APPLICATION FOR CERTIFICATION
On Behalf of

Zhan Xiang Technology (Hui Zhou) CO., LTD

Flat Panel TV Bracket

Model Number: PX-T0904

Prepared for : Zhan Xiang Technology (Hui Zhou) CO., LTD
Xianiao Village, Longqiao Road, Longxi Town, Boluo Country, Huizhou City

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-F08110
Date of Test	:	Jan.21~24, 2008
Date of Report	:	Mar.05, 2008

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Description Page

TEST REPORT CERTIFICATION

Applicant	:	Zhan Xiang Technology (Hui Zhou) CO., LTD
Manufacturer	:	Zhan Xiang Technology (Hui Zhou) CO., LTD
EUT Description	:	Flat Panel TV Bracket
		(A) MODEL NO. : PX-T0904
		(B) SERIAL NO. : N/A
		(C) POWER SUPPLY : DC 12V

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2007

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

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 tests. Also, this report shows that EUT is technically compliant with FCC requirements.

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 : Jan.21~24, 2008

Prepared by : YoYo Wang

YoYo Wang / Assistant

Reviewer : Iceman Hu

Iceman Hu / Supervisor

Approved & Authorized Signer :

Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report.
Signature: Ken Lu 3/3 08

Ken Lu / Deputy 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**
Radiated Emission Test	FCC Part 15C: 15.231 ANSI C63.4: 2003	PASS
Stop Transmitting Time Test	FCC Part 15C: 15.231	PASS
20 dB Bandwidth Test	FCC Part 15C: 15.231	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description	:	Flat Panel TV Bracket
Model Number	:	PX-T0904
Operation frequency	:	433.92MHz
Modulation	:	ASK
Applicant	:	Zhan Xiang Technology (Hui Zhou) CO., LTD Xianiao Village, Longqiao Road, Longxi Town, Boluo Country, Huizhou City
Manufacturer	:	Zhan Xiang Technology (Hui Zhou) CO., LTD Xianiao Village, Longqiao Road, Longxi Town, Boluo Country, Huizhou City
Date of Test	:	Jan.21~34, 2008
Date of Receipt	:	Jan.15, 2008
Sample Type	:	Prototype production

2.2. 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	:	Jun. 13, 2006 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Jan. 31, 2007 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2004 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2007

2.3. Measurement Uncertainty

No.	Item	Uncertainty
1.	Uncertainty for Conducted Emission Test	1.22dB
2.	Uncertainty for Radiated Emission Test<1GHz	4.62dB
3.	Uncertainty for Radiated Emission Test>1GHz	4.79dB
4.	Uncertainty for Frequency measure	$0.42*10^{-6}$

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15 section 15.231, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

4. RADIATED EMISSION TEST

4.1. Test Equipment

The following test equipments are used during the radiated emission Test：

4.1.1. For Anechoic Chamber

Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber	AUDIX	N/A	N/A	Dec.20.07	1/2 Year
2.	EMI Spectrum	Agilent	E7403A	MY42000106	May 11, 07	1 Year
3.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	Dec.19, 07	1 Year
4.	Amplifier	HP	8447D	2944A04738	Jan.09, 08	1/2 Year
5.	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.22, 07	1 Year
6.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	Jan.09, 08	1/2 Year
7.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	Jan.09, 08	1/2 Year
8.	RF Cable	FUJIKURAw	RG-55/U	3# Chamber No.3	Jan.09, 08	1/2 Year
9.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	Jan.09, 08	1/2 Year
10.	Coaxial Switch	Anritsu	MP59B	M73989	Jan.09, 08	1/2 Year

Frequency rang: above 1000MHz

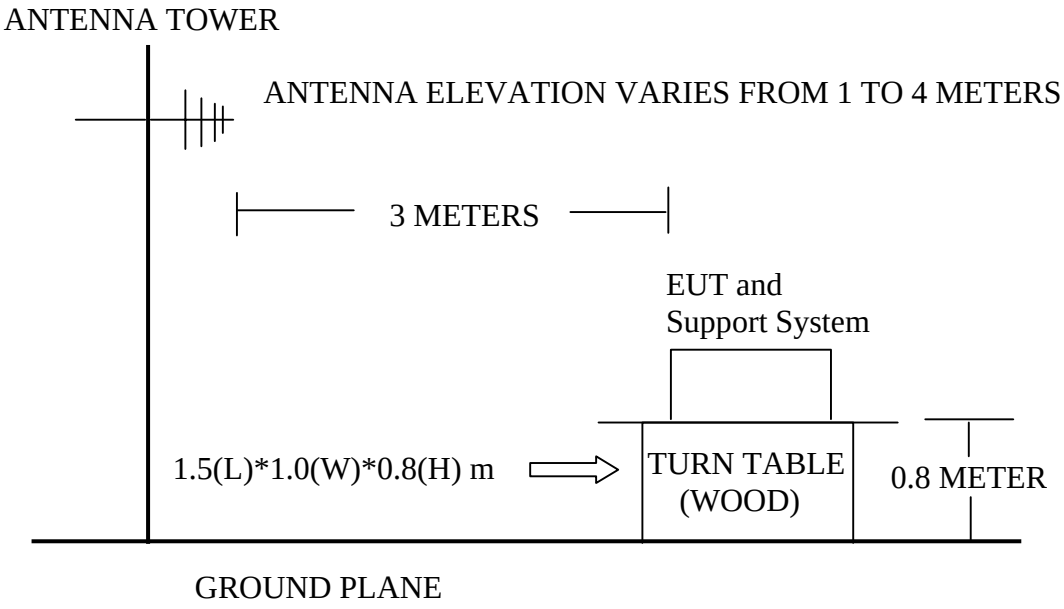
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year
5.	Antenna	ETS	3116	00060088	May. 28, 07	1 Year

4.2. Block Diagram of Test Setup

4.2.1. Block Diagram of connection between EUT and simulators

(EUT: Flat Panel TV Bracket)

4.2.2. Anechoic Chamber Setup Diagram



4.3. Radiated Emission Limit (Standard: FCC Part 15)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/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
Local Oscillator:	3	100.80 dB(μV)/m (Peak) 80.80 dB(μV)/m (Average)	
Above 1000	3	Other: 74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/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.

