

FCC CERTIFICATION  
On Behalf of  
Yifang Digital Technologies Co., Ltd.

Car MP3 Player  
Model No.: XF195T

FCC ID: S7JXF195T

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## Test Report Certification

Applicant : Yifang Digital Technologies Co., Ltd.  
Manufacturer : Yifang Digital Technologies Co., Ltd.  
EUT Description : Car MP3 Player  
(A) MODEL NO.: XF195T  
(B) SERIAL NO.: N/A  
(C) POWER SUPPLY: DC 12V

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.239: 2006

The device described above is tested by ACCURATE TECHNOLOGY 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 Section 15.239 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : November 17, 2006

Prepared by :   
(Engineer)

Reviewer :   
(Quality Manager)

Approved & Authorized Signer :   
(Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT	:	Car MP3 Player
Model Number	:	XF195T
Power Supply	:	DC 12V
Port	:	DC Input, USB , Line in
Range of Frequency	:	88.1M-88.9MHz, 106.7M-107.9MHz
Modulation Type	:	Frequency Modulation
Applicant	:	Yifang Digital Technologies Co., Ltd.
Address	:	5/F, Bldg.H-3, Huaqiaocheng East Industrial Park No.1 Xiangshan East Rd., Nanshan District, Shenzhen Guangdong, P.R.China
Manufacturer	:	Yifang Digital Technologies Co., Ltd.
Address	:	5/F, Bldg.H-3, Huaqiaocheng East Industrial Park No.1 Xiangshan East Rd., Nanshan District, Shenzhen Guangdong, P.R.China
Date of sample received	:	November 11, 2006
Date of Test	:	November 17, 2006

### 1.2. Description of Test Facility

EMC Lab	:	Accredited by TUV Rheinland Shenzhen, May 10, 2004  Accredited by FCC, May 10, 2004 The Certificate Registration Number is 253065  Accredited by Industry Canada, May 18, 2004 The Certificate Registration Number is IC 5077
Name of Firm	:	ACCURATE TECHNOLOGY CO. LTD
Site Location	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

### 1.3. Measurement Uncertainty

Conducted emission expanded uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty	=	4.12dB, k=2

## 2. MEASURING DEVICE AND TEST EQUIPMENT

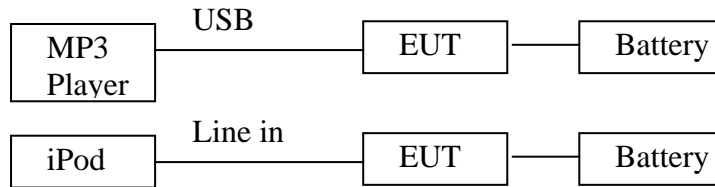
**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.31.2007
EMI Test Receiver	Rohde&Schwarz	ESI26	838786/013	01.02.2007
Bilog Antenna	Schwarzbeck	VULB9163	9163-194	03.31.2007
Bilog Antenna	Chase	CBL6112B	2591	03.31.2007
Horn Antenna	Rohde&Schwarz	HF906	100013	01.02.2007
Spectrum Analyzer	Anritsu	MS2651B	6200238856	03.31.2007
Pre-Amplifier	Agilent	8447D	2944A10619	03.31.2007
iPod	Apple	60GB	JQ543GF95ZA	N/A
MP3 Player	Yifang	XM738SF	N/A	N/A

### 3. RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(C)

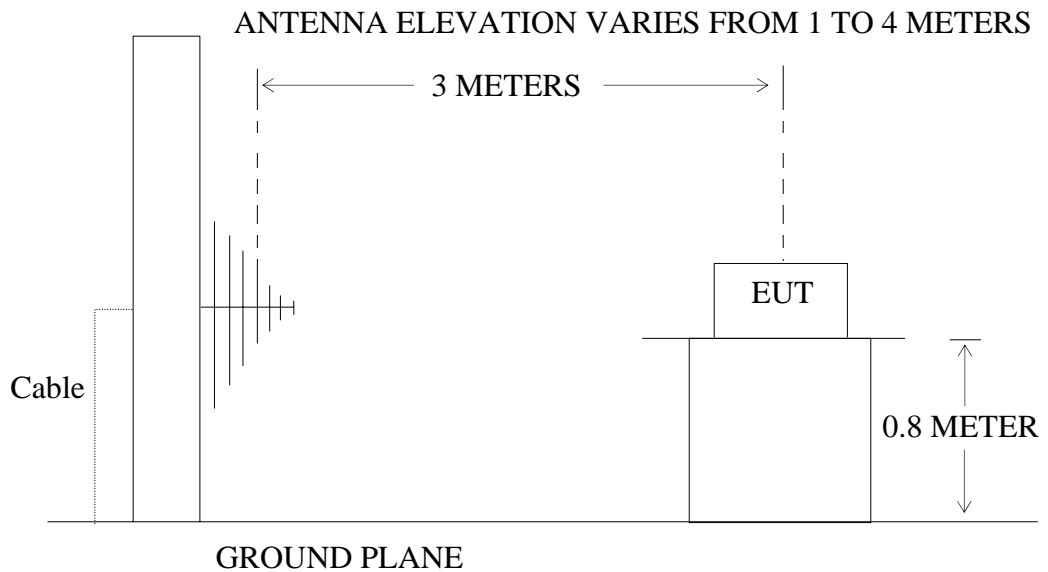
#### 3.1. Block Diagram of Test Setup

##### 3.1.1. Block diagram of connection between the EUT and simulators



(EUT: Car MP3 Player)

##### 3.1.2. Anechoic Chamber Test Setup Diagram



(EUT: Car MP3 Player)

#### 3.2. The Emission Limit for section 15.239(c)

- 3.2.1 The field strength of any emissions radiated on any frequency outside of the specified 200kHz band shall not exceed the general radiated emission limits in section 15.209

Radiation Emission Measurement Limits According to Section 15.209

Frequency (MHz)	Limit,		The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dB $\mu$ V/m)	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	

### 3.3. Configuration of EUT on Measurement

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

#### 3.3.1. Car MP3 Player (EUT)

Model Number : XF195T  
 Serial Number : N/A  
 Manufacturer : Yifang Digital Technologies Co., Ltd.

### 3.4. Operating Condition of EUT

3.4.1. Setup the EUT and simulator as shown as Section 3.1.

3.4.2. Turn on the power of all equipment.

Let the EUT work in TX modes [Connect iPod Headphone output to EUT line in port, and iPod playing typical audio signal(music song) with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz. We are select 88.1M, 88.9M, 106.7M, 107.9MHz operation frequency to transmitted.

3.4.3. Turn on the power of all equipment.

Let the EUT work in TX modes [Plug MP3 Player to EUT USB Connector and MP3 Player playing typical audio signal(music song)] with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz. We are select 88.1M, 88.9M, 106.7M, 107.9MHz operation frequency to transmitted.

Note: The EUT is connected to iPod or MP3 Player. The input signal of EUT is controlled by iPod or MP3 Player. so the volume control of iPod or MP3 Player was set to maximum during the test. It means that the test was performed with the maximum audio input.

### 3.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. 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 measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 120KHz in 30-1000MHz; Set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 1100MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.



### 3.6. The Field Strength of Radiation Emission Measurement Results

#### PASS.

The frequency range 30MHz to 1100MHz is investigated.

Date of Test:	<u>November 17, 2006</u>	Temperature:	<u>24°C</u>	
EUT:	<u>Car MP3 Player</u>	Humidity:	<u>56%</u>	
Model No.:	<u>XF195T</u>	Power Supply:	<u>DC 12V</u>	
Test Mode:	<u>TX 88.1MHz[Line in typical audio signal(music song) with the maximum audio input]</u>		Test Engineer:	<u>Andy</u>

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor Corr.( dB)	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP		QP	QP	QP
Horizontal	243.008	29.7	9.8	39.5	46.0	6.5
Horizontal	264.308	28.2	10.8	39.0	46.0	7.0
Horizontal	308.356	27.3	12.7	40.0	46.0	6.0
Horizontal	330.380	26.2	13.3	39.5	46.0	6.5
Horizontal	594.678	17.2	18.5	35.7	46.0	10.3
Horizontal	616.726	18.0	18.8	36.8	46.0	9.2
Horizontal	638.738	15.7	19.1	34.8	46.0	11.2
Horizontal	660.748	18.5	19.4	37.9	46.0	8.1
Horizontal	682.796	16.0	19.7	35.7	46.0	10.3
Horizontal	704.828	15.1	20.0	35.1	46.0	10.9
Horizontal	726.836	15.1	20.3	35.4	46.0	10.6
Vertical	242.296	20.7	8.6	29.3	46.0	16.7
Vertical	264.312	18.9	9.9	28.8	46.0	17.2
Vertical	308.356	17.9	12.6	30.5	46.0	15.5
Vertical	330.404	15.8	13.3	29.1	46.0	16.9
Vertical	528.600	16.5	18.3	34.8	46.0	11.2
Vertical	572.650	14.8	19.1	33.9	46.0	12.1
Vertical	594.702	18.3	19.6	37.9	46.0	8.1
Vertical	616.718	15.3	19.9	35.2	46.0	10.8
Vertical	638.744	14.8	20.3	35.1	46.0	10.9
Vertical	660.746	18.9	20.7	39.6	46.0	6.4
Vertical	682.808	15.7	21.0	36.7	46.0	9.3
Vertical	726.824	12.7	21.7	34.4	46.0	11.6

