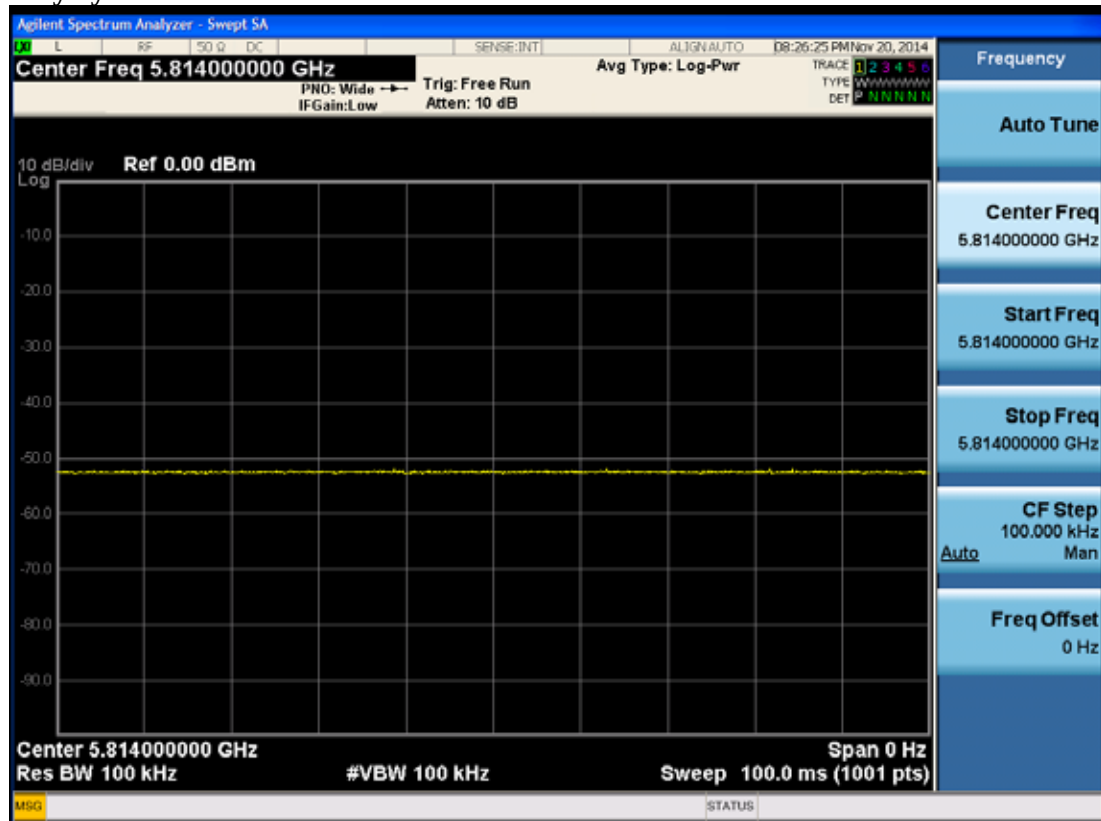
4.7.Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 40 GHz were comply with 15.209 limits.

Note: For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

Duty cycle



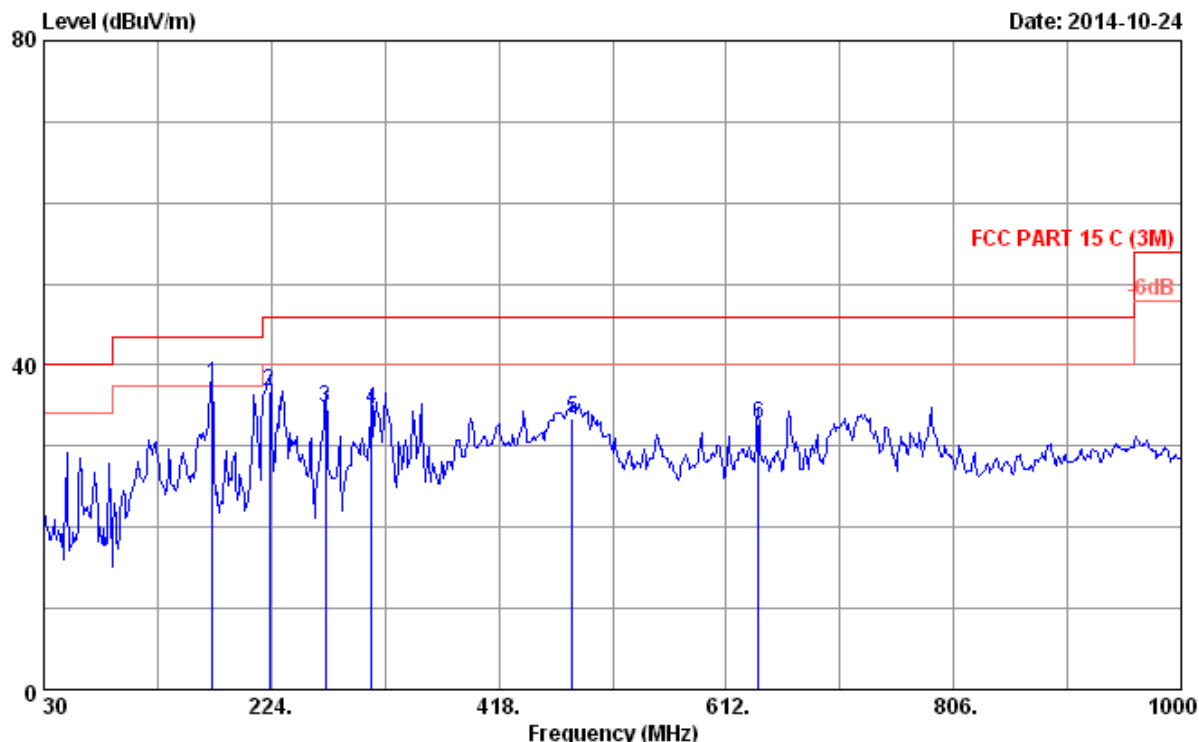
Note: The Duty Cycle is close to 100%.

Frequency: 30MHz~1GHz

Data: 29

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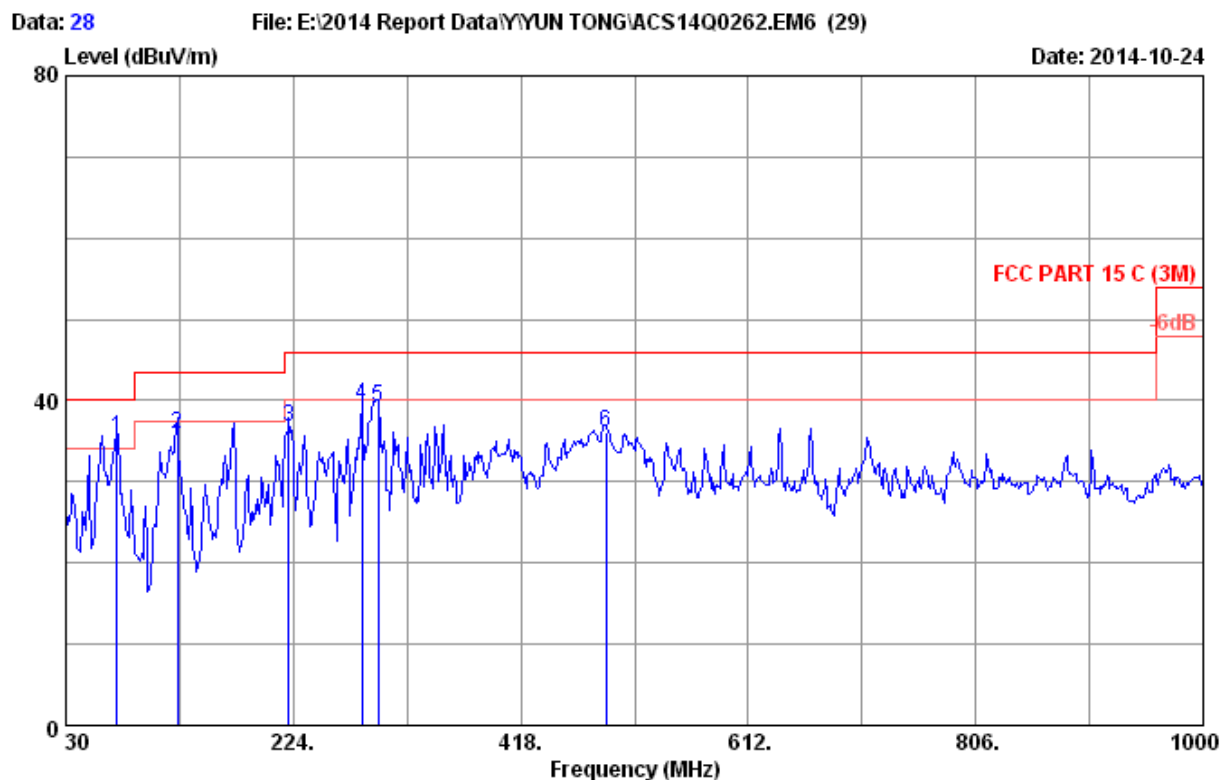
Date: 2014-10-24



Site no. : 3m Chamber Data no. : 29
 Dis. / Ant. : 3m 2014 CBL6112D 35375 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 24.5°C/48% Engineer : Berg_Guo
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60Hz
 Test Mode : Tx Mode(5.8G)
 M/N:SLIM-PWR44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	173.560	9.84	1.69	53.53	37.56	43.50	5.94	QP
2	222.060	10.80	1.95	51.36	36.79	46.00	9.21	QP
3	270.560	13.50	2.16	46.35	34.83	46.00	11.17	QP
4	309.360	14.19	2.33	45.21	34.57	46.00	11.43	QP
5	481.050	17.70	3.15	40.68	33.50	46.00	12.50	QP
6	639.160	19.90	3.88	37.05	32.67	46.00	13.33	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