4.4. EUT Configuration on Test

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

4.4.1. Flat Panel TV Bracket (EUT)

Model Number : PX-T0904
Serial Number : N/A

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown in Section 4.2.

4.5.2. Let the EUT work in test modes (TX) and test it.

4.6. Test Procedure

The 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. The 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 is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position and all the final test data below were recoded in X position.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emission above 1GHz

The frequency ranges from 30MHz to 10^{th}harmonic (5GHz) are checked.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on Section 4.7.

4.7. Radiated Emission Test Results

PASS.

The frequency range from 30MHz to 1000MHz and 1GHz to 5GHz. is investigated. Please see the following pages.

EUT: Flat Panel TV Bracket Model No. : PX-T0904

Test Date: Jan.24, 2008 Temperature: 24℃ Humidity: 56%

The details of test modes are as follows：

Test Mode	Frequency (MHz)	Test Mode	Reference Test Data No.	
			Horizontal	Vertical
1.	30~1000	Tx Mode	#7	#8
2.	1000~5000	Tx Mode	#17, #18	#15, #16

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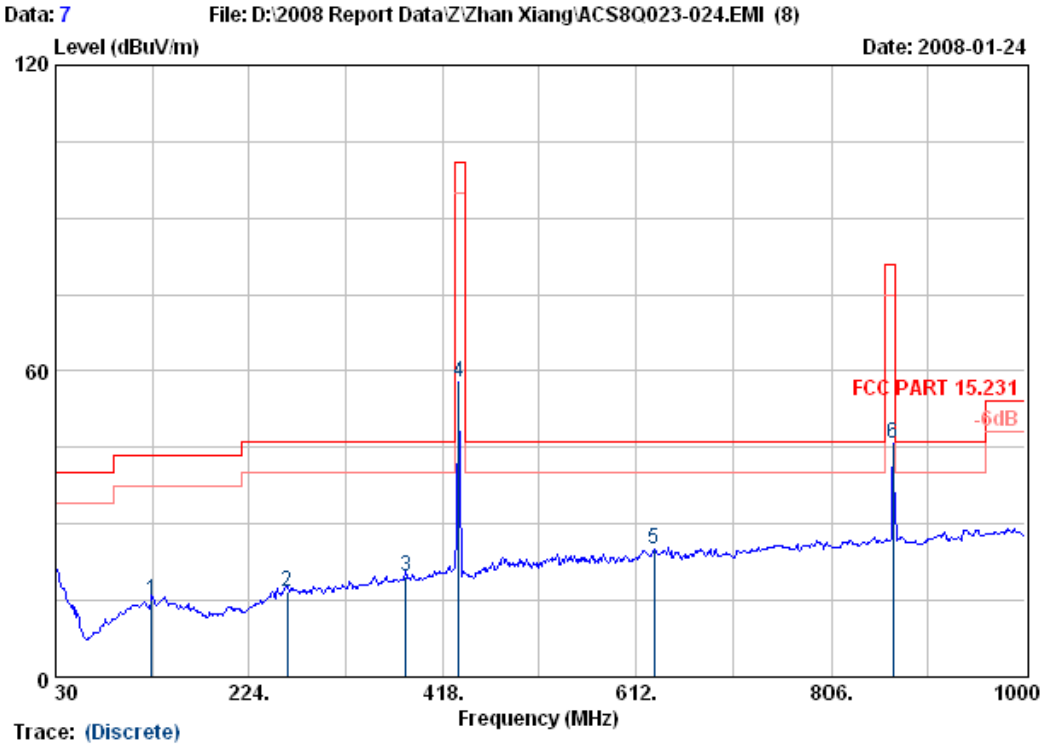

Site no. : 3# Chamber Radiation Data no. : 7
Dis. / Ant. : 3m 2598 Ant. pol. : HORIZONTAL
Limit : FCC PART 15.231
Env. / Ins. : 24*C/56% ESVS20 Engineer : Skyle
EUT : Flat Plane TV Bracket M/N:PX-T0904
Power Rating : DC 12V
Test Mode : TX Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	126.03	11.86	1.12	1.94	14.92	43.50	28.58	QP
2	261.83	13.98	1.55	1.21	16.74	46.00	29.26	QP
3	381.14	15.92	1.80	1.95	19.67	46.00	26.33	QP
4	433.94	17.00	1.96	38.72	57.68	100.80	43.12	Peak
5	630.43	20.00	2.36	2.58	24.94	46.00	21.06	QP
6	868.08	22.86	2.65	20.45	45.96	80.80	34.84	Peak

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

Fundamental and Harmonics Average Result					
Freq(MHz)	Peak Level (dBμV/m)	PDCF(dBμV/m) (see Section 7)	Average Level (dBμV/m)	Limit(dBμV/m) (average)	Conclusion
433.94	57.68	-7.55	50.13	80.80	PASS
868.08	45.96	-7.55	38.41	60.80	PASS