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

Date of Test: November 17, 2006 Temperature: 24C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
TX88.9MHz[Line in typical audio  
signal(music song) with the  
 Test Mode: maximum audio input] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP	Corr.( dB)	QP	QP	QP
Horizontal	222.260	29.9	9.7	39.6	46.0	6.4
Horizontal	244.498	27.2	9.8	37.0	46.0	9.0
Horizontal	266.728	26.8	11.9	38.7	46.0	7.3
Horizontal	300.020	24.1	12.7	36.8	46.0	9.2
Horizontal	545.428	20.1	17.8	37.9	46.0	8.1
Horizontal	563.986	18.1	18.1	36.2	46.0	9.8
Horizontal	600.128	18.8	18.7	37.5	46.0	8.5
Horizontal	622.292	17.6	19.0	36.6	46.0	9.4
Horizontal	644.564	15.5	19.2	34.7	46.0	11.3
Horizontal	666.776	17.1	19.5	36.6	46.0	9.4
Vertical	244.492	23.5	8.6	32.1	46.0	13.9
Vertical	266.704	18.5	10.3	28.8	46.0	17.2
Vertical	311.172	18.4	12.6	31.0	46.0	15.0
Vertical	333.400	14.8	13.5	28.3	46.0	17.7
Vertical	533.404	17.0	18.4	35.4	46.0	10.6
Vertical	555.628	14.2	18.8	33.0	46.0	13.0
Vertical	577.884	16.4	19.2	35.6	46.0	10.4
Vertical	600.000	19.4	19.6	39.0	46.0	7.0
Vertical	624.148	16.7	20.0	36.7	46.0	9.3
Vertical	644.564	16.2	20.4	36.6	46.0	9.4
Vertical	666.776	19.2	20.8	40.0	46.0	6.0
Vertical	689.012	15.1	21.1	36.2	46.0	9.8
Vertical	711.200	13.2	21.4	34.6	46.0	11.4

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

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

Date of Test: November 17, 2006 Temperature: 24C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
TX106.7MHz[Line in typical audio  
signal(music song) with the  
 Test Mode: maximum audio input] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP	Corr.( dB)	QP	QP	QP
Horizontal	237.616	25.3	9.8	35.1	46.0	10.9
Horizontal	256.100	29.1	10.3	39.4	46.0	6.6
Horizontal	298.784	24.5	12.5	37.0	46.0	9.0
Horizontal	320.002	25.9	13.1	39.0	46.0	7.0
Horizontal	384.096	20.5	14.7	35.2	46.0	10.8
Horizontal	597.520	16.0	18.6	34.6	46.0	11.4
Horizontal	618.872	16.0	18.9	34.9	46.0	11.1
Horizontal	640.208	15.2	19.2	34.4	46.0	11.6
Horizontal	661.562	17.9	19.4	37.3	46.0	8.7
Horizontal	683.958	16.4	19.7	36.1	46.0	9.9
Horizontal	704.196	16.0	20.0	36.0	46.0	10.0
Horizontal	725.568	14.9	20.3	35.2	46.0	10.8
Vertical	256.098	20.8	9.3	30.1	46.0	15.9
Vertical	320.128	14.7	13.0	27.7	46.0	18.3
Vertical	576.164	16.8	19.2	36.0	46.0	10.0
Vertical	597.544	16.3	19.6	35.9	46.0	10.1
Vertical	618.932	13.7	19.9	33.6	46.0	12.4
Vertical	640.212	14.9	20.3	35.2	46.0	10.8
Vertical	661.578	17.4	20.7	38.1	46.0	7.9
Vertical	682.888	14.7	21.0	35.7	46.0	10.3
Vertical	704.244	12.0	21.3	33.3	46.0	12.7
Vertical	725.568	12.3	21.6	33.9	46.0	12.1

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

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

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
 TX 107.9MHz[Line in typical  
 audio signal(music song) with the  
 Test Mode: maximum audio input] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor Corr.( dB)	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP		QP		
Horizontal	237.396	22.3	9.8	32.1	46.0	13.9
Horizontal	258.988	27.7	10.5	38.2	46.0	7.8
Horizontal	302.130	23.9	12.6	36.5	46.0	9.5
Horizontal	323.714	25.9	13.2	39.1	46.0	6.9
Horizontal	366.872	23.1	14.3	37.4	46.0	8.6
Horizontal	420.006	19.9	15.4	35.3	46.0	10.7
Horizontal	604.230	19.0	18.6	37.6	46.0	8.4
Horizontal	625.814	17.6	18.9	36.5	46.0	9.5
Horizontal	647.442	17.3	19.2	36.5	46.0	9.5
Horizontal	671.972	16.8	19.6	36.4	46.0	9.6
Horizontal	690.626	15.0	19.8	34.8	46.0	11.2
Horizontal	712.200	15.3	20.1	35.4	46.0	10.6
Horizontal	733.762	14.2	20.4	34.6	46.0	11.4
Vertical	259.000	19.0	9.7	28.7	46.0	17.3
Vertical	539.524	15.7	18.5	34.2	46.0	11.8
Vertical	582.704	16.5	19.3	35.8	46.0	10.2
Vertical	604.256	17.6	19.7	37.3	46.0	8.7
Vertical	625.840	16.7	20.1	36.8	46.0	9.2
Vertical	647.348	16.9	20.4	37.3	46.0	8.7
Vertical	669.000	16.9	20.8	37.7	46.0	8.3
Vertical	690.580	11.9	21.1	33.0	46.0	13.0
Vertical	733.700	13.5	21.8	35.3	46.0	10.7

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
TX 88.1MHz[USB connector Input  
typical audio signal(music song)  
 Test Mode: with the maximum audio input]] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP	Corr.( dB)	QP	QP	QP
Horizontal	110.128	18.7	6.9	25.6	43.5	17.9
Horizontal	242.270	22.1	9.8	31.9	46.0	14.1
Horizontal	264.298	22.4	10.8	33.2	46.0	12.8
Horizontal	330.380	17.9	13.4	31.3	46.0	14.7
Horizontal	594.696	15.8	18.5	34.3	46.0	11.7
Horizontal	648.144	15.5	19.3	34.8	46.0	11.2
Horizontal	684.148	16.7	19.7	36.4	46.0	9.6
Horizontal	804.300	14.3	21.2	35.5	46.0	10.5
Horizontal	828.260	14.9	21.4	36.3	46.0	9.7
Vertical	594.688	13.8	19.5	33.3	46.0	12.7
Vertical	648.178	15.8	20.5	36.3	46.0	9.7
Vertical	660.770	13.3	20.7	34.0	46.0	12.0
Vertical	682.792	15.3	21.0	36.3	46.0	9.7
Vertical	888.248	11.3	23.8	35.1	46.0	10.9
Vertical	900.224	14.9	24.0	38.9	46.0	7.1

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

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

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
 TX 88.9MHz[USB connector Input  
 typical audio signal(music song)  
 Test Mode: with the maximum audio input] ] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP	Corr.( dB)	QP	QP	QP
Horizontal	244.488	22.9	9.8	32.7	46.0	13.3
Horizontal	266.696	21.9	11.1	33.0	46.0	13.0
Horizontal	311.138	17.6	12.9	30.5	46.0	15.5
Horizontal	600.124	15.4	18.6	34.0	46.0	12.0
Horizontal	666.762	16.2	19.5	35.7	46.0	10.3
Horizontal	688.992	15.6	19.8	35.4	46.0	10.6
Horizontal	696.156	17.2	19.9	37.1	46.0	8.9
Horizontal	816.200	16.2	21.3	37.5	46.0	8.5
Vertical	600.074	16.2	19.6	35.8	46.0	10.2
Vertical	666.752	12.8	20.8	33.6	46.0	12.4
Vertical	696.172	18.3	21.2	39.5	46.0	6.5
Vertical	876.260	15.6	23.7	39.3	46.0	6.7

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

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

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
 TX 106.7MHz[USB connector  
 Input typical audio signal(music  
 song) with the maximum audio  
 Test Mode: input]] Test Engineer: Andy

Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor	Result(dBμV/m)	Limits(dBμV/m)	Margin(dBμV/m)
		QP	Corr.( dB)	QP	QP	QP
Horizontal	128.040	24.2	6.0	30.2	43.5	13.3
Horizontal	256.084	23.6	10.3	33.9	46.0	12.1
Horizontal	320.116	18.7	13.1	31.8	46.0	14.2
Horizontal	597.504	14.2	18.6	32.8	46.0	13.2
Horizontal	660.192	14.7	19.4	34.1	46.0	11.9
Horizontal	684.192	15.8	19.7	35.5	46.0	10.5
Horizontal	768.150	18.6	20.8	39.4	46.0	6.6
Horizontal	864.248	13.1	21.8	34.9	46.0	11.1
Vertical	588.154	14.1	19.4	33.5	46.0	12.5
Vertical	600.170	12.1	19.6	31.7	46.0	14.3
Vertical	684.128	12.5	21.0	33.5	46.0	12.5
Vertical	708.184	12.6	21.4	34.0	46.0	12.0
Vertical	828.220	10.1	23.1	33.2	46.0	12.8
Vertical	900.192	9.3	24.0	33.3	46.0	12.7

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
 TX 107.9MHz[USB connector  
 Input typical audio signal(music  
 song) with the maximum audio  
 Test Mode: input] ] Test Engineer: Andy


Polarization	Frequency (MHz)	Reading(dBμV/m)	Factor Corr.( dB)	Result(dBμV/m)	Limits(dBμV/m) QP	Margin(dBμV/m) QP
		QP		QP		
Horizontal	258.980	22.8	10.6	33.4	46.0	12.6
Horizontal	564.166	14.8	18.1	32.9	46.0	13.1
Horizontal	648.658	16.3	19.3	35.6	46.0	10.4
Horizontal	696.202	17.1	19.9	37.0	46.0	9.0
Horizontal	708.133	17.5	20.1	37.6	46.0	8.4
Horizontal	733.722	20.7	20.3	40.8	46.0	5.2
Horizontal	780.240	18.0	20.9	38.9	46.0	7.1
Horizontal	804.174	18.9	21.2	40.1	46.0	5.9
Vertical	648.156	15.4	20.5	35.9	46.0	10.1
Vertical	684.198	14.7	21.0	35.7	46.0	10.3
Vertical	696.180	14.5	21.2	35.7	46.0	10.3
Vertical	720.152	14.9	21.6	36.5	46.0	9.5
Vertical	780.237	15.5	22.4	37.9	46.0	8.1
Vertical	792.204	17.3	22.6	39.9	46.0	6.1
Vertical	840.136	12.8	23.2	36.0	46.0	10.0
Vertical	936.280	14.6	24.4	39.0	46.0	7.0

The spectral diagrams in appendix I display the measurement of un-weighted peak values.