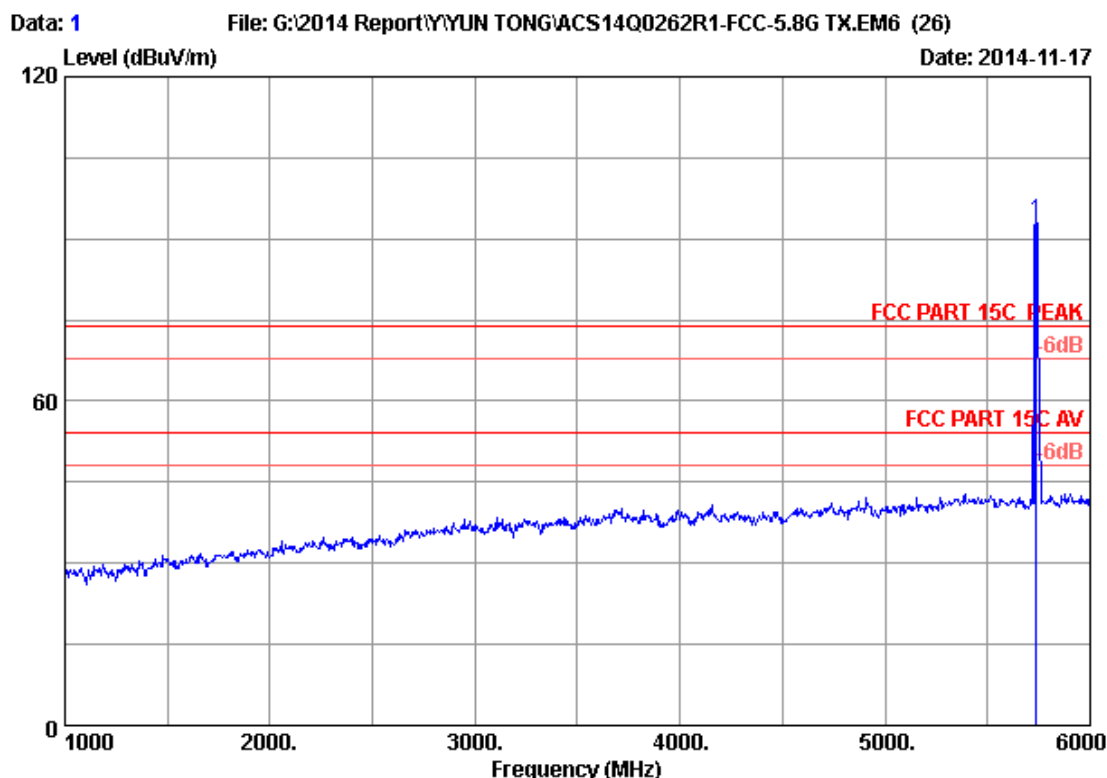


Site no. : 3m Chamber Data no. : 28
 Dis. / Ant. : 3m 2014 CBL6112D 35375 Ant. pol. : VERTICAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 24.5°C/48% Engineer : Berg_Guo
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60Hz
 Test Mode : Tx Mode(5.8G)
 M/N:SLIM-PWR44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	73.650	6.90	0.96	55.54	35.34	40.00	4.66	QP
2	125.060	12.85	1.35	49.46	35.92	43.50	7.58	QP
3	220.120	10.71	1.94	51.46	36.78	46.00	9.22	QP
4	282.200	13.61	2.21	50.79	39.46	46.00	6.54	QP
5	296.750	13.90	2.26	50.11	39.16	46.00	6.84	QP
6	490.750	18.03	3.19	42.92	36.07	46.00	9.93	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

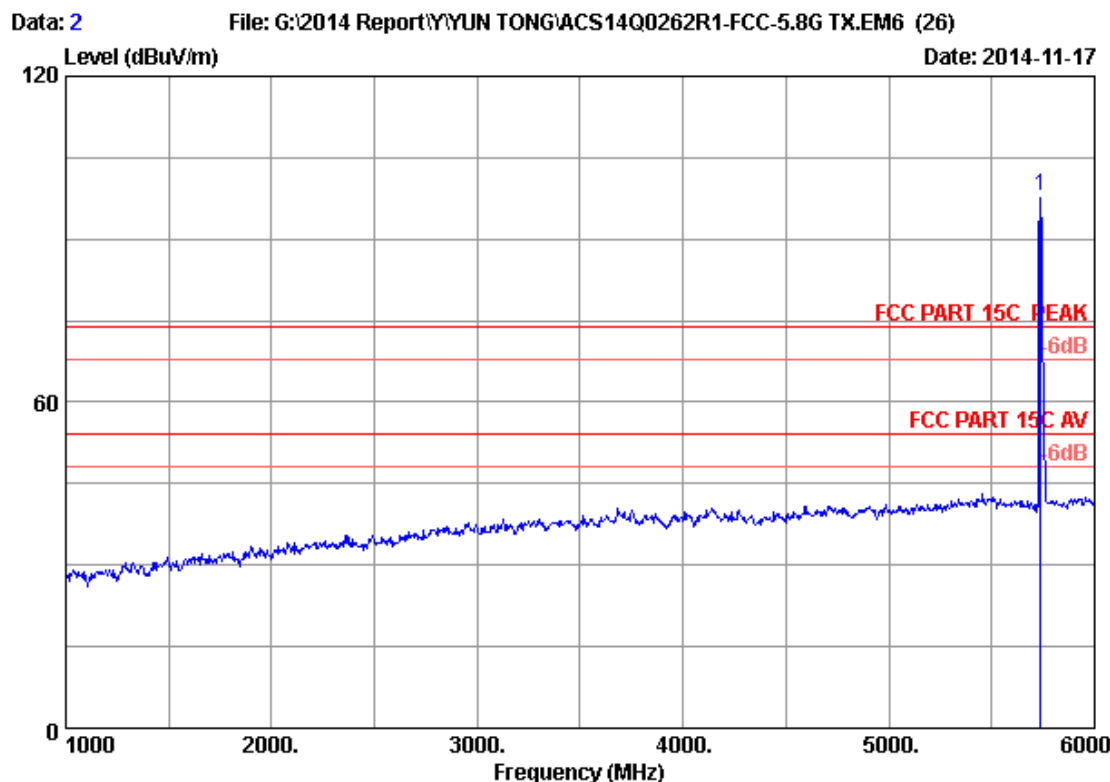
Frequency: 1GHz~18GHz



Site no.	: 3m Chamber	Data no.	: 1
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5736 MHz		
M/N	: SLIM-PWR-44		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5736.000	34.09	9.54	35.70	85.47	93.40	74.00	-19.40	Peak

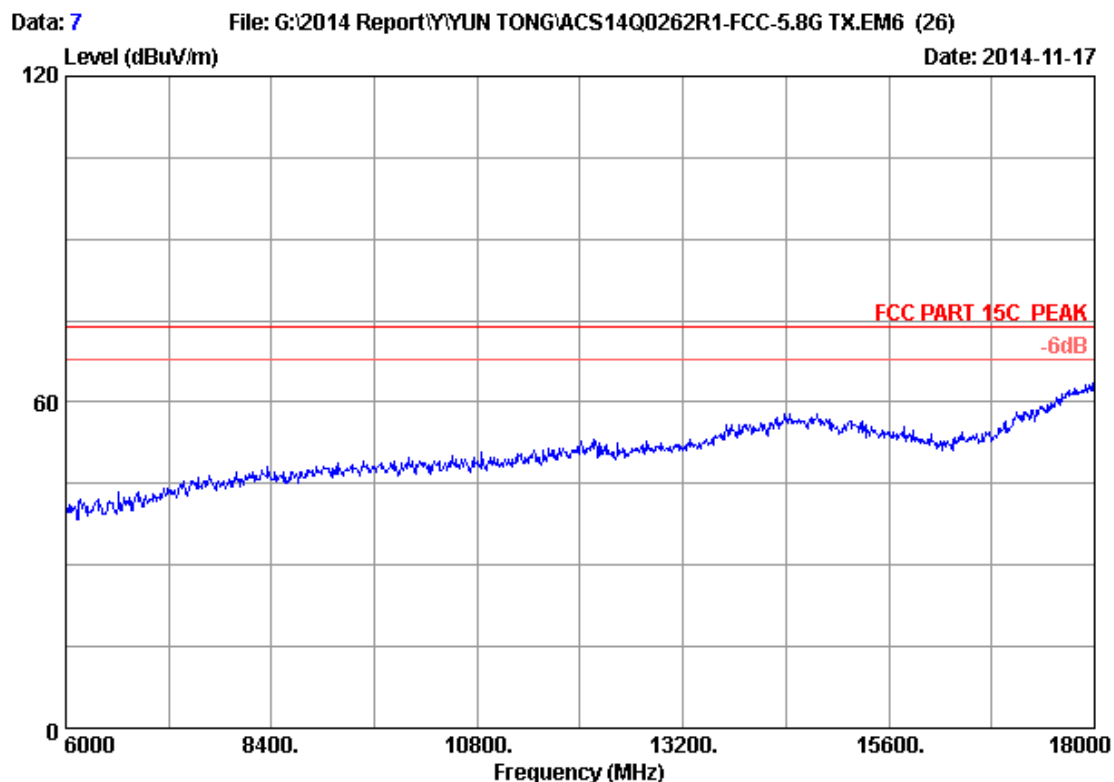
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor
2. The emission levels that are 20dB below the official
limit are not reported.