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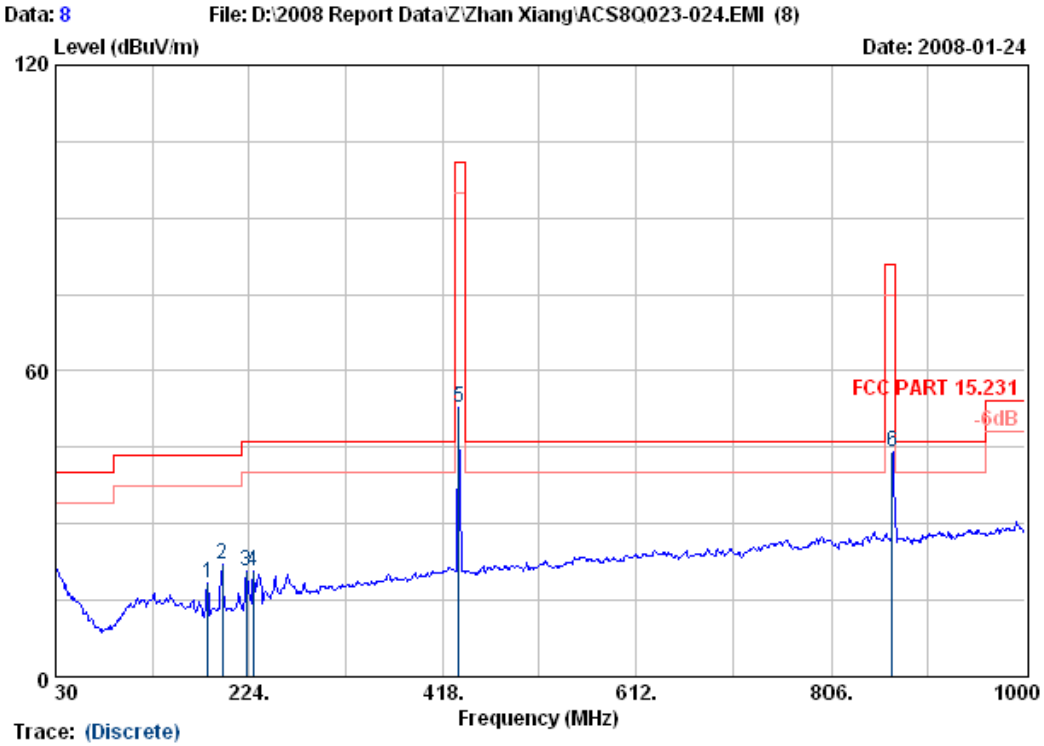

Site no. : 3# Chamber Radiation Data no. : 8
Dis. / Ant. : 3m 2598 Ant. pol. : VERTICAL
Limit : FCC PART 15.231
Env. / Ins. : 24*C/56% ESVS20 Engineer : Skyle
EUT : Flat Plane TV Bracket M/N:PX-T0904
Power Rating : DC 12V
Test Mode : TX Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	182.29	9.26	1.30	7.79	18.35	43.50	25.15	QP
2	196.84	9.92	1.34	10.90	22.16	43.50	21.34	QP
3	221.09	10.38	1.42	9.06	20.86	46.00	25.14	QP
4	227.88	10.88	1.40	8.58	20.86	46.00	25.14	QP
5	433.90	17.00	1.96	33.91	52.87	100.80	47.93	Peak
6	867.08	22.84	2.65	18.57	44.06	80.80	36.74	Peak

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

Fundamental and Harmonics Average Result					
Freq(MHz)	Peak Level (dBμV/m)	PDCF(dBμV/m) (see Section 7)	Average Level (dBμV/m)	Limit(dBμV/m) (average)	Conclusion
433.90	52.87	-7.55	45.32	80.80	PASS
867.08	44.06	-7.55	36.51	60.80	PASS

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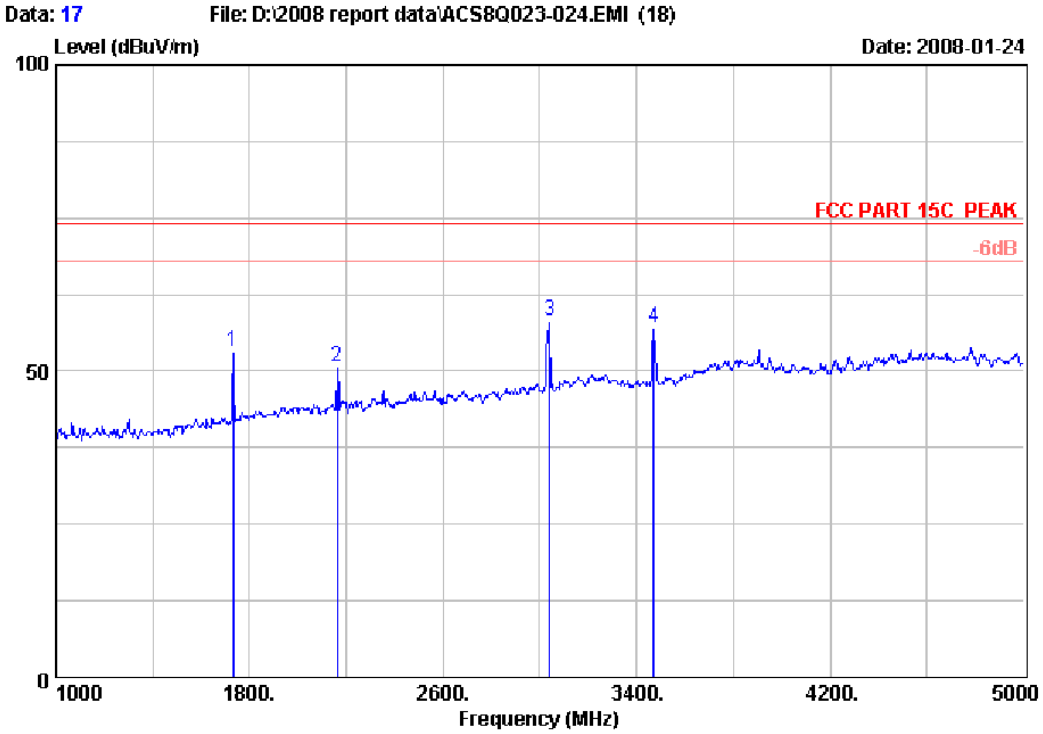