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

Reviewer : 

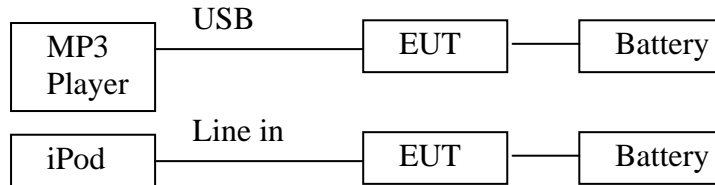


## 4. FUNDAMENTAL RADIATED EMISSION FOR FCC PART 15

### SECTION 15.239(B)

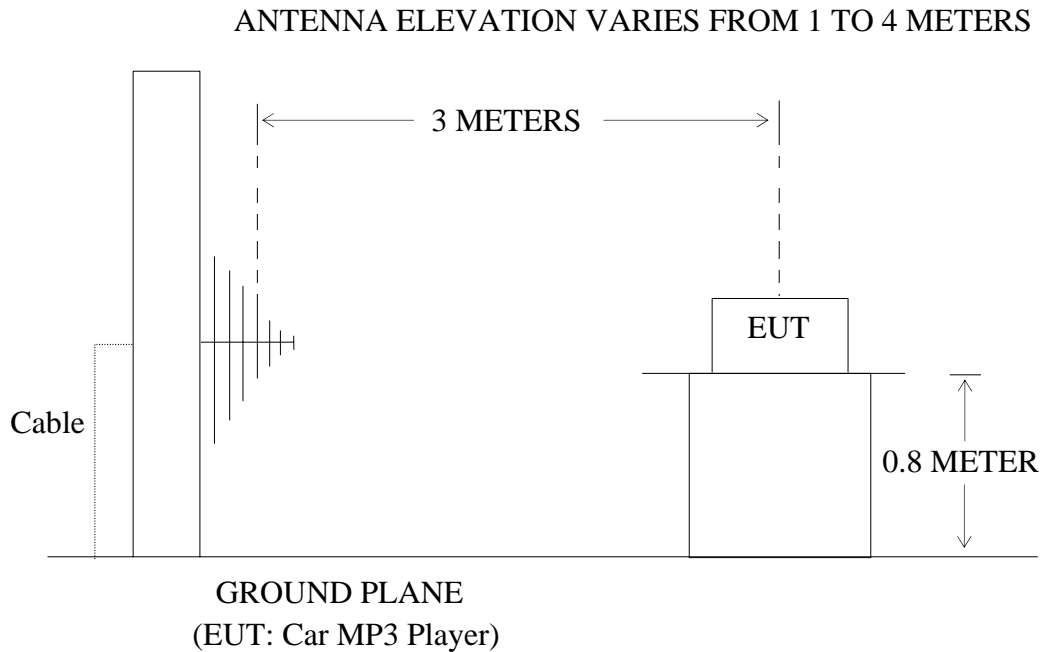
#### 4.1. Block Diagram of Test Setup

##### 4.1.1. Block diagram of connection between the EUT and simulators



(EUT: Car MP3 Player)

##### 4.1.2. Anechoic Chamber Test Setup Diagram



#### 4.2. The Emission Limit For Section 15.239(b)

4.2.1 The field strength of any emission within the permitted 200kHz band shall not exceed 250microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.

### 4.3.EUT Configuration on Measurement

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

#### 4.3.1.Car MP3 Player (EUT)

Model Number : XF195T  
Serial Number : N/A  
Manufacturer : Yifang Digital Technologies Co., Ltd.

### 4.4.Operating Condition of EUT

4.4.1.Setup the EUT and simulator as shown as Section 4.1.

4.4.2.Turn on the power of all equipment.

Let the EUT work in TX modes [Connect iPod Headphone output to EUT line in port, and iPod playing typical audio signal(music song) with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz.We are select 88.1M, 88.9M,106.7M, 107.9MHz operation frequency to transmitted.

4.4.3.Turn on the power of all equipment.

Let the EUT work in TX modes [Plug Flash Disk to EUT USB Connector and Flash Disk playing typical audio signal(music song) with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz&from 106.7 to 107.9MHz.We are select 88.1M, 88.9M,106.7M, 107.9MHz operation frequency to transmitted.

Note: The EUT is connected to iPod or MP3 Player. The input signal of EUT is controlled by iPod or MP3 Player. so the volume control of iPod or MP3 Player was set to maximum during the test. It means that the test was performed with the maximum audio input.

### 4.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. 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 measurement.

## 4.6.The Emission Measurement Result

**PASS.**

Date of Test:	November 17, 2006	Temperature:	24°C
EUT:	Car MP3 Player	Humidity:	56%
Model No.:	XF195T	Power Supply:	DC 12V
Test Mode:	TX[Line in typical audio signal(music song) with the maximum audio input]		Test Engineer: Andy

### Fundamental Radiated Emissions

Test conditions		Fundamental Frequency	
		88.1MHz	
T <sub>nom</sub> (24°C)	Unit	(dBμV/m)/( μ V/m) AV	(dBμV/m)/( μ V/m) PEAK
	Horizontal	44.6/170	46.8/219
	Vertical	35.6/60	37.9/79
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		88.9MHz	
T <sub>nom</sub> (24°C)	Unit	(dBμV/m)/( μ V/m) AV	(dBμV/m)/( μ V/m) PEAK
	Horizontal	43.9/157	46.2/204
	Vertical	35.5/60	37.9/79
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		106.7MHz	
T <sub>nom</sub> (24°C)	Unit	(dBμV/m)/( μ V/m) AV	(dBμV/m)/( μ V/m) PEAK
	Horizontal	40.3/104	42.7/136
	Vertical	35.5/60	37.9/79
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		107.9MHz	
T <sub>nom</sub> (24°C)	Unit	(dBμV/m)/( μ V/m) AV	(dBμV/m)/( μ V/m) PEAK
	Horizontal	39.5/94	41.8/123
	Vertical	33.2/46	35.5/60
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Date of Test: November 17, 2006 Temperature: 24°C  
 EUT: Car MP3 Player Humidity: 56%  
 Model No.: XF195T Power Supply: DC 12V  
 TX [USB port Input typical audio signal(music song) with the  
 Test Mode: maximum audio input] Test Engineer: Andy

**Fundamental Radiated Emissions**

Test conditions		Fundamental Frequency	
		88.1MHz	
T <sub>nom</sub> (24°C)	Unit	(dBµV/m)/( µ V/m) AV	(dBµV/m)/( µ V/m) PEAK
	Horizontal	45.2/182	47.6/240
	Vertical	36.8/69	39.2/91
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		88.9MHz	
T <sub>nom</sub> (24°C)	Unit	(dBµV/m)/( µ V/m) AV	(dBµV/m)/( µ V/m) PEAK
	Horizontal	45.0/178	47.4/234
	Vertical	37.1/72	39.6/95
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		106.7MHz	
T <sub>nom</sub> (24°C)	Unit	(dBµV/m)/( µ V/m) AV	(dBµV/m)/( µ V/m) PEAK
	Horizontal	44.4/166	46.8/219
	Vertical	38.0/79	40.5/106
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Test conditions		Fundamental Frequency	
		107.9MHz	
T <sub>nom</sub> (24°C)	Unit	(dBµV/m)/( µ V/m) AV	(dBµV/m)/( µ V/m) PEAK
	Horizontal	43.0/141	45.5/188
	Vertical	37.2/72	39.6/95
limit		48/250	68/2500
Note: Measurement was performed with modulated signal with average detector and peak detector.			

Reviewer : 

## 5. OCCUPIED BANDWIDTH FOR FCC PART 15 SECTION

### 15.239(A)

#### 5.1.The Requirement For Section 15.239(a)

- 5.1.1. Emission from the device shall be confined within a band 200kHz wide centered on the operating frequency. The 200kHz band shall lie wholly within the frequency range of 88-108MHz.

#### 5.2.EUT Configuration on Measurement

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

##### 5.2.1.Car MP3 Player (EUT)

Model Number : XF195T  
 Serial Number : N/A  
 Manufacturer : Yifang Digital Technologies Co., Ltd.

#### 5.3.Operating Condition of EUT

- 5.3.1.Setup the EUT and simulator as shown as Section 4.1.

- 5.3.2.Turn on the power of all equipment.

Let the EUT work in TX modes [Connect iPod Headphone output to EUT line in port, and iPod playing typical audio signal(music song) with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz.We are select 88.1M, 88.9M,106.7M, 107.9MHz operation frequency to transmitted.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. so the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

#### 5.4.Test Procedure

The zero level was set without modulation. A small sample of the transmitter output was fed into the spectrum analyzer and above photo was taken. The vertical scale is set to 10dB per division; the horizontal scale is set to 30kHz per division.

## 5.5. Test Result

**The EUT does meet the FCC requirement.**

Input signal : play typical audio signal(music song)

FM 88.1MHz

26dB bandwidth = 129.0kHz

FM 88.9MHz

26dB bandwidth = 147.0kHz

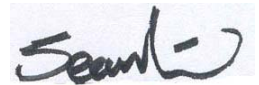
FM 106.7MHz

26dB bandwidth = 163.8kHz

FM 107.9MHz

26dB bandwidth = 136.2kHz

Reviewer :

A handwritten signature in black ink, appearing to read "Sean", is written over a light blue rectangular background. The signature is cursive and includes a small flourish at the end.

## 6. TUNING RANGE

### 6.1.The Requirement For Section 15.239

88-108MHz

### 6.2.EUT Configuration on Measurement

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

#### 6.2.1.Car MP3 Player (EUT)

Model Number : XF195T  
 Serial Number : N/A  
 Manufacturer : Yifang Digital Technologies Co., Ltd.

### 6.3.Operating Condition of EUT

6.3.1.Setup the EUT and simulator as shown as Section 4.1.

6.3.2.Turn on the power of all equipment.

Let the EUT work in TX modes [Connect iPod Headphone output to EUT line in port, and iPod playing typical audio signal(music song) with maximum audio level] measure it. The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz.We are select 88.1M, 88.9M,106.7M, 107.9MHz operation frequency to transmitted.

Note: The EUT is connected to ipod by the base interface of iPod. The input signal of EUT is controlled by iPod. so the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

### 6.4.Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set the EUT working on the lowest frequency.
3. Set EMI test receiver center frequency = working frequency, RBW, VBW= 10KHz, Span=200KHz.
4. Measuring the working frequency. And check the measuring result with the EUT display.
3. Set the EUT working on the mid 1frequency. Repeat step 3 and 4.
- 4.
5. Set the EUT working on the high frequency. Repeat step 3 and 4.
6. Press the "CH" to select the transmission frequency, from the low to high frequency. And check the working frequency display on the screen. The working frequency should be inside 88-108MHz.