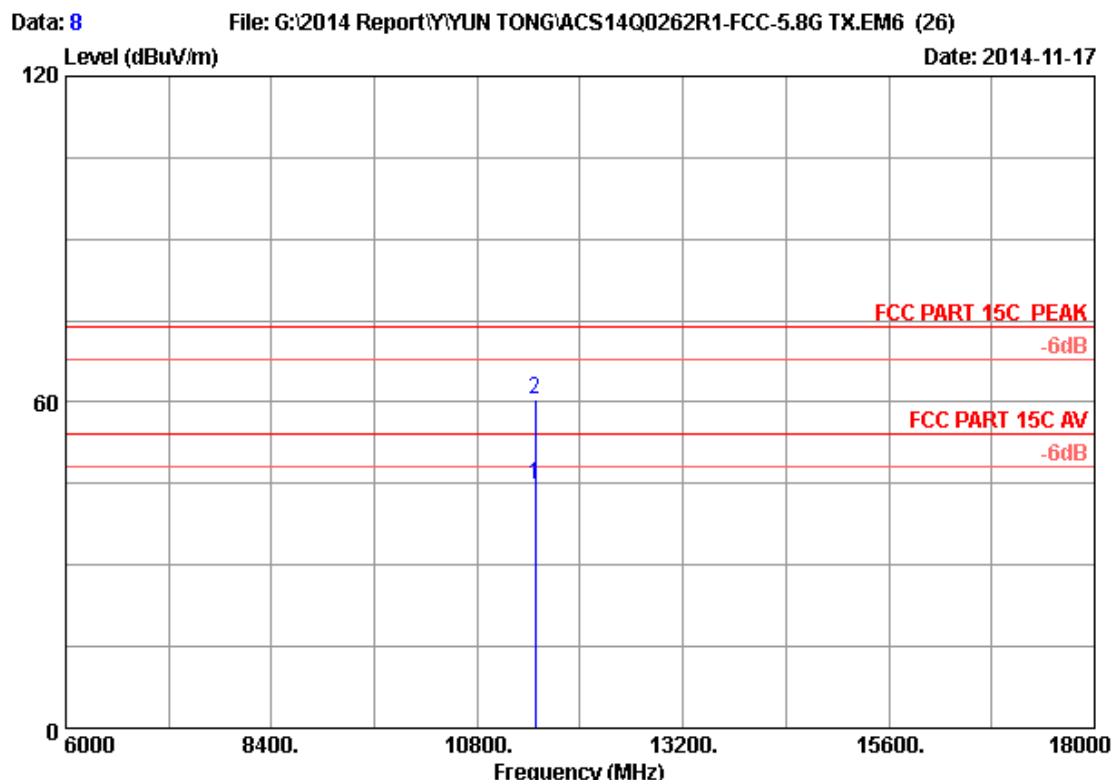
Site no.	: 3m Chamber	Data no.	: 2
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5736 MHz		
M/N	: SLIM-PWR-44		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5736.000	34.09	9.54	35.70	90.14	98.07	74.00	-24.07	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor
2. The emission levels that are 20dB below the official
limit are not reported.



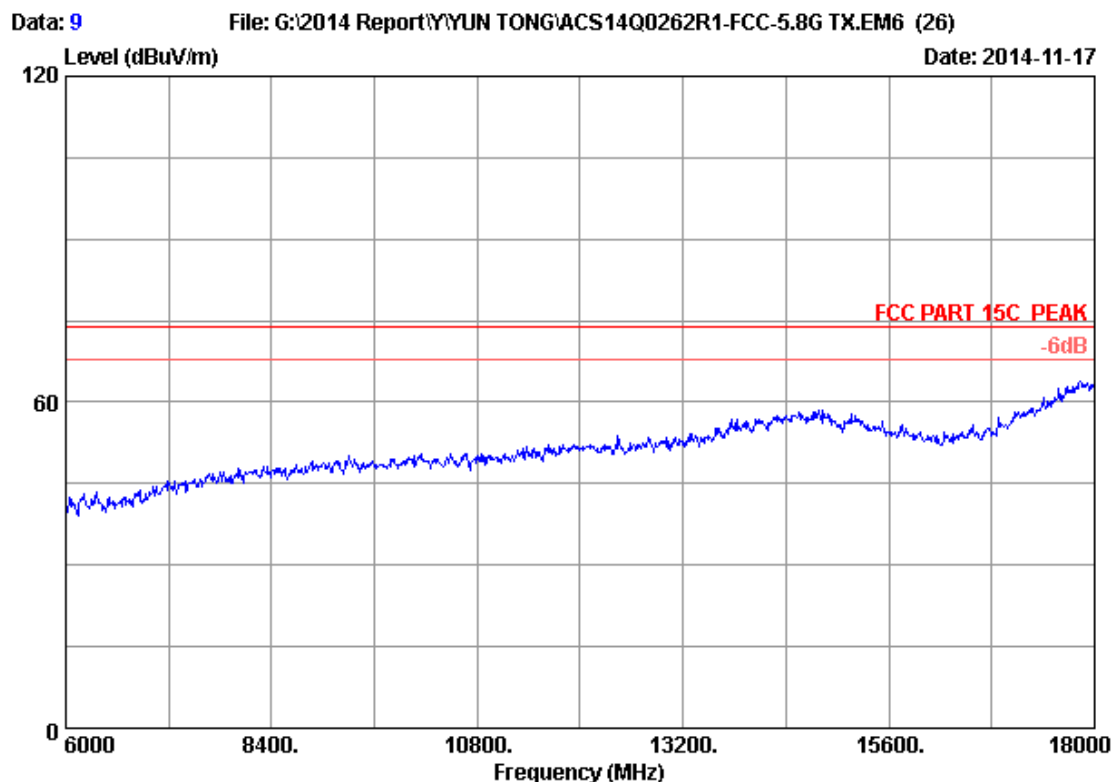
Site no.	: 3m Chamber	Data no.	: 7
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK	Engineer	: Kobe
Env. / Ins.	: 24°C/56%		
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5736 MHz		
M/N	: SLIM-PWR-44		



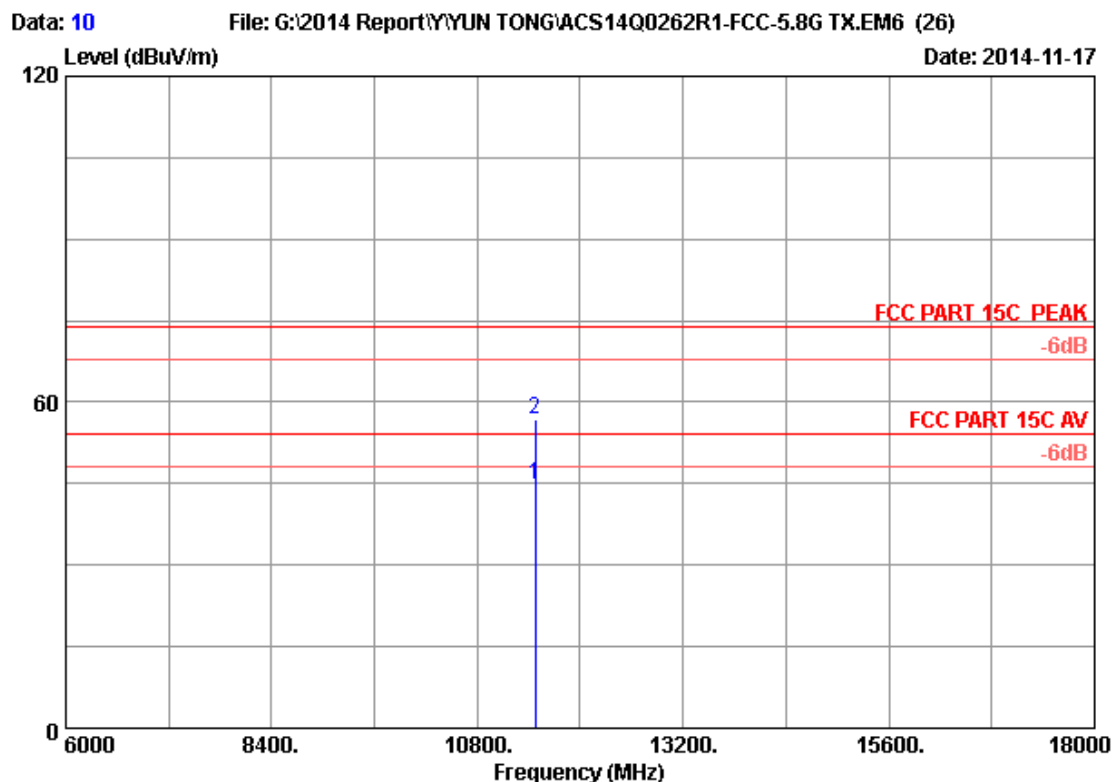
Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2014 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 24°C/56% Engineer : Kobe
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60 Hz
 Test Mode : 11a 5736 MHz
 M/N : SLIM-PWR-44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11472.000	38.68	13.27	35.28	28.04	44.71	54.00	9.29	Average
2	11472.000	38.68	13.27	35.28	43.84	60.51	74.00	13.49	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