Site no. : RF Chamber
Data no. : 17
Dis. / Ant. : 3m 3115 FACTOR
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54%
Engineer : Skyle
EUT : Flat Plane TV Bracket
M/N:PX-T0904
Power Rating: DC 12V
Test Mode : Tx Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1732.00	26.63	5.71	35.55	56.38	53.17	74.00	20.83	Peak
2	2164.00	28.42	6.42	35.25	51.18	50.77	74.00	23.23	Peak
3	3040.00	31.09	7.78	34.99	54.26	58.14	74.00	15.86	Peak
4	3472.00	32.28	8.72	34.86	50.93	57.07	74.00	16.93	Peak

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

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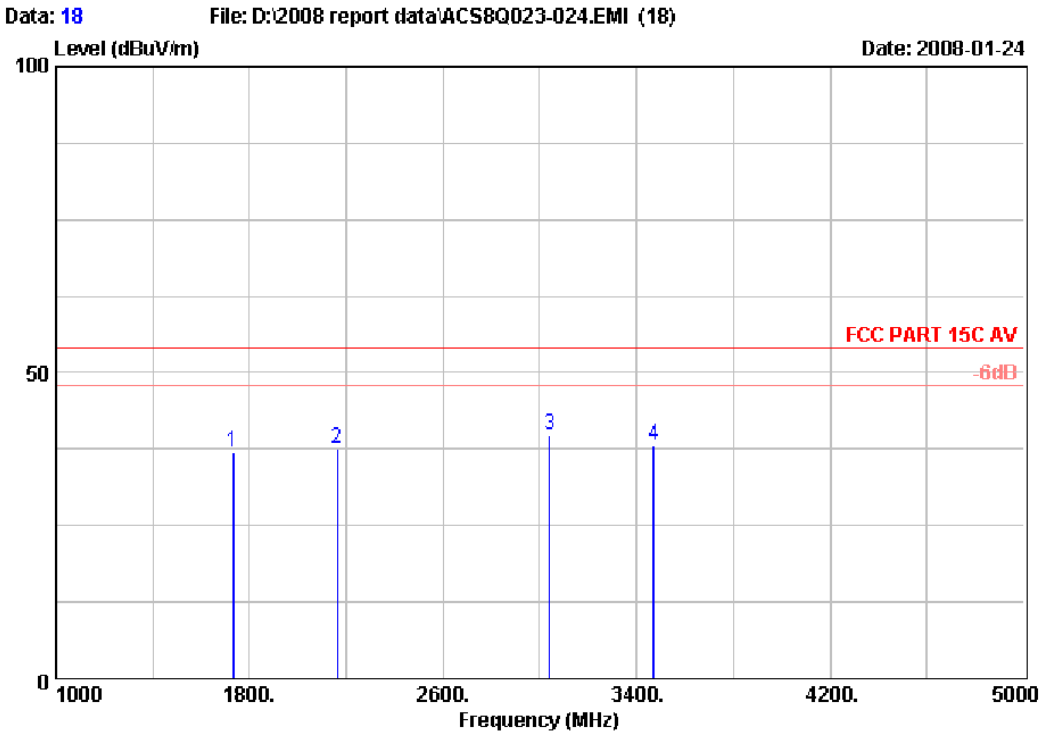

Site no. : RF Chamber
Data no. : 18
Dis. / Ant. : 3m 3115 FACTOR
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54%
Engineer : Skyle
EUT : Flat Plane TV Bracket
M/N:PX-T0904
Power Rating: DC 12V
Test Mode : Tx Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1732.00	26.63	5.71	35.55	40.17	36.96	54.00	17.04	Average
2	2164.00	28.42	6.42	35.25	37.97	37.56	54.00	16.44	Average
3	3040.00	31.09	7.78	34.99	36.05	39.93	54.00	14.07	Average
4	3472.00	32.28	8.72	34.86	32.10	38.24	54.00	15.76	Average