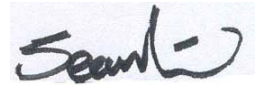
## 6.5. Test Result

**The EUT does meet the FCC requirement.**

Low Frequency= 88.1008MHz	EUT screen display 88.1MHz
Mid 1 Frequency= 88.9006MHz	EUT screen display 88.9MHz
Mid 2 Frequency= 106.7006MHz	EUT screen display 106.7MHz
High Frequency=107.9012MHz	EUT screen display 107.9MHz

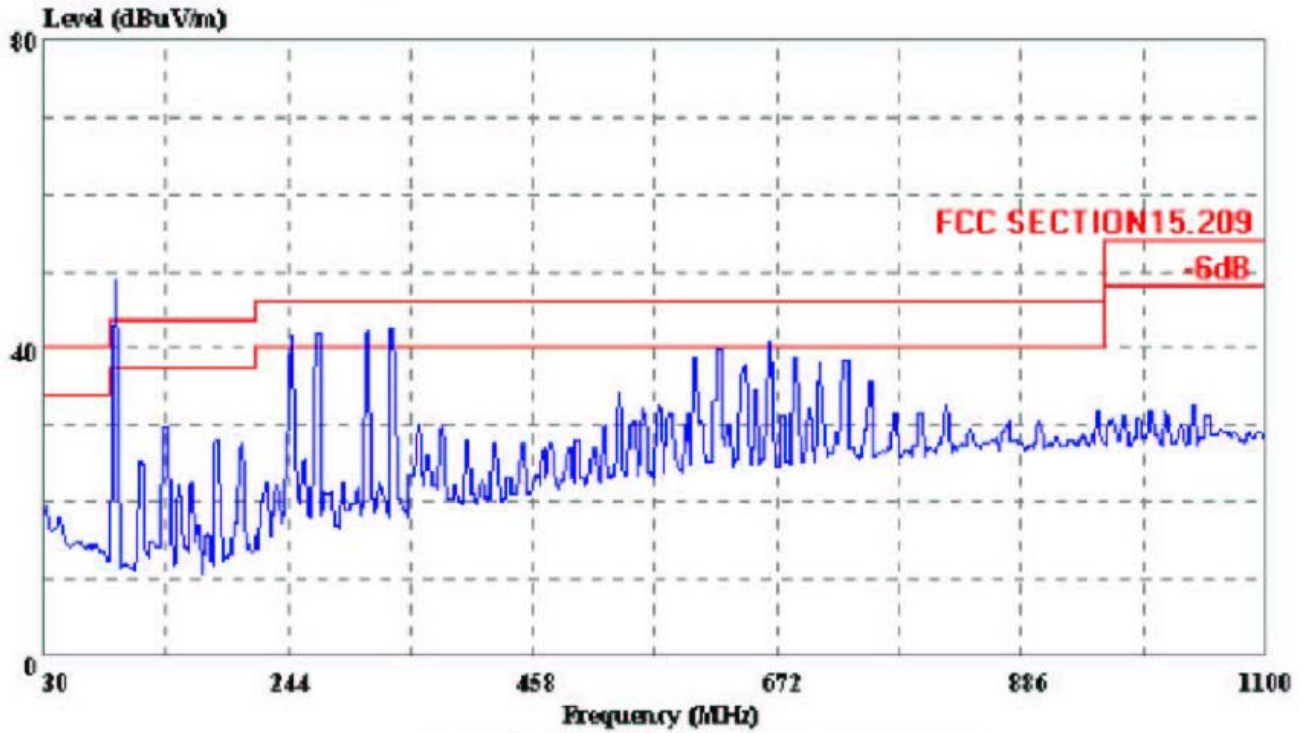
The working frequency rang is from 88.1 to 88.9MHz, from 106.7 to 107.9MHz.

Reviewer :





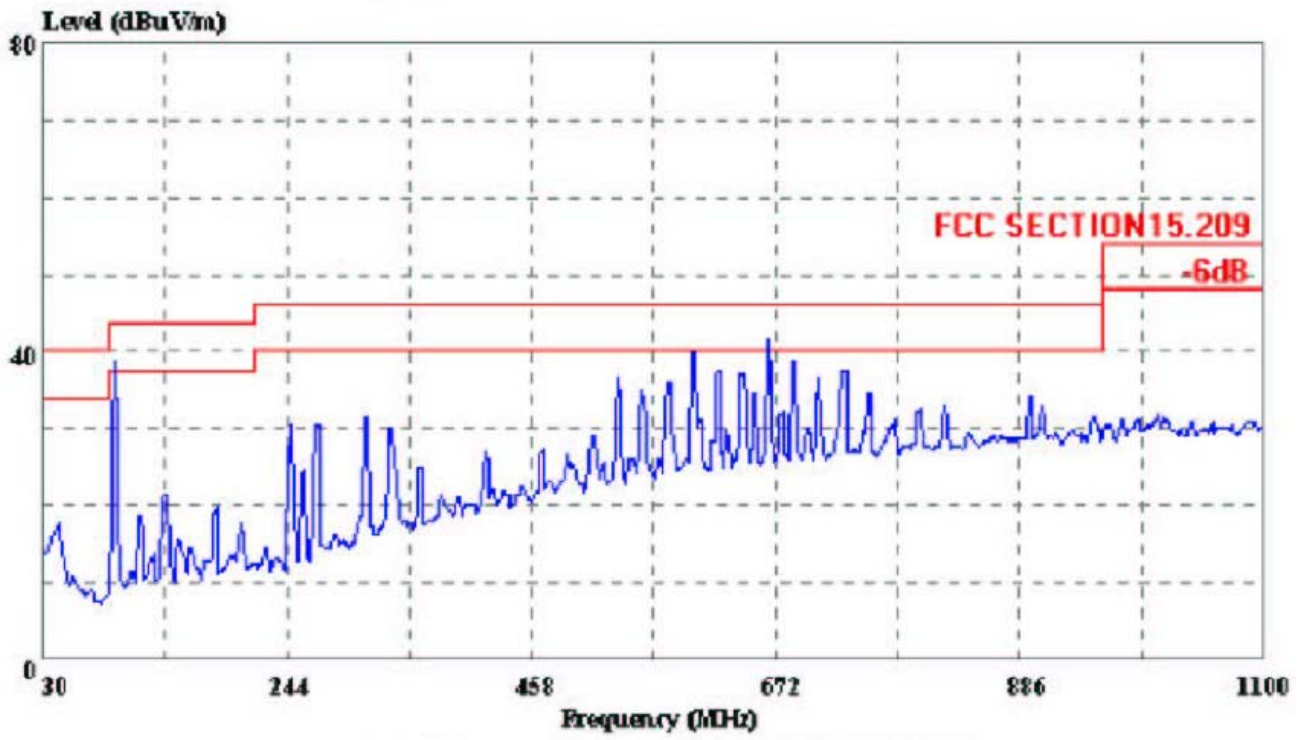
# APPENDIX I (Test Curves)



Trace:

Ref Trace:

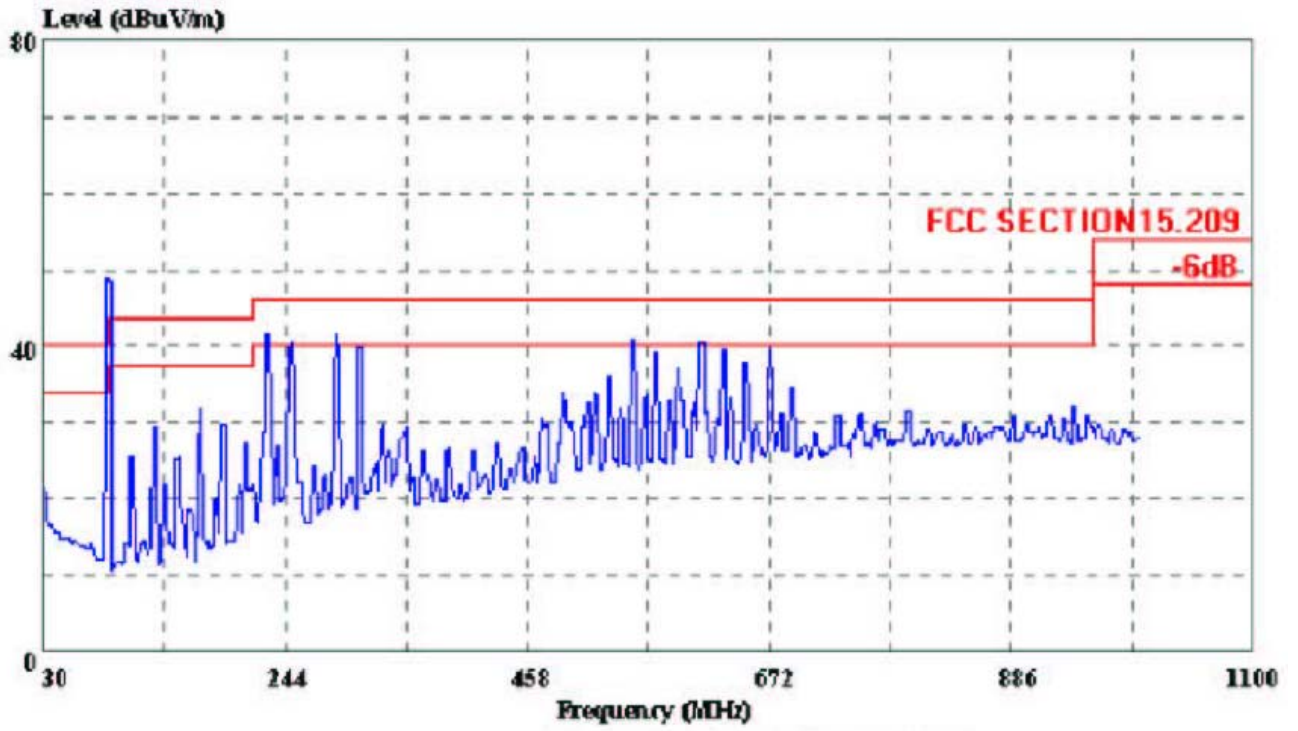
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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.1MHz (Line in)  
manuf : YIFANG  
sample no. : 063166



Trace:

Ref Trace:

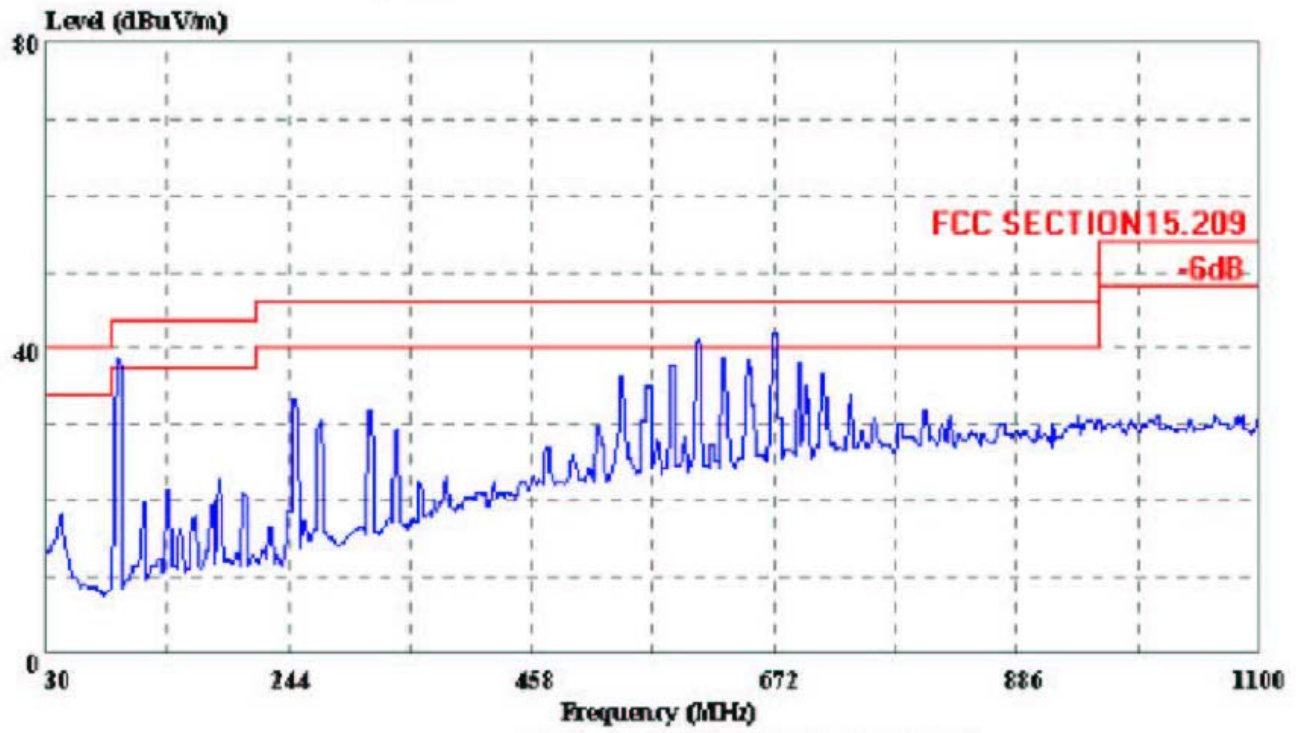
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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.1MHz(Line in)  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

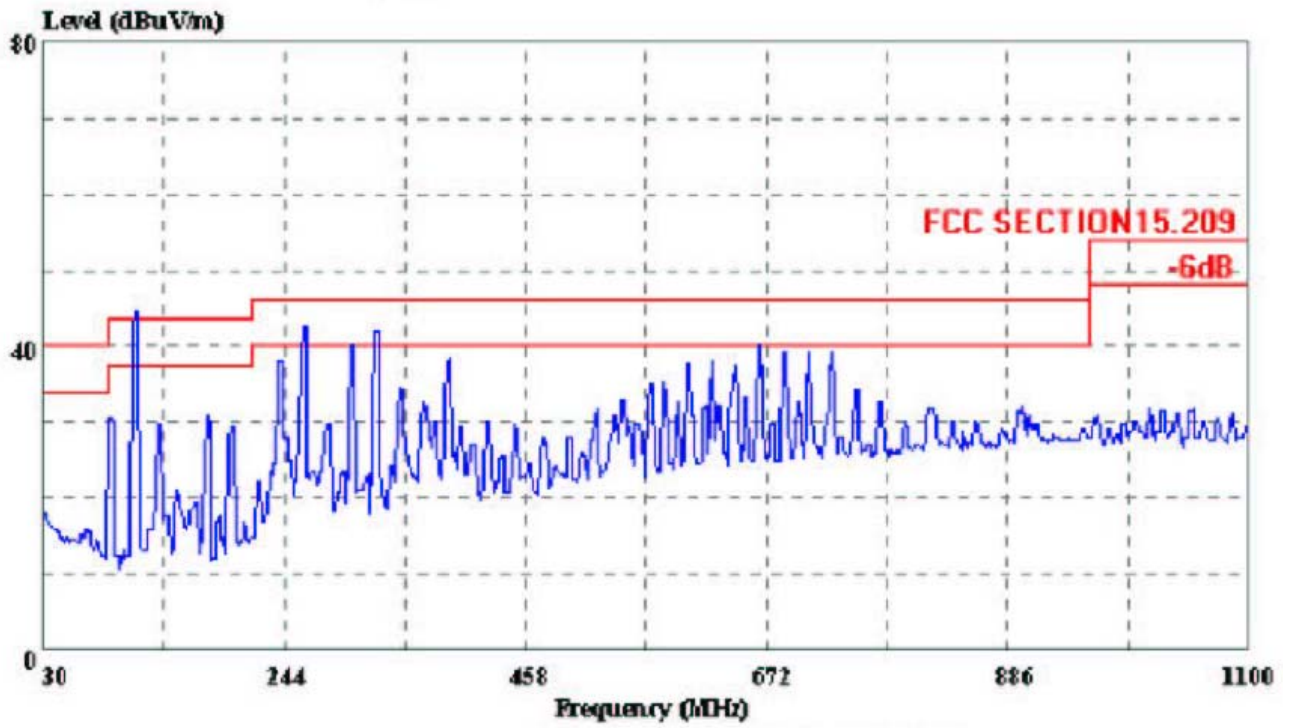
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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.9MHz (Line in)  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.9MHz(Line in)  
manuf : YIFANG  
sample no.: 063166

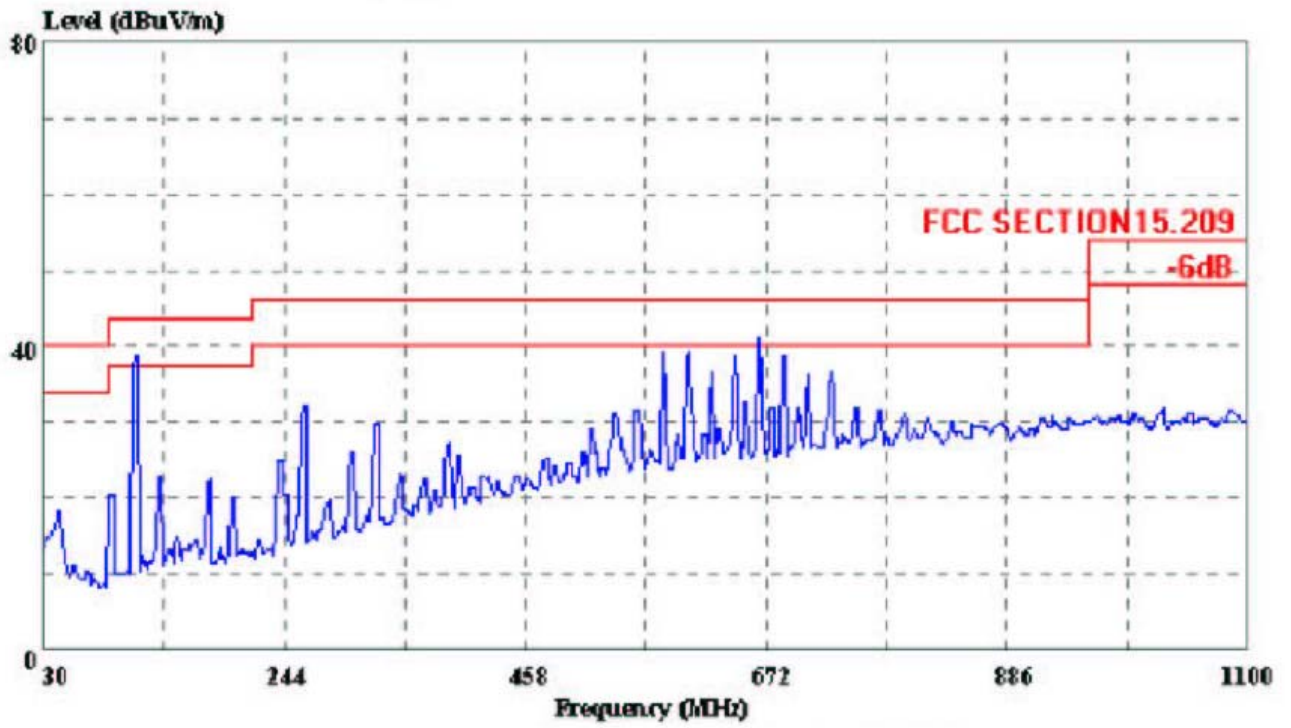


Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 106.7MHz(Line in)  
manuf : YIFANG  
sample no.: 063166