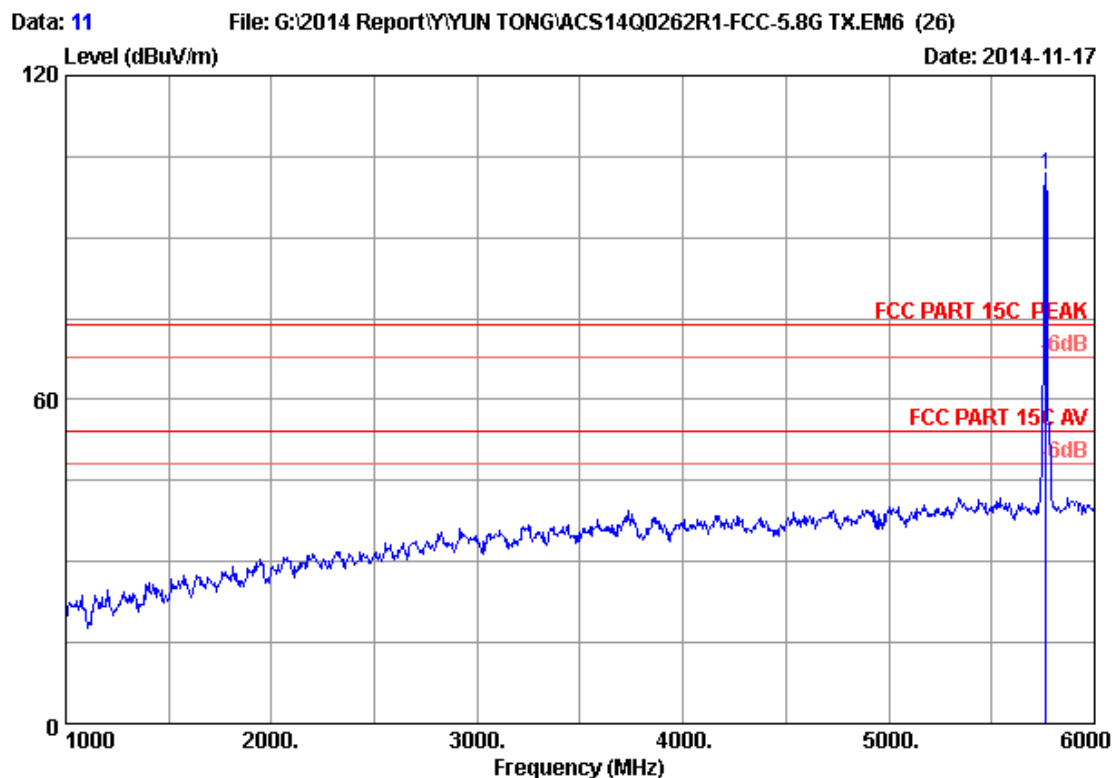
Site no.	: 3m Chamber	Data no.	: 9
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5736 MHz		
M/N	: SLIM-PWR-44		



Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2014 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 24°C/56% Engineer : Kobe
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60 Hz
 Test Mode : 11a 5736 MHz
 M/N : SLIM-PWR-44

No.	Freq. (MHz)	Ant.	Cable	AMP	Reading (dBuV)	Emission			Remark
		Factor (dB/m)	Loss (dB)	factor (dB)		Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	11472.000	38.68	13.27	35.28	28.14	44.81	54.00	9.19	Average
2	11472.000	38.68	13.27	35.28	40.27	56.94	74.00	17.06	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.

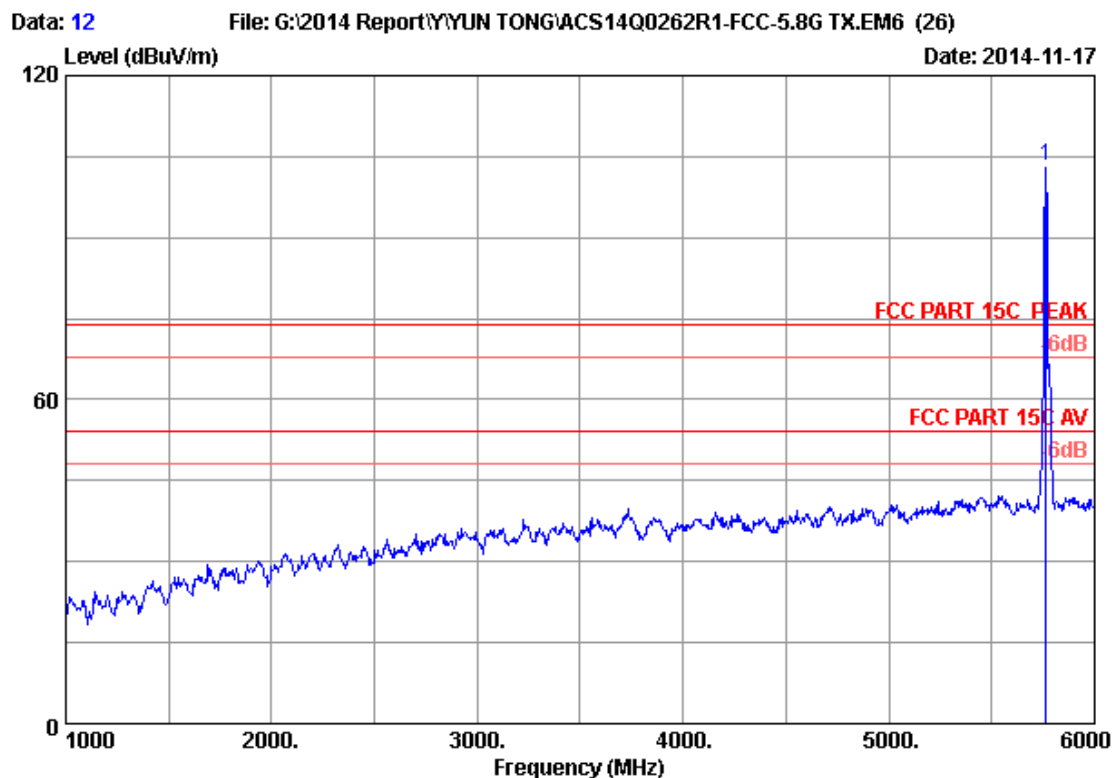


Site no.	: 3m Chamber	Data no.	: 11
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5762 MHz		
M/N	: SLIM-PWR-44		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5762.000	34.10	9.56	35.70	93.72	101.68	74.00	-27.68	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor

2. The emission levels that are 20dB below the official
limit are not reported.

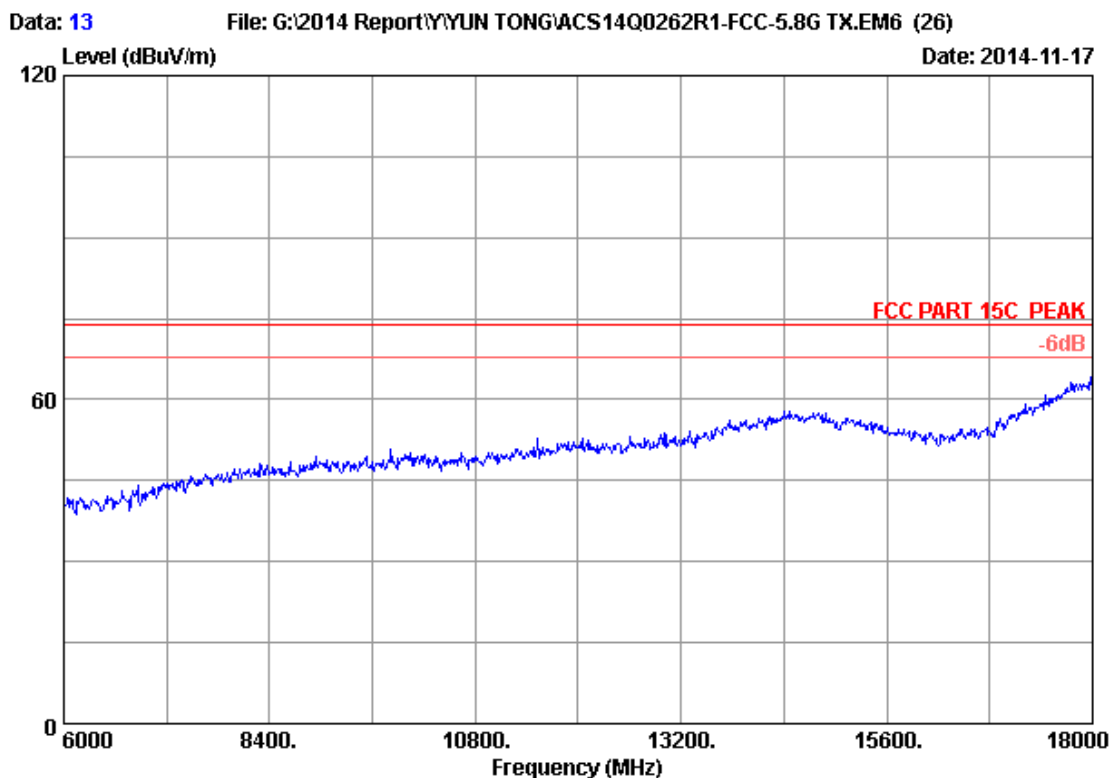


Site no.	: 3m Chamber	Data no.	: 12
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5762 MHz		
M/N	: SLIM-PWR-44		