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

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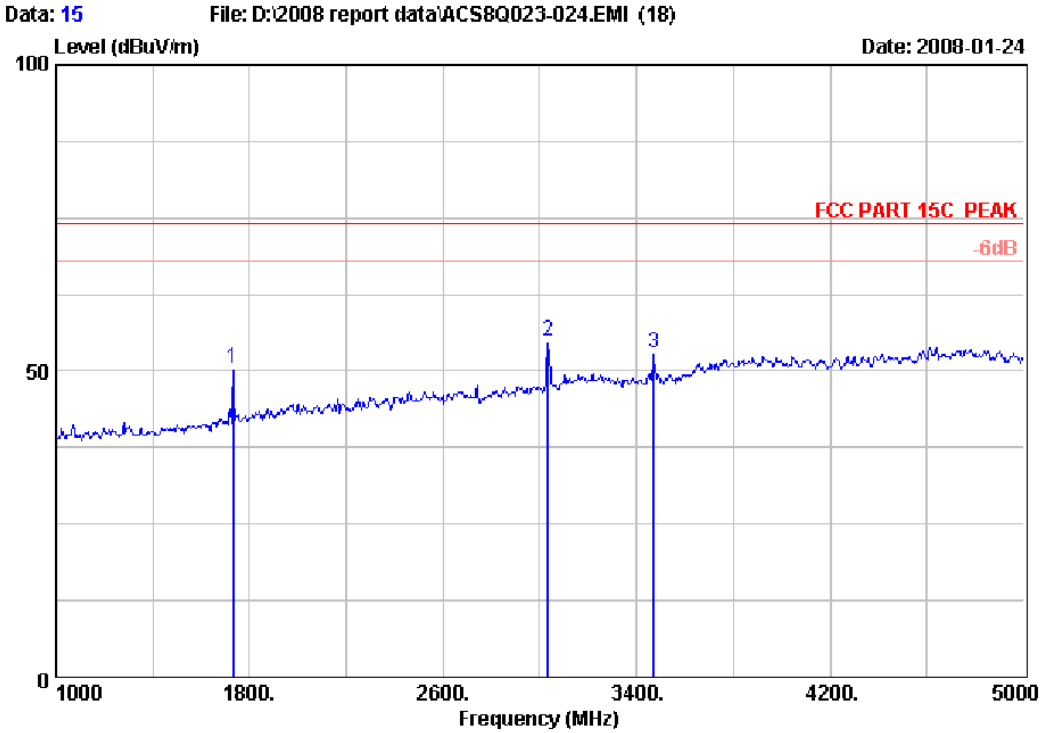

Site no. : RF Chamber
Dis. / Ant. : 3m 3115 FACTOR
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54%
EUT : Flat Plane TV Bracket
Power Rating: DC 12V
Test Mode : Tx Mode

Data no. : 15
Ant. pol. : VERTICAL
Engineer : Skyle
M/N:PX-T0904

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1732.00	26.63	5.71	35.55	53.70	50.49	74.00	23.51	Peak
2	3032.00	31.09	7.76	34.99	50.99	54.85	74.00	19.15	Peak
3	3472.00	32.28	8.72	34.86	46.82	52.96	74.00	21.04	Peak

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

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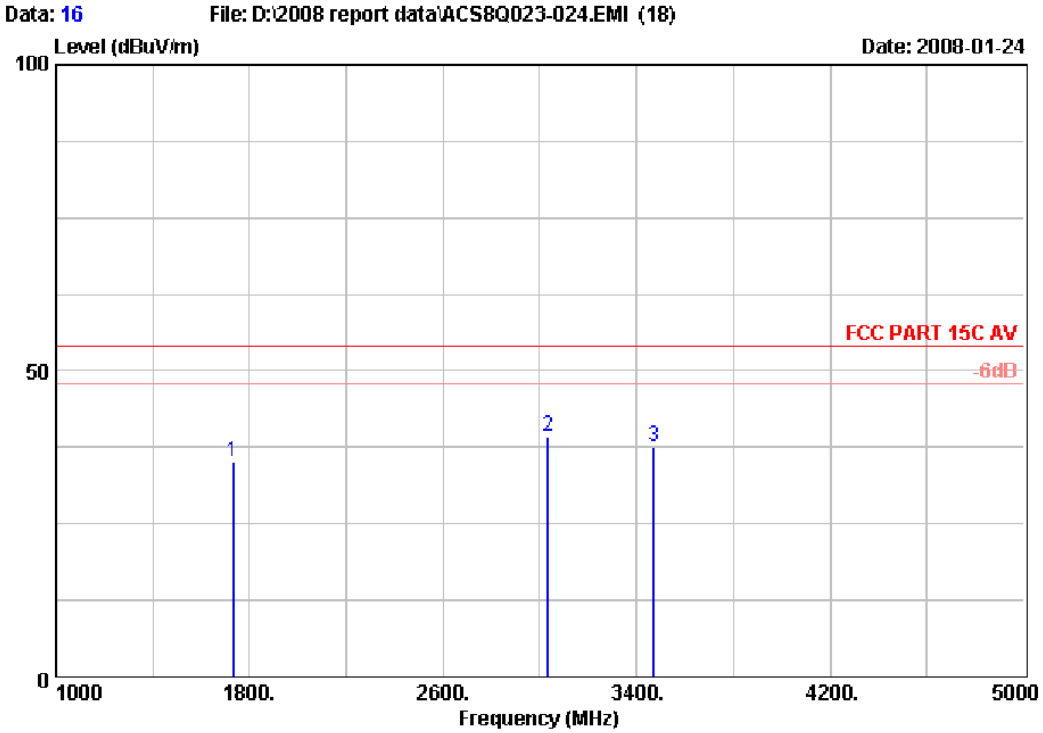


Site no. : RF Chamber
Dis. / Ant. : 3m 3115 FACTOR
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54%
EUT : Flat Plane TV Bracket
Power Rating: DC 12V
Test Mode : Tx Mode

Data no. : 16
Ant. pol. : VERTICAL
Engineer : Skyle
M/N:PX-T0904

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1732.00	26.63	5.71	35.55	38.19	34.98	54.00	19.02	Average
2	3032.00	31.09	7.76	34.99	35.31	39.17	54.00	14.83	Average
3	3472.00	32.28	8.72	34.86	31.50	37.64	54.00	16.36	Average