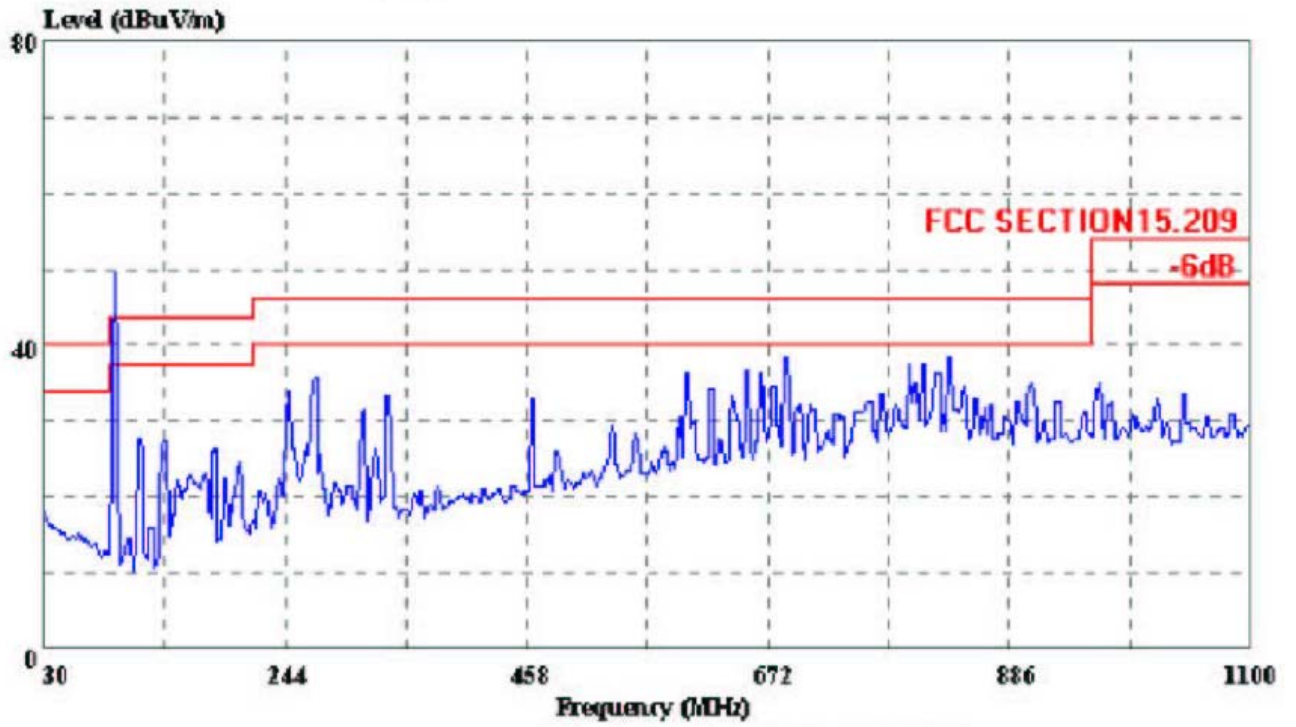




Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 106.7MHz(Line in)  
manuf : YIFANG  
sample no.: 063166

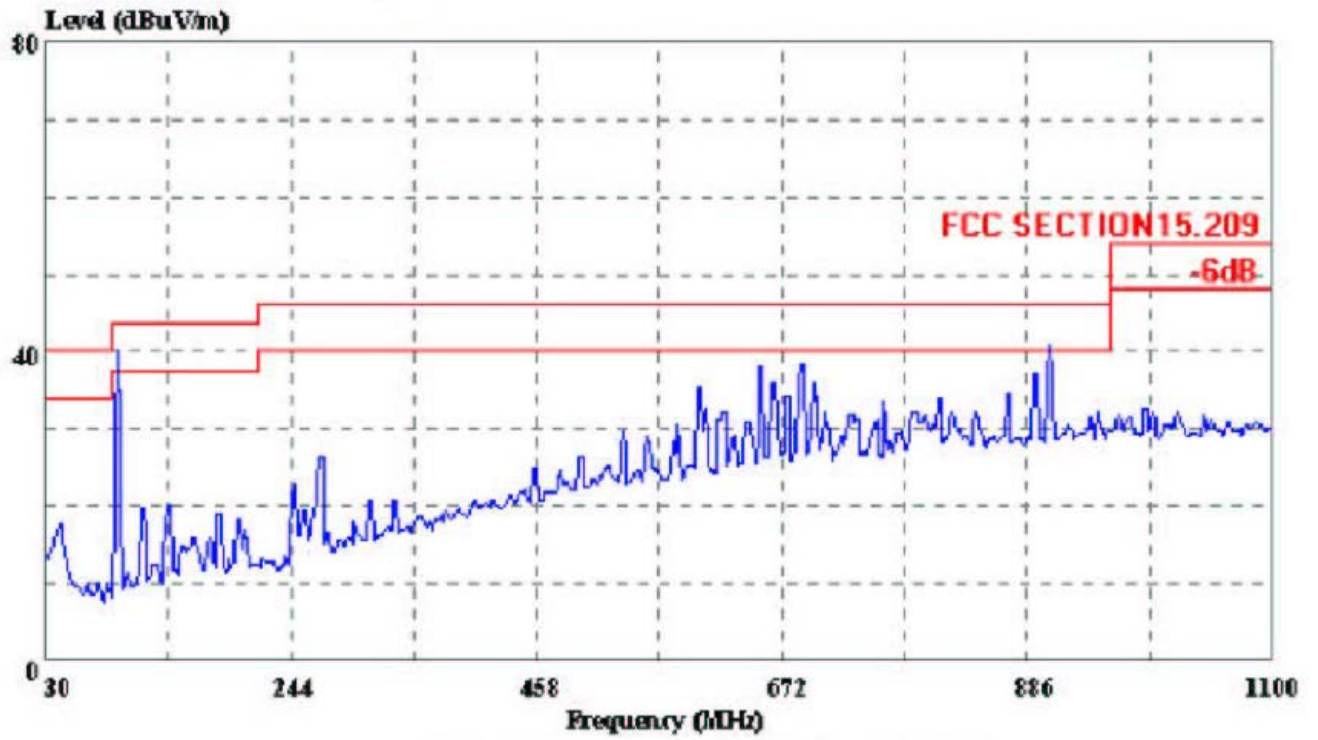


Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.1MHz {Flash Disk}  
manuf : YIFANG  
sample no.: 063166

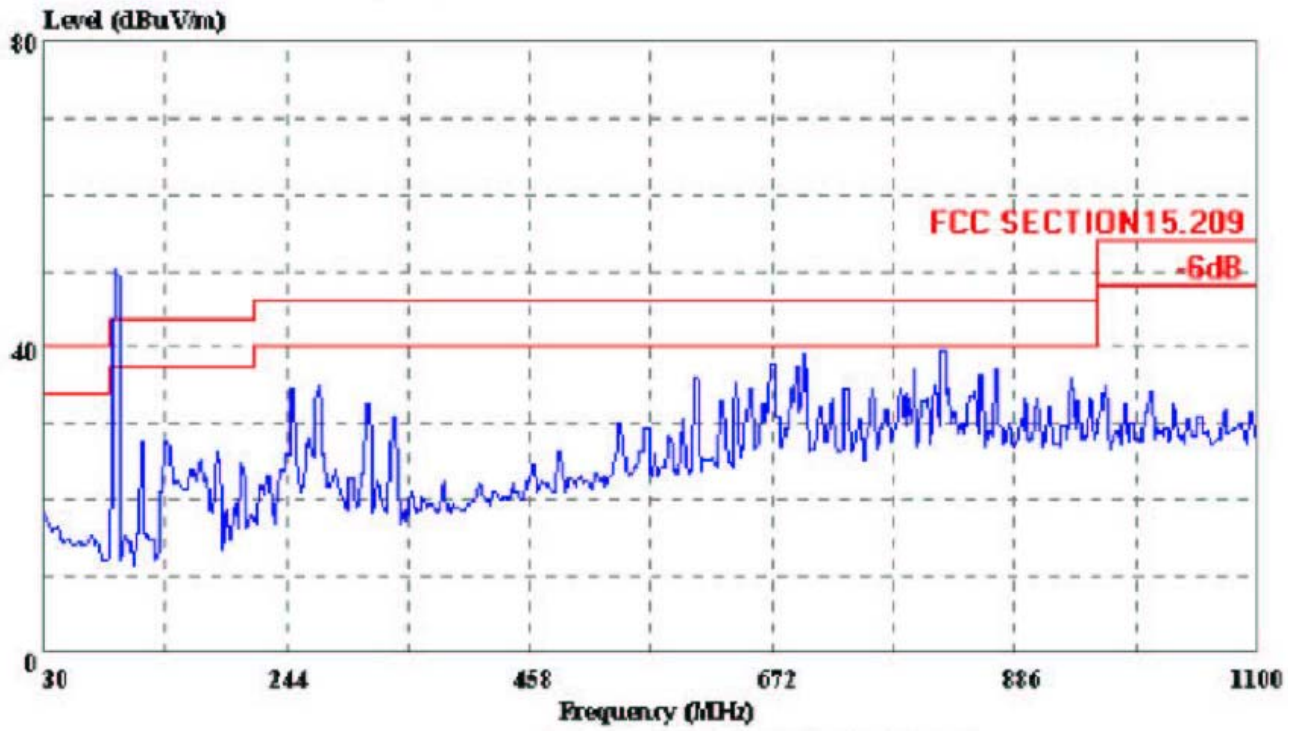




Trace:

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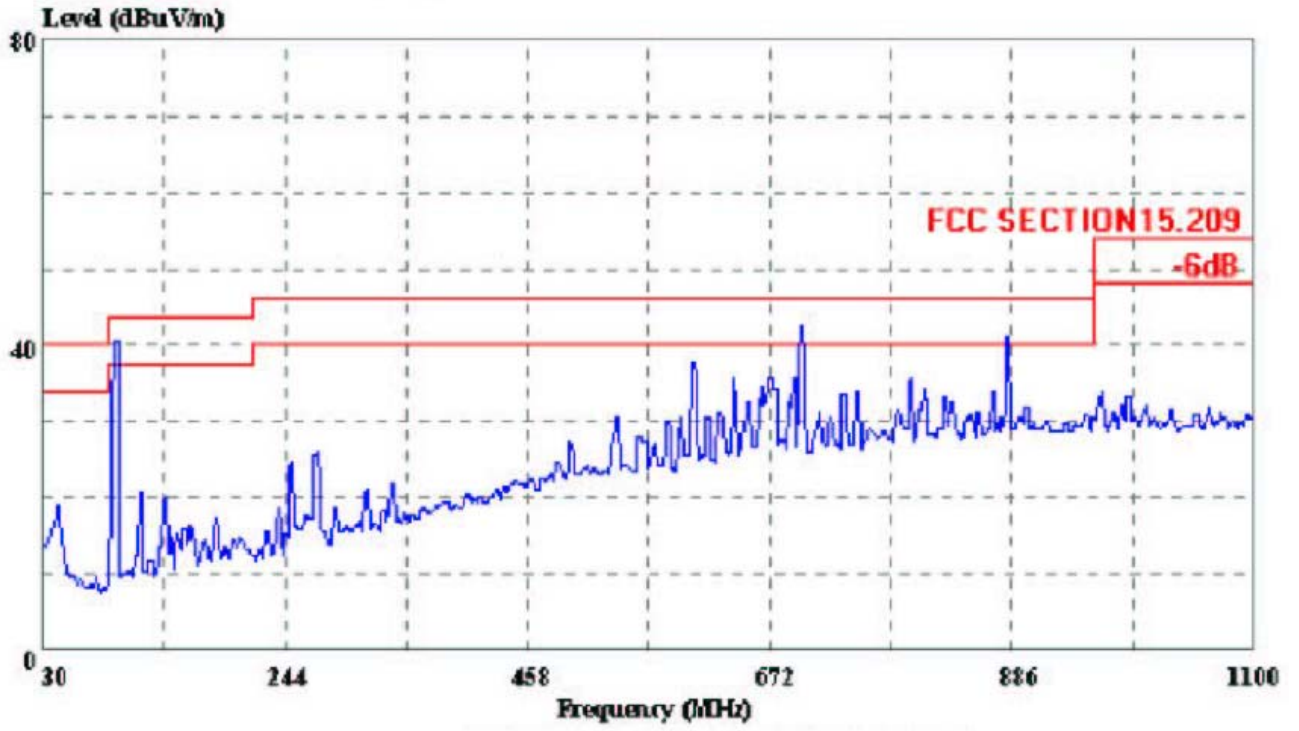
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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.1MHz {Flash Disk}  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