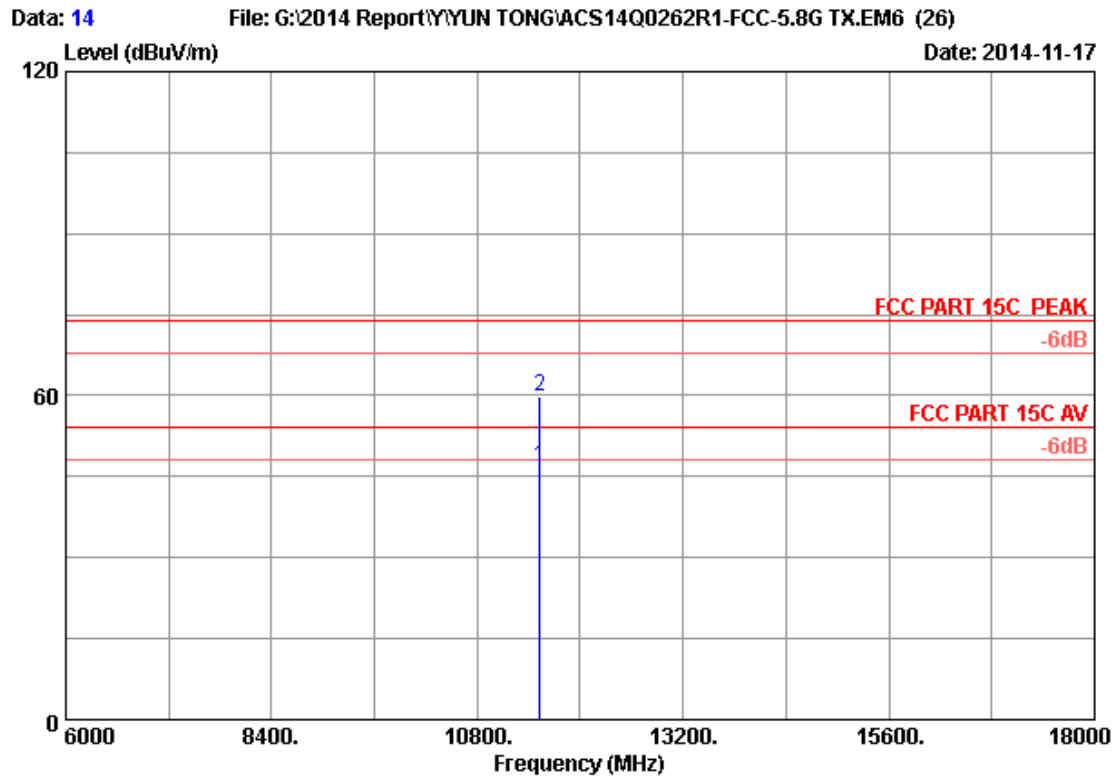
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBUV)	Emission			
						Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	5762.000	34.10	9.56	35.70	95.18	103.14	74.00	-29.14	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor

2. The emission levels that are 20dB below the official
limit are not reported.



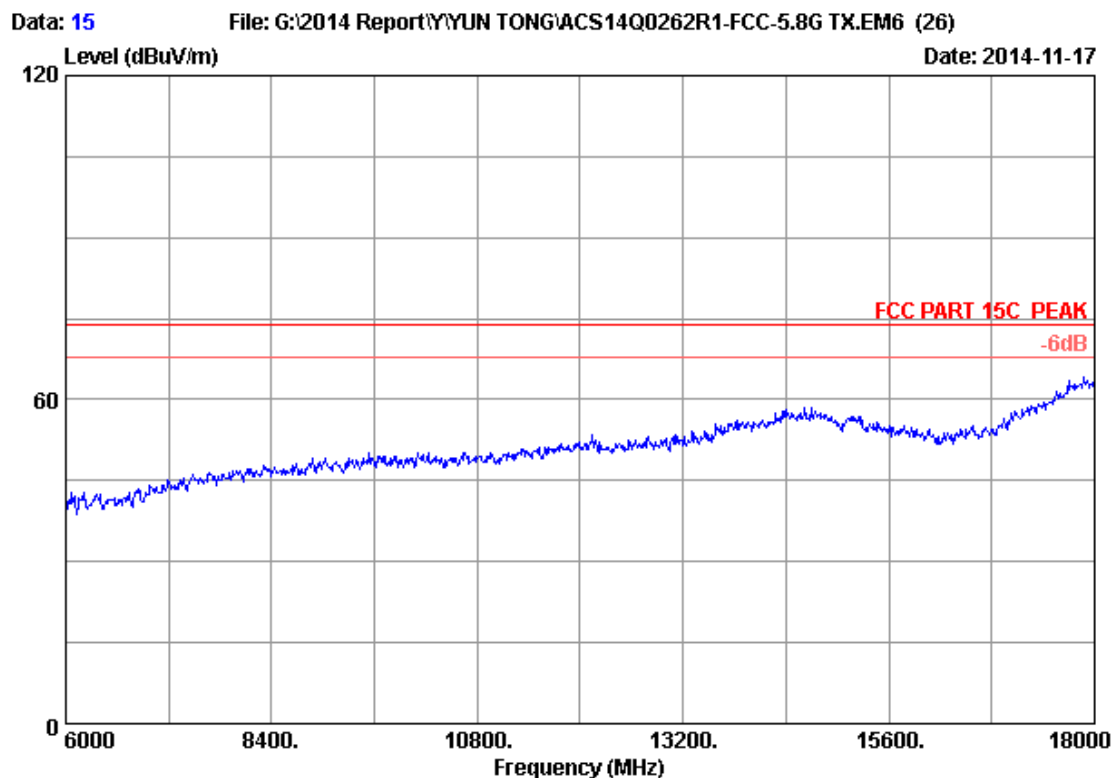
Site no.	: 3m Chamber	Data no.	: 13
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5762 MHz		
M/N	: SLIM-PWR-44		



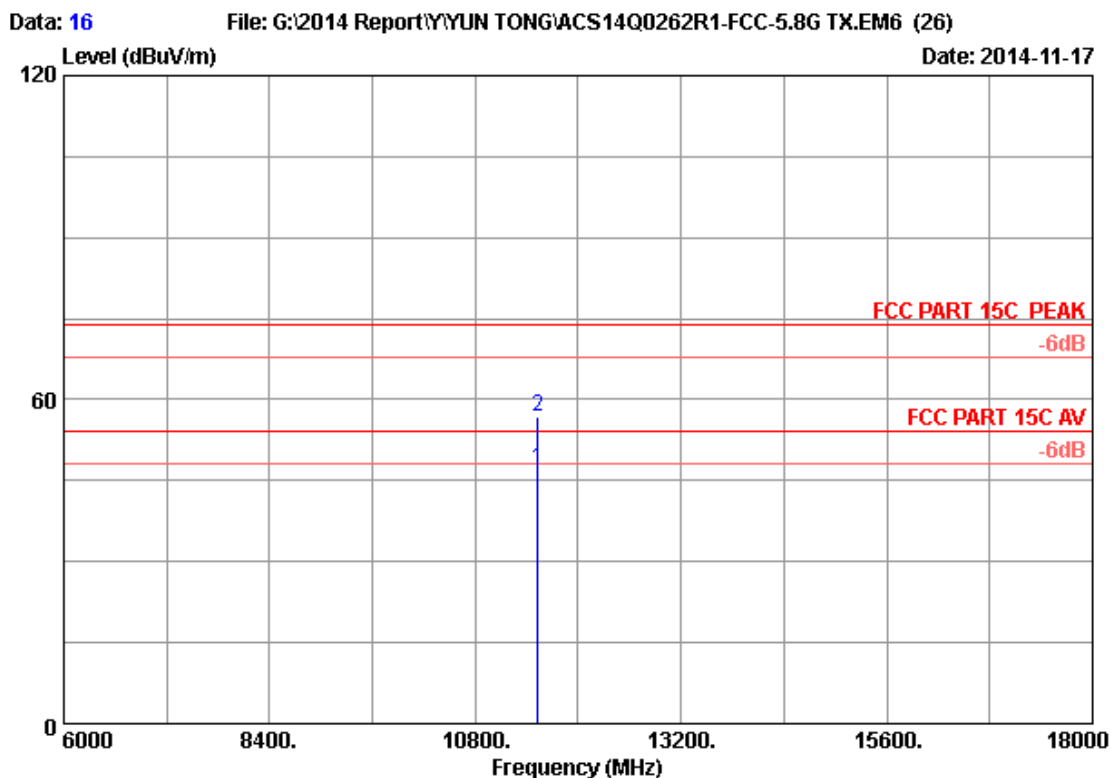
Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2014 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 24°C/56% Engineer : Kobe
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60 Hz
 Test Mode : 11a 5762 MHz
 M/N : SLIM-PWR-44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11524.000	38.73	13.30	35.27	30.03	46.79	54.00	7.21	Average
2	11524.000	38.73	13.30	35.27	43.06	59.82	74.00	14.18	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



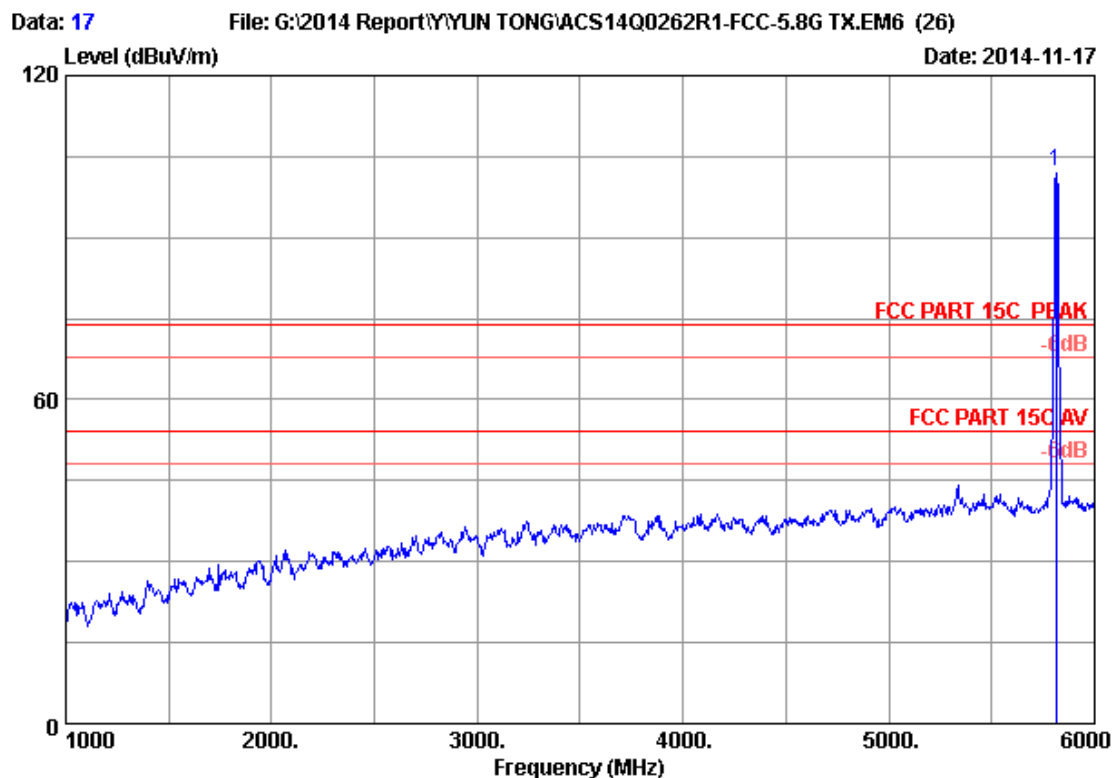
Site no.	: 3m Chamber	Data no.	: 15
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5762 MHz		
M/N	: SLIM-PWR-44		



Site no.	: 3m Chamber	Data no.	: 16
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5762 MHz		
M/N	: SLIM-PWR-44		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11524.000	38.73	13.30	35.27	30.25	47.01	54.00	6.99	Average
2	11524.000	38.73	13.30	35.27	40.17	56.93	74.00	17.07	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor
2. The emission levels that are 20dB below the official
limit are not reported.