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

5. STOP TRANSMITTING TIME TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

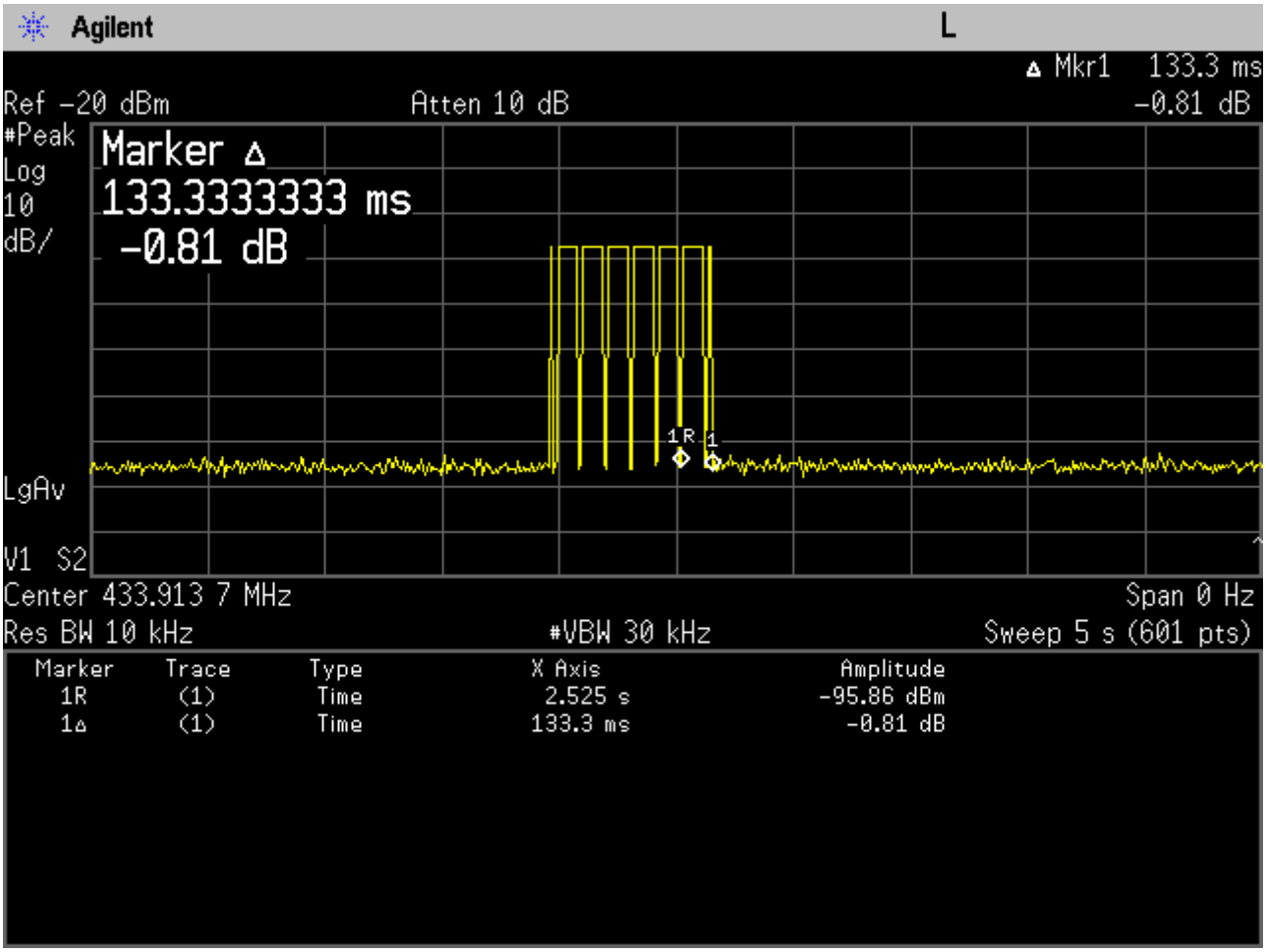
5.2. Test Information

EUT:	Flat Panel TV Bracket
M/N:	PX-T0904
Test Date:	Jan.21, 2008
Ambient Temperature:	23℃
Relative Humidity:	50%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.92MHz
Test By:	skyle

5.3. Test Results

Set the spectrum to zero span, activated the EUT by manually, And then, we could see the transmitting wave in the spectrum, when the time marker went to “1R”, released the button, After 133.33ms, we could see the EUT stop transmitting.

Frequency (MHz)	Stop Transmitting Time	Limit: not more than 5 seconds of being released	Conclusion
433.92	133.33ms	5s	PASS


Agilent
L
Mkr1 133.3 ms
Ref -20 dBm
Atten 10 dB
-0.81 dB
#Peak
Log
10
dB/
Marker Δ
133.3333333 ms
-0.81 dB
1R 1
LgAv
V1 S2
Center 433.913 7 MHz
Span 0 Hz
Res BW 10 kHz
#VBW 30 kHz
Sweep 5 s (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 2.525 s -95.86 dBm
1Δ (1) Time 133.3 ms -0.81 dB

6. 20 DB BANDWITH TEST

6.1. Test Equipment

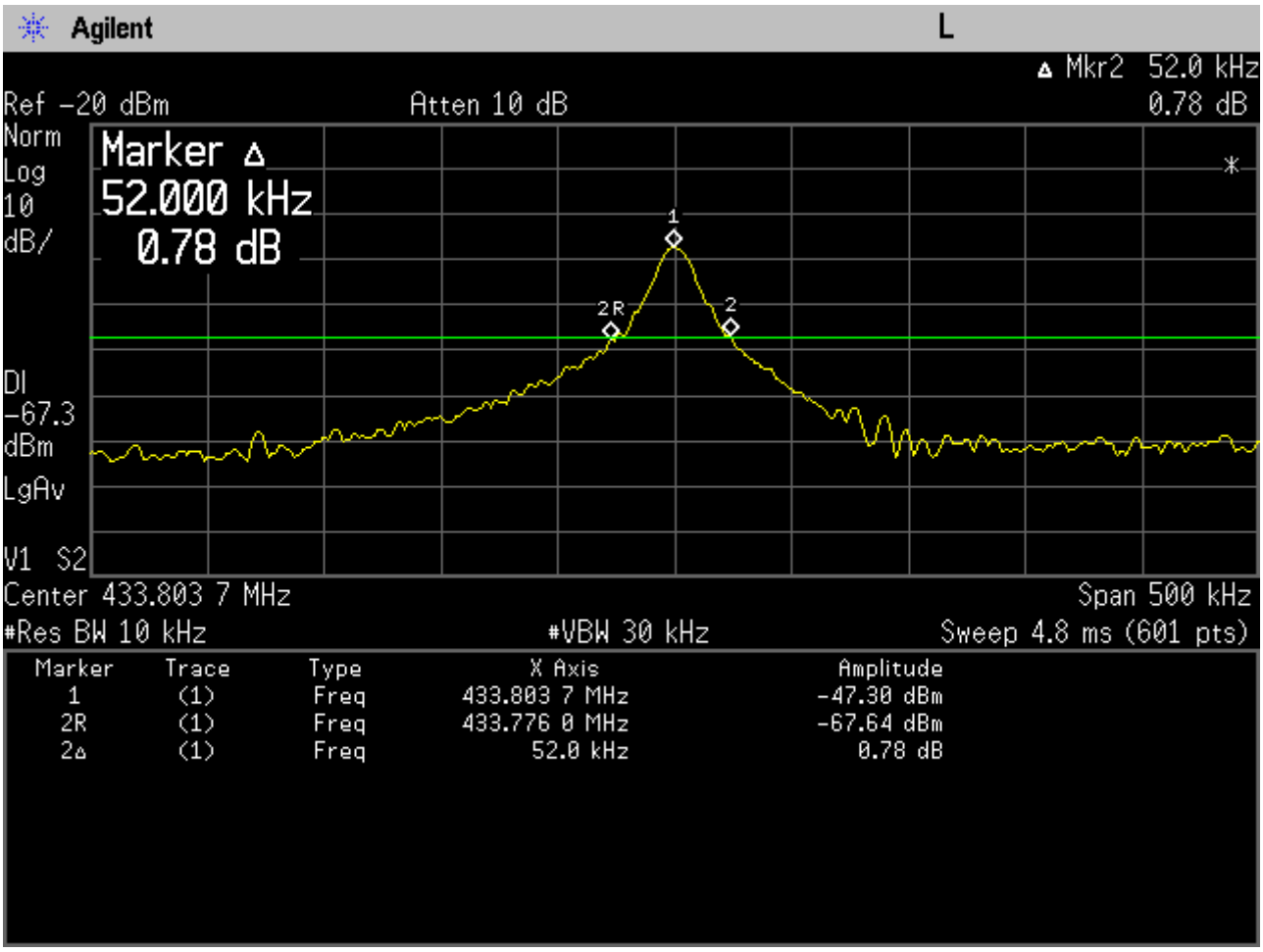
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

6.2. Test Information

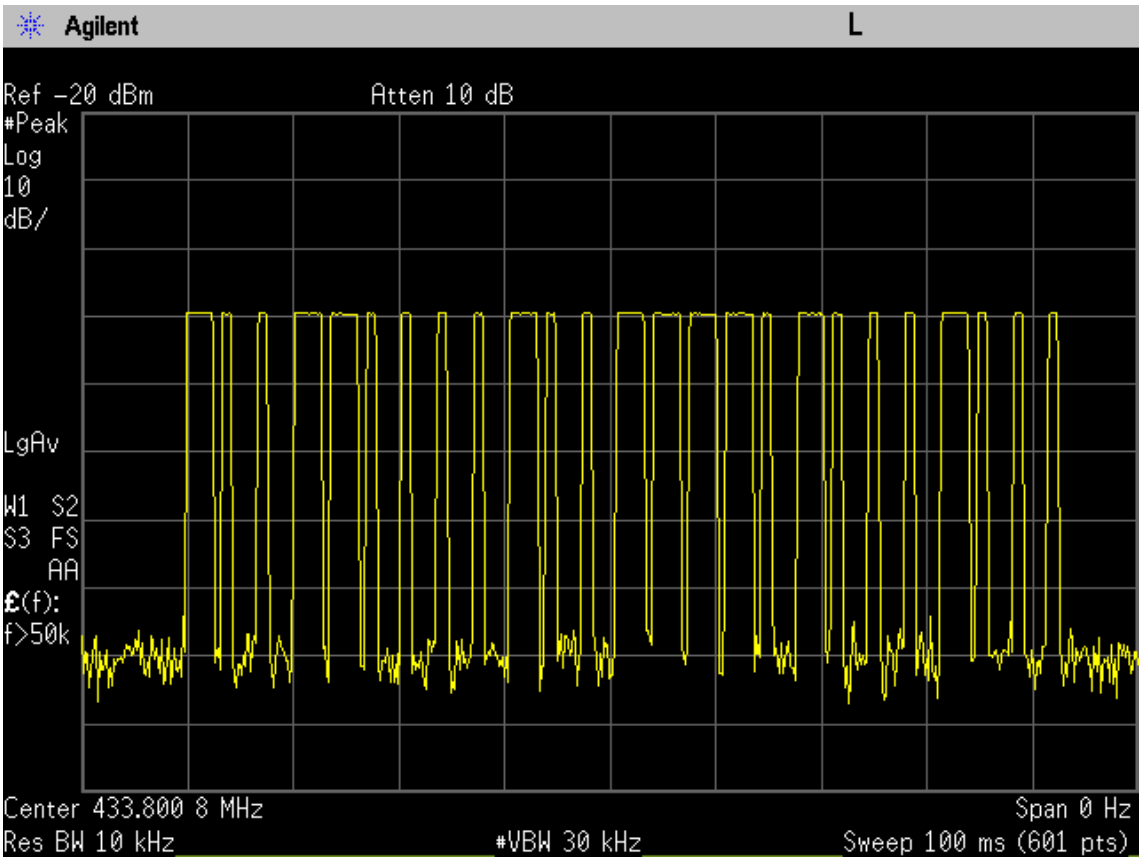
EUT:	Flat Panel TV Bracket
M/N:	PX-T0904
Test Date:	Jan.21, 2008
Ambient Temperature:	23℃
Relative Humidity:	50%
Test standard:	FCC PART 15C: 15.231
Test mode:	Transmitting
Test Frequency:	433.92MHz
Test By:	skyle