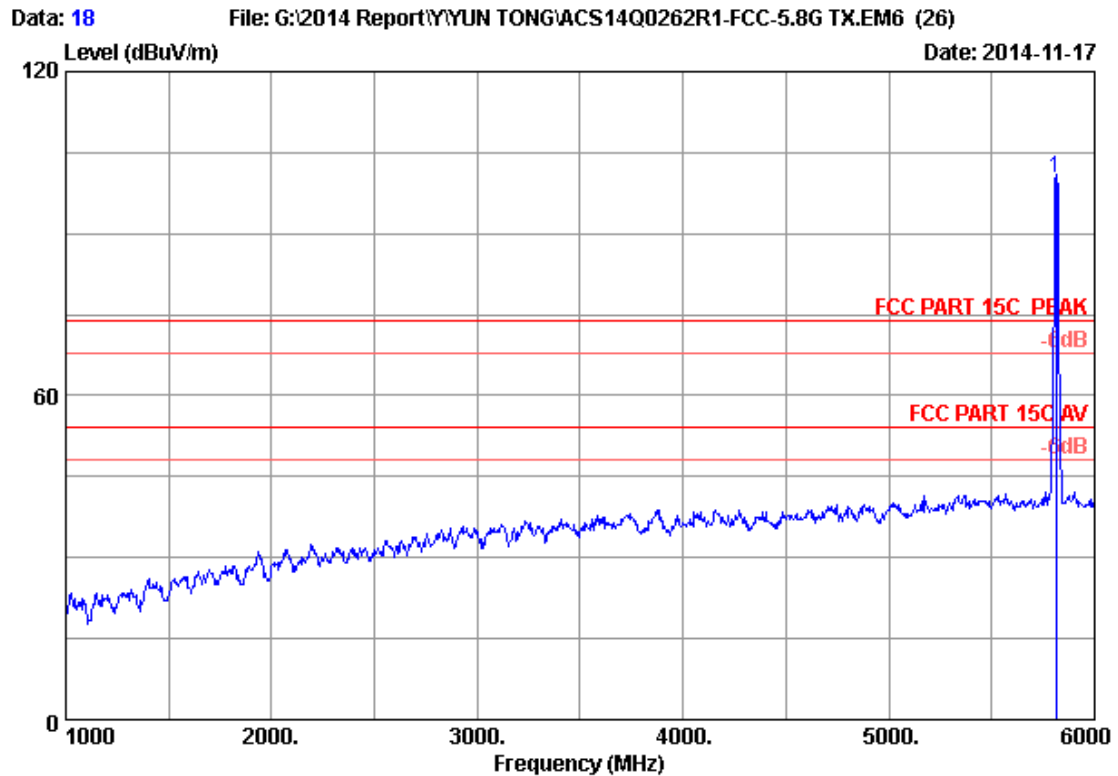


Site no.	: 3m Chamber	Data no.	: 17
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5814 MHz		
M/N	: SLIM-PWR-44		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBUV)	Emission			
						Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	5814.000	34.13	9.62	35.70	94.26	102.31	74.00	-28.31	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor

2. The emission levels that are 20dB below the official
limit are not reported.

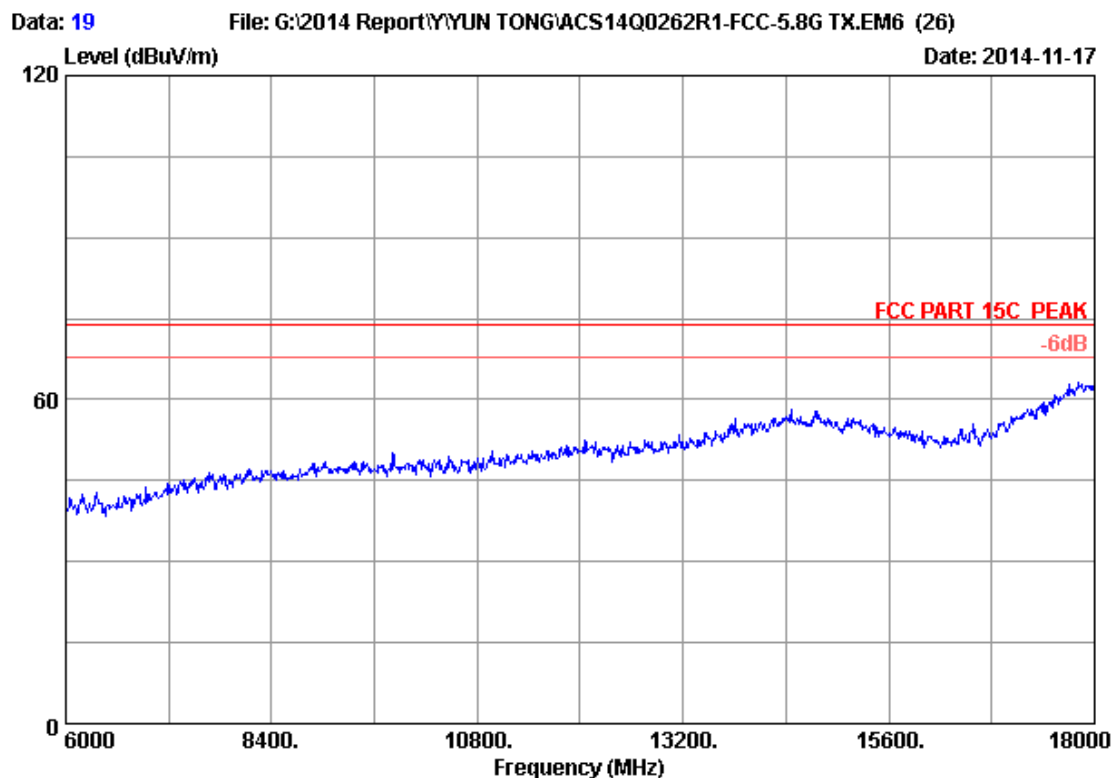


Site no.	: 3m Chamber	Data no.	: 18
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5814 MHz		
M/N	: SLIM-PWR-44		

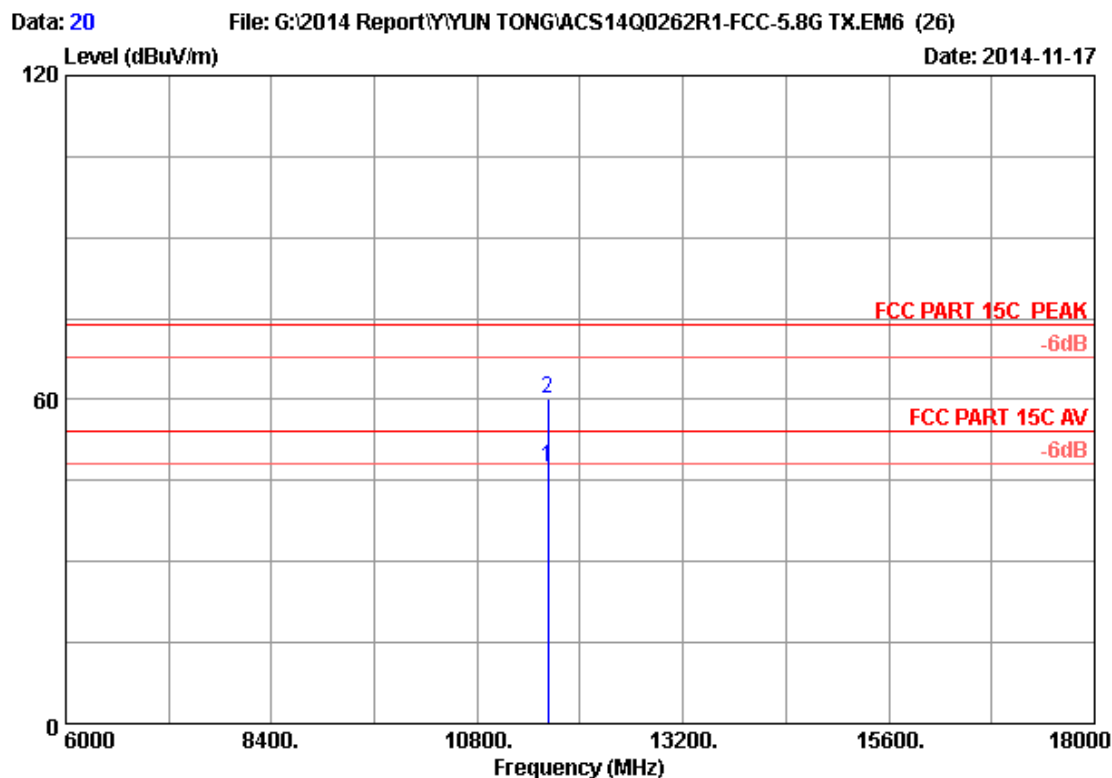
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBUV)	Emission			
						Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	5814.000	34.13	9.62	35.70	92.27	100.32	74.00	-26.32	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor