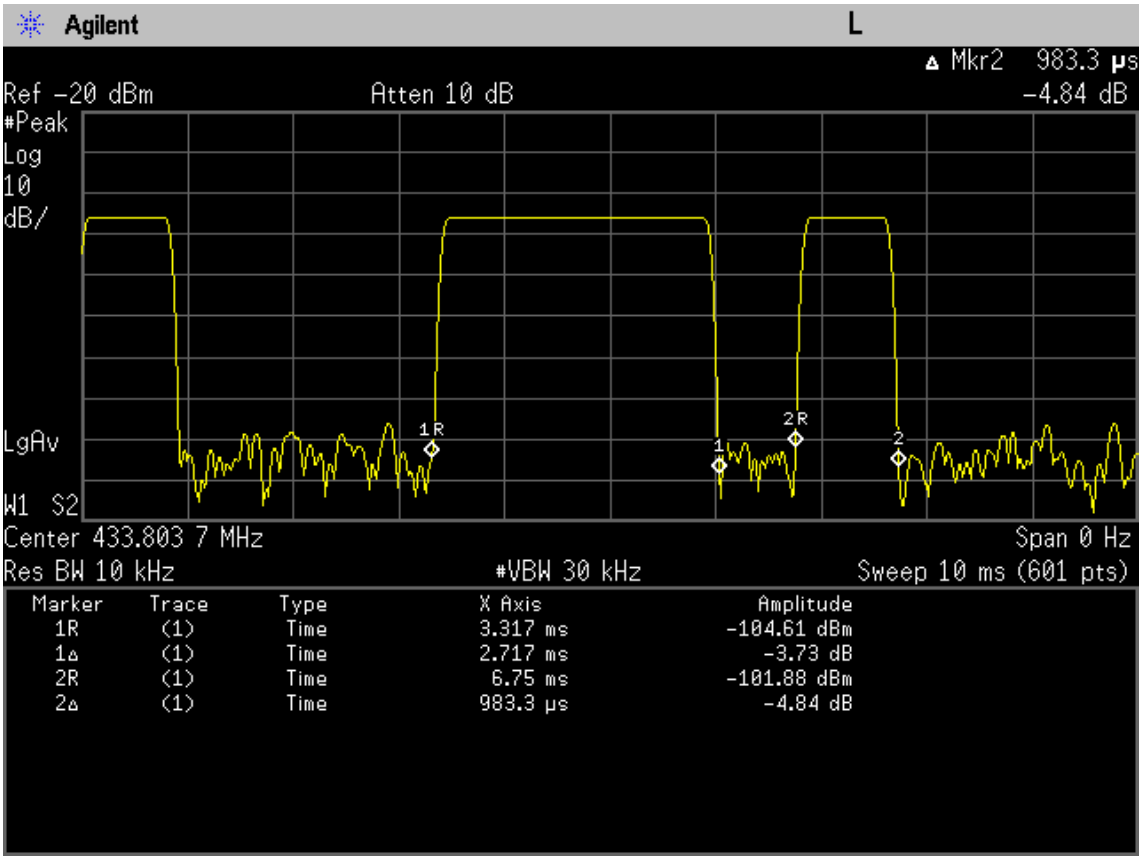
6.3. Test Results

Frequency (MHz)	20 dB Bandwidth (kHz)	Limit(kHz): No wider than 0.25% of the center frequency	Conclusion
433.92	52.0	433.92*0.25%=1.08MHz	PASS


Agilent
L
Mkr2 52.0 kHz
0.78 dB
Ref -20 dBm
Atten 10 dB
Norm
Log
10
dB/
Marker Δ
52.000 kHz
0.78 dB
1
2R
2
Dl
-67.3
dBm
LgAv
V1 S2
Center 433.803 7 MHz
Span 500 kHz
#Res BW 10 kHz
#VBW 30 kHz
Sweep 4.8 ms (601 pts)
Marker Trace Type X Axis Amplitude
1 (1) Freq 433.803 7 MHz -47.30 dBm
2R (1) Freq 433.776 0 MHz -67.64 dBm
2Δ (1) Freq 52.0 kHz 0.78 dB

7. PULSE DESENSITIZATION CORRECTION FACTOR





Duty cycle= T ontime / 100ms=(10*2.717+15*0.9833) / 100=0.42
PDCF=20*log(Duty cycle)=20*log(0.42)=-7.55

8. DEVIATION TO TEST SPECIFICATIONS

[NONE]