2. The emission levels that are 20dB below the official
limit are not reported.



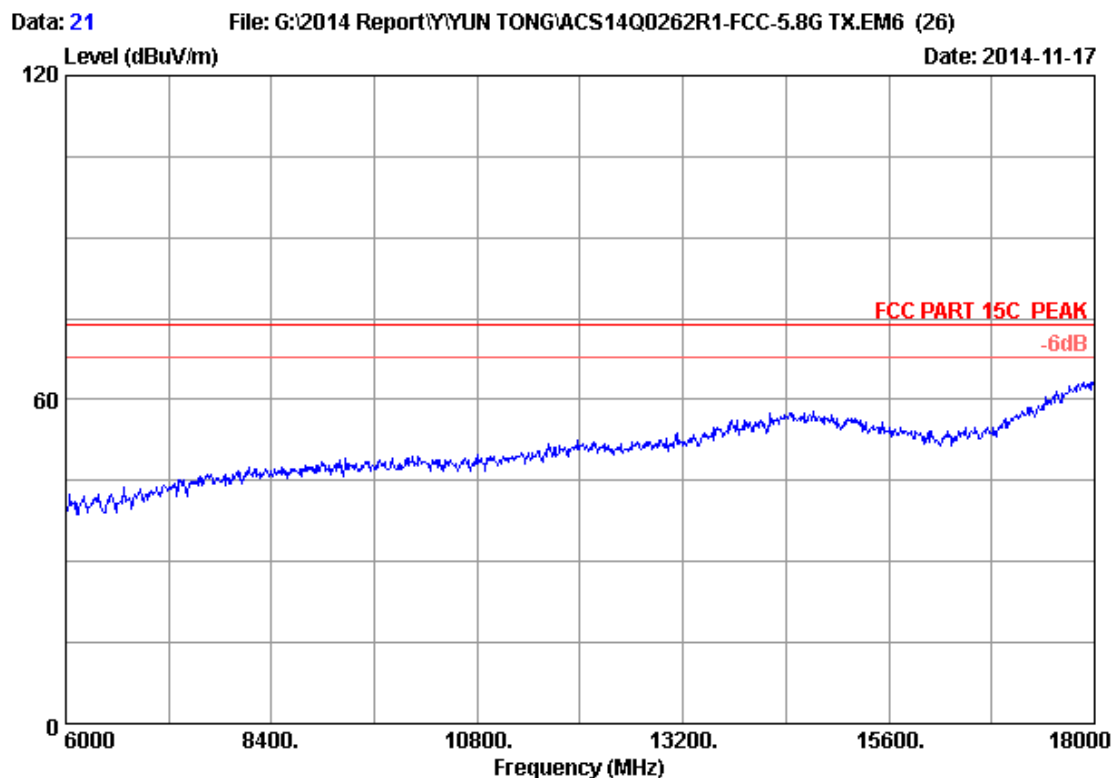
Site no.	: 3m Chamber	Data no.	: 19
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5814 MHz		
M/N	: SLIM-PWR-44		



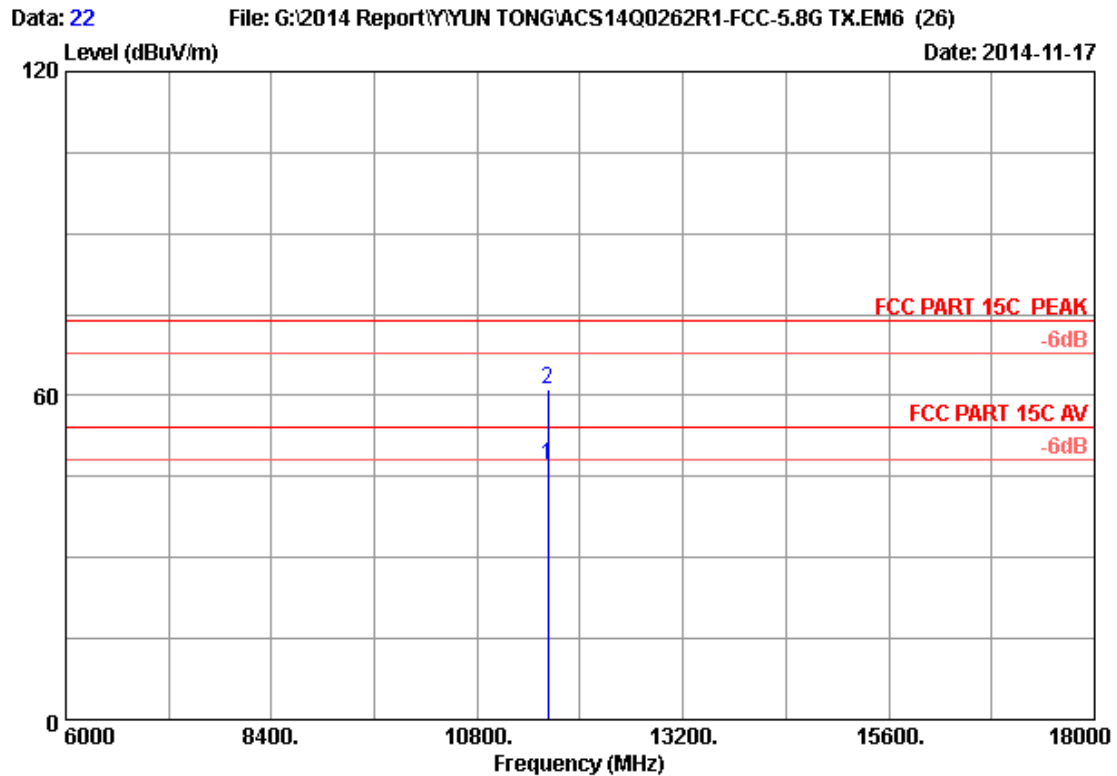
Site no. : 3m Chamber Data no. : 20
 Dis. / Ant. : 3m 2014 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 24°C/56% Engineer : Kobe
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60 Hz
 Test Mode : 11a 5814 MHz
 M/N : SLIM-PWR-44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11628.000	38.88	13.36	35.26	30.47	47.45	54.00	6.55	Average
2	11628.000	38.88	13.36	35.26	43.04	60.02	74.00	13.98	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no.	: 3m Chamber	Data no.	: 21
Dis. / Ant.	: 3m 2014 3115 (4580)	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Kobe
EUT	: Soundbar with W-TX		
Power rating	: AC 120V/60 Hz		
Test Mode	: 11a 5814 MHz		
M/N	: SLIM-PWR-44		



Site no. : 3m Chamber Data no. : 22
 Dis. / Ant. : 3m 2014 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 24°C/56% Engineer : Kobe
 EUT : Soundbar with W-TX
 Power rating : AC 120V/60 Hz
 Test Mode : 11a 5814 MHz
 M/N : SLIM-PWR-44

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11628.000	38.88	13.36	35.26	30.27	47.25	54.00	6.75	Average
2	11628.000	38.88	13.36	35.26	44.18	61.16	74.00	12.84	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.

5. CONDUCTED SPURIOUS EMISSIONS

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	Apr. 28,14	1 Year
2.	Spectrum	Agilent	N9030A	MY51380221	Oct.29, 14	1 Year
3.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr. 28,14	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	Apr. 28,14	1 Year

5.2. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum 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.

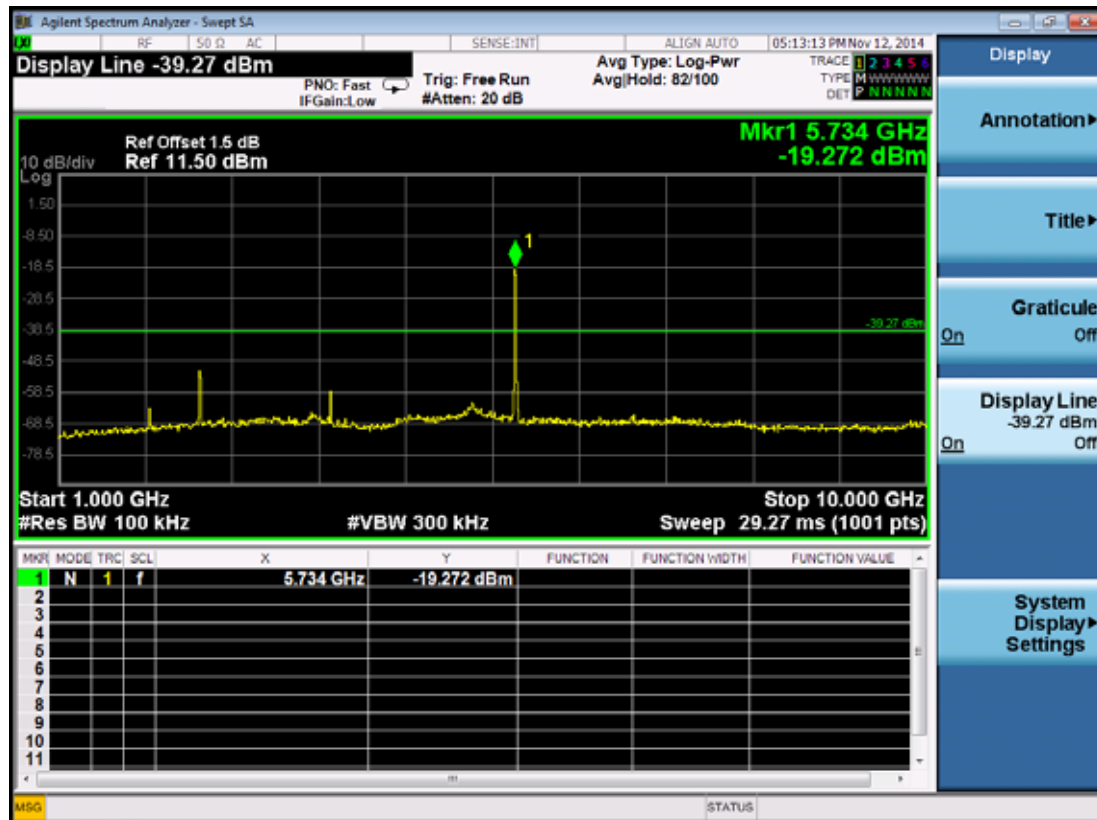
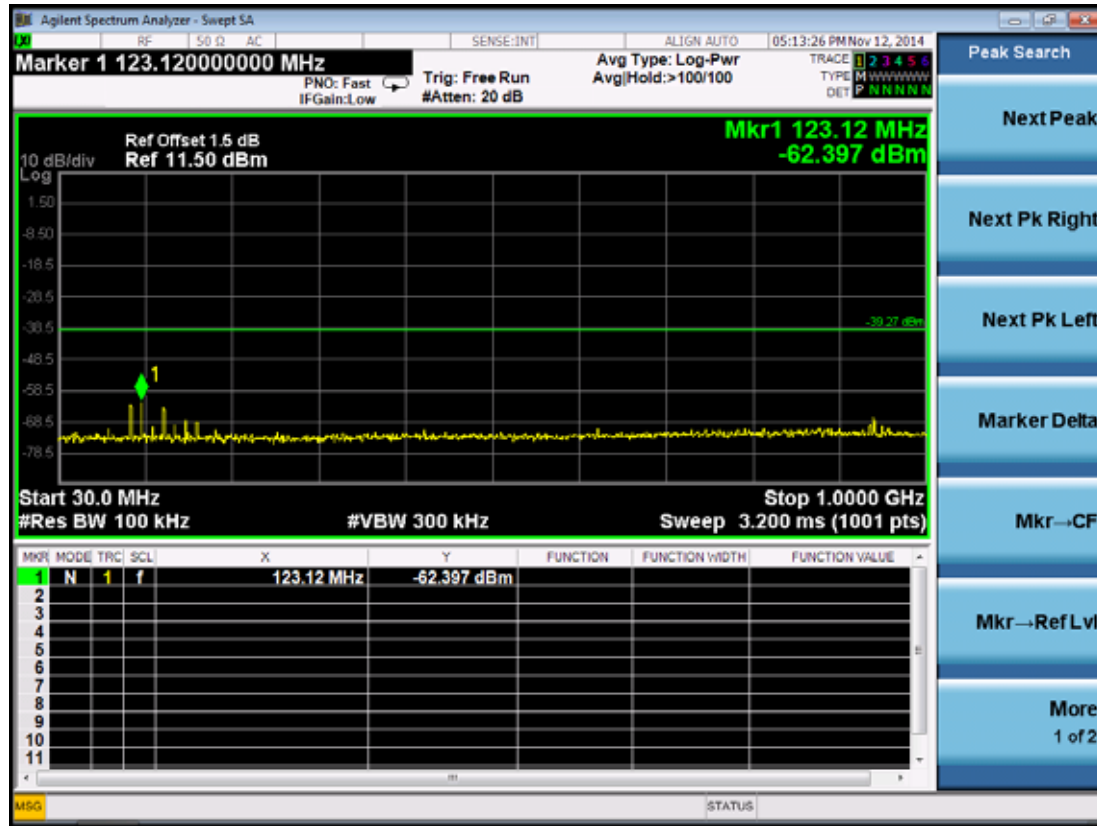
5.3. Test Procedure

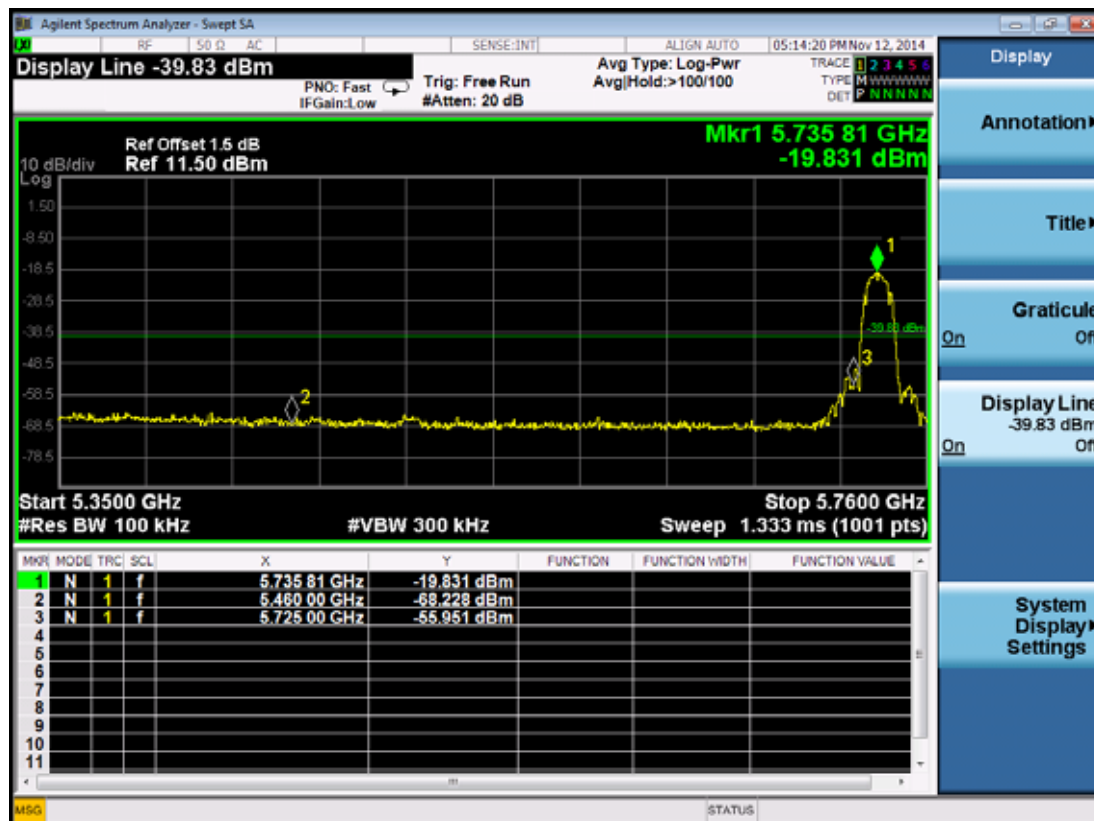
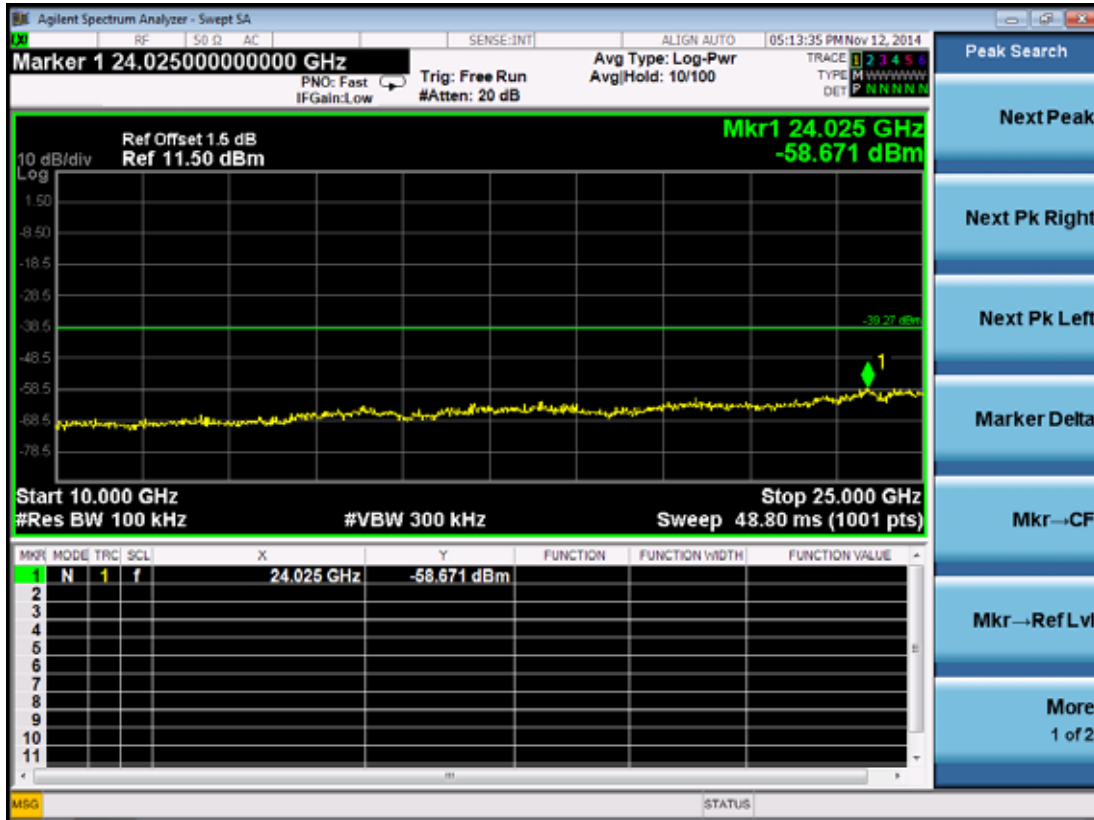
The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions detected.

5.4. Test result

PASS (The testing data was attached in the next pages.)

ANT 0:
5736MHz





5762MHz