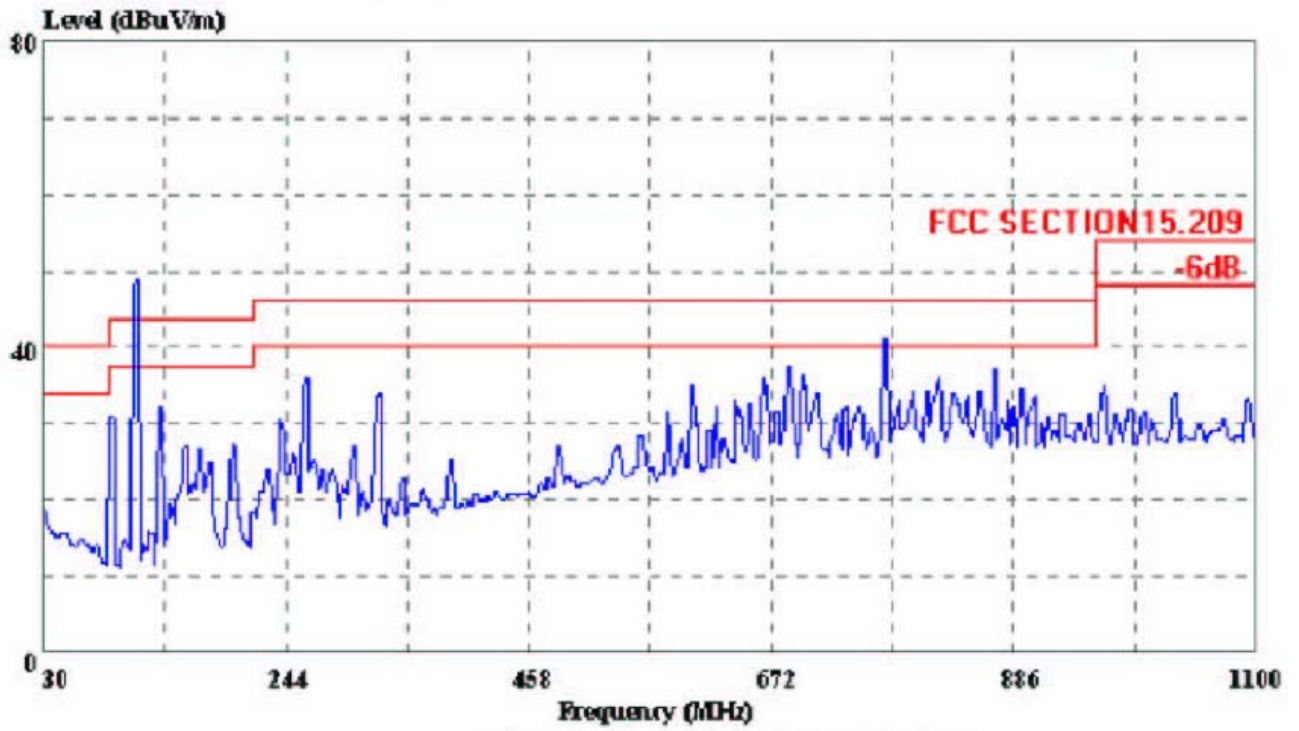
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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.9MHz (Flash Disk)  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

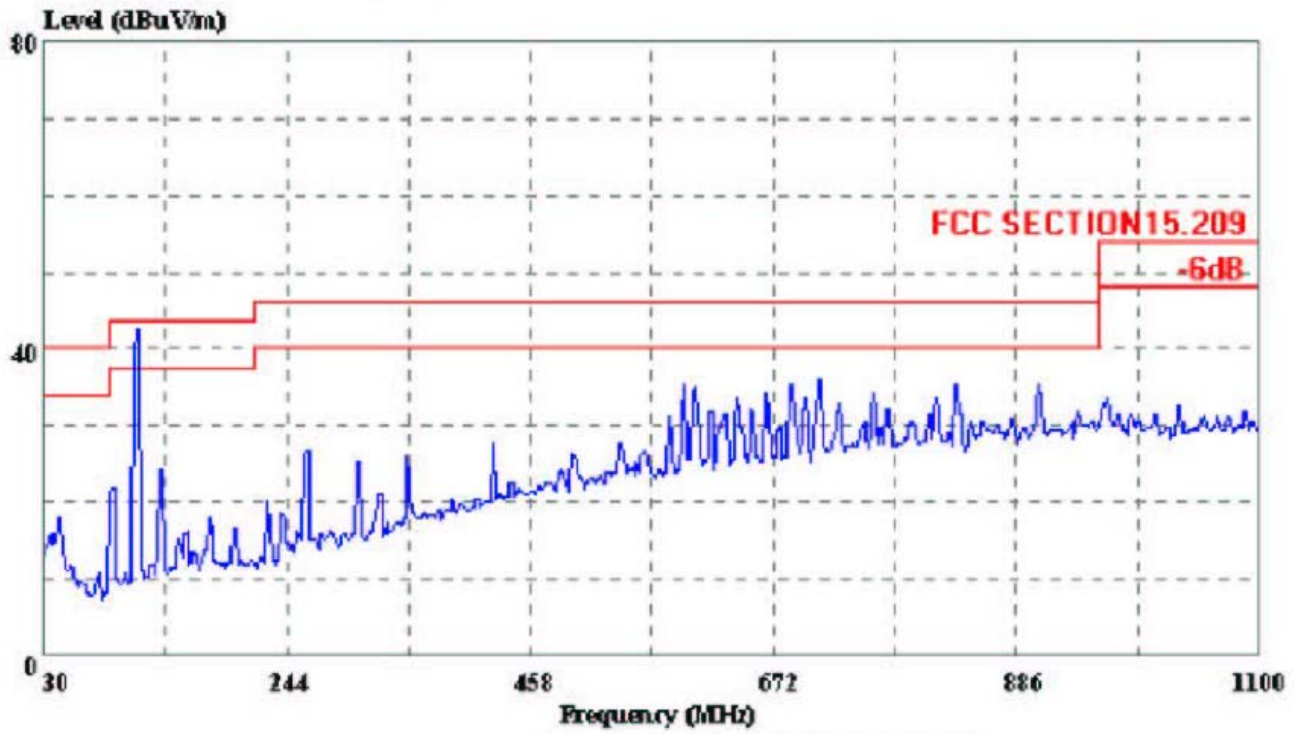
Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 88.9MHz (Flash Disk)  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 106.7MHz(Flash Disk)  
manuf : YIFANG  
sample no.: 063166

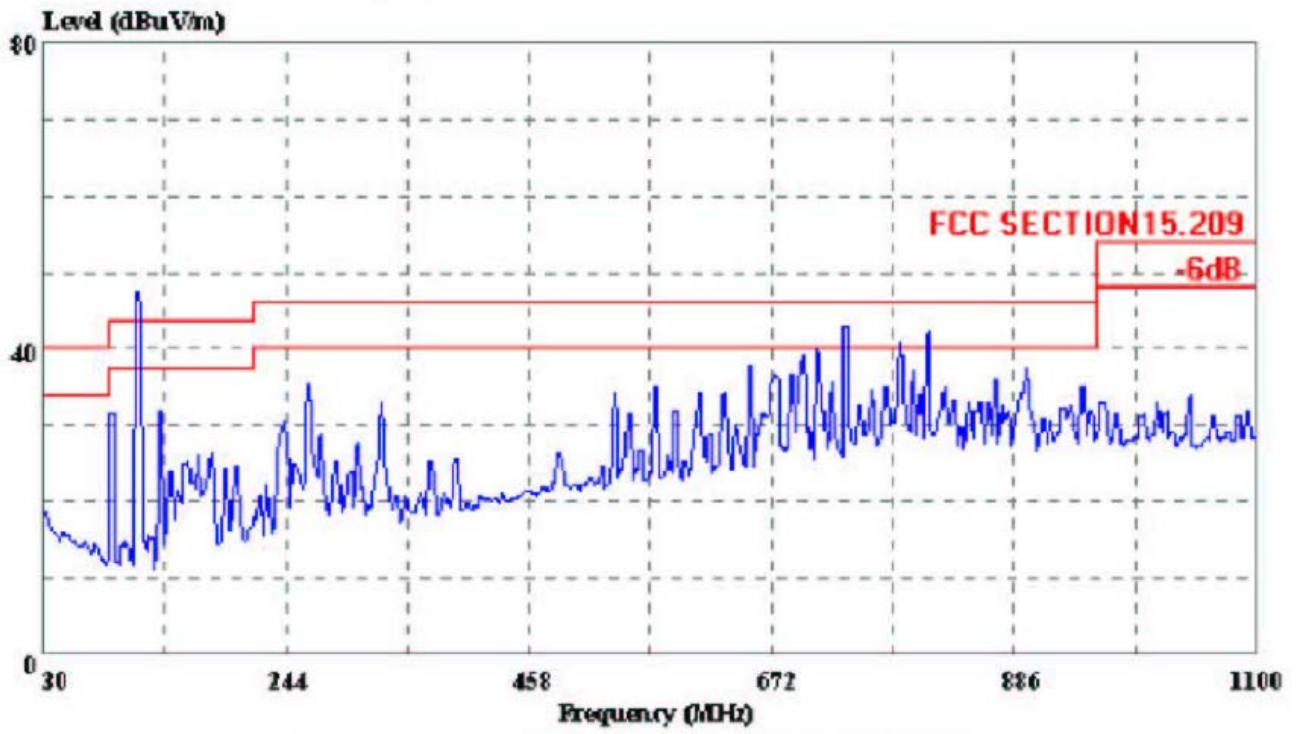


Trace:

Ref Trace:

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eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 106.7MHz{Flash Disk}  
manuf : YIFANG  
sample no. : 063166

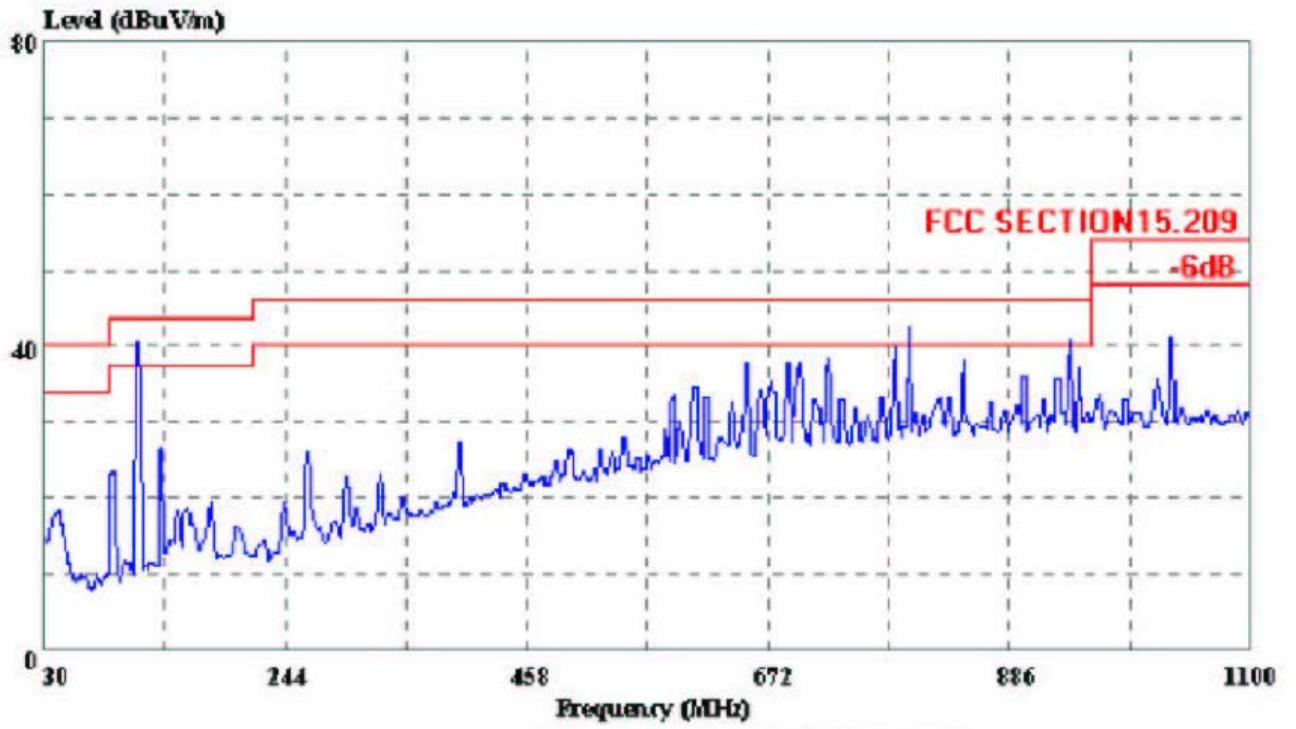




Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA HORIZONTAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 107.9MHz(Flash Disk)  
manuf : YIFANG  
sample no.: 063166



Trace:

Ref Trace:

Condition: FCC SECTION15.209 3m ATC FCC15C ANTENNA VERTICAL  
eut : Car Mp3 Player m/n:XF195T  
power : DC 12.0V  
memo : TX 107.9MHz(Flash Disk)  
manuf : YIFANG  
sample no.: 063166

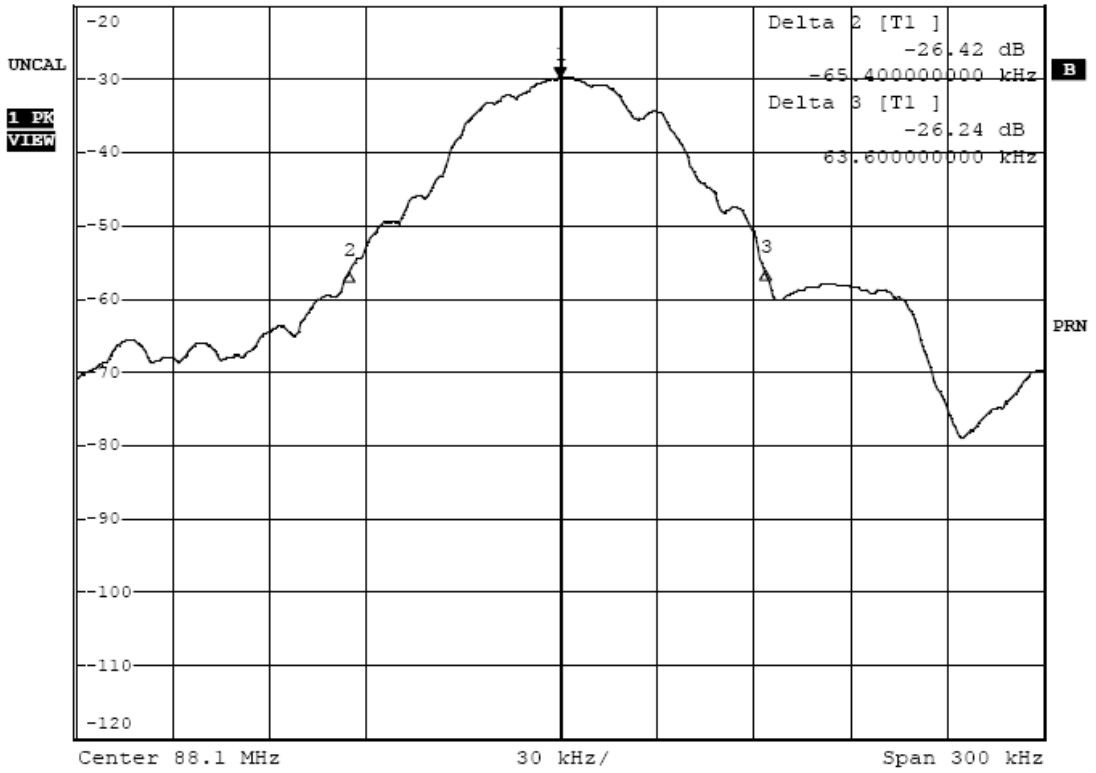


\*RBW 3 kHz      Marker 1 [T1 ]  
\*VBW 10 kHz      -29.90 dBm  
\*SWT 5 ms      88.100000000 MHz

Ref -20 dBm

Att 10 dB

88.100000000 MHz





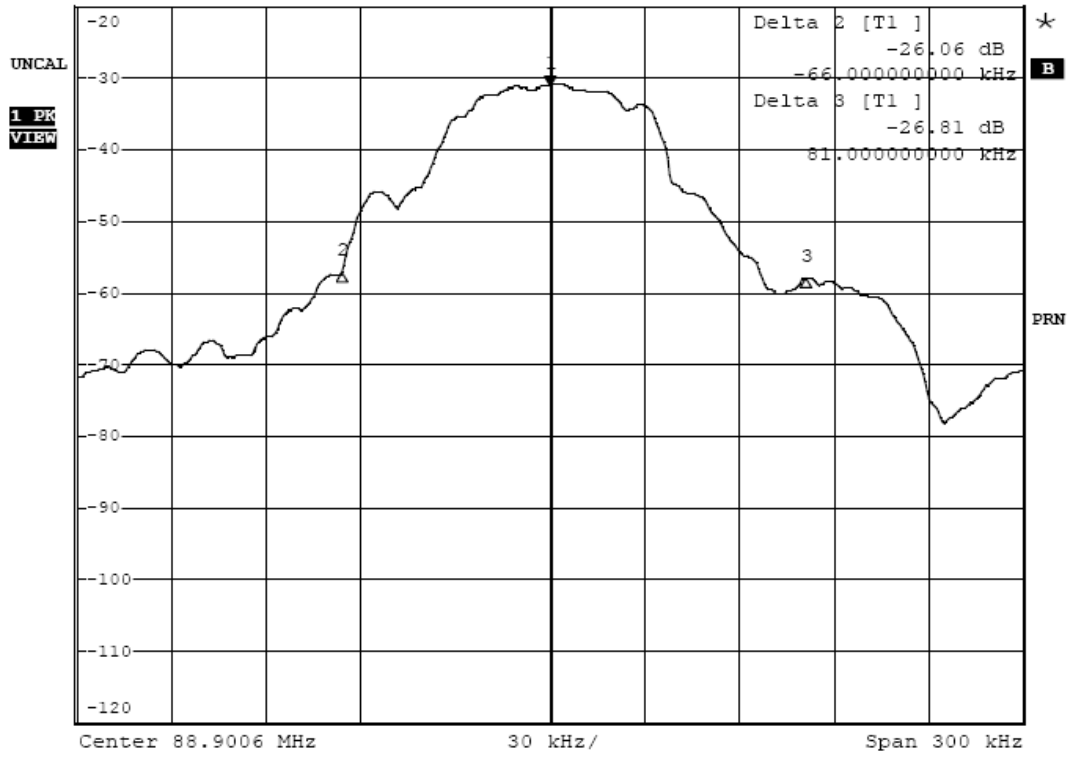


\*RBW 3 kHz      Marker 1 [T1 ]  
\*VBW 10 kHz      -31.05 dBm  
\*SWT 5 ms      88.900600000 MHz

Ref -20 dBm

Att 10 dB

88.900600000 MHz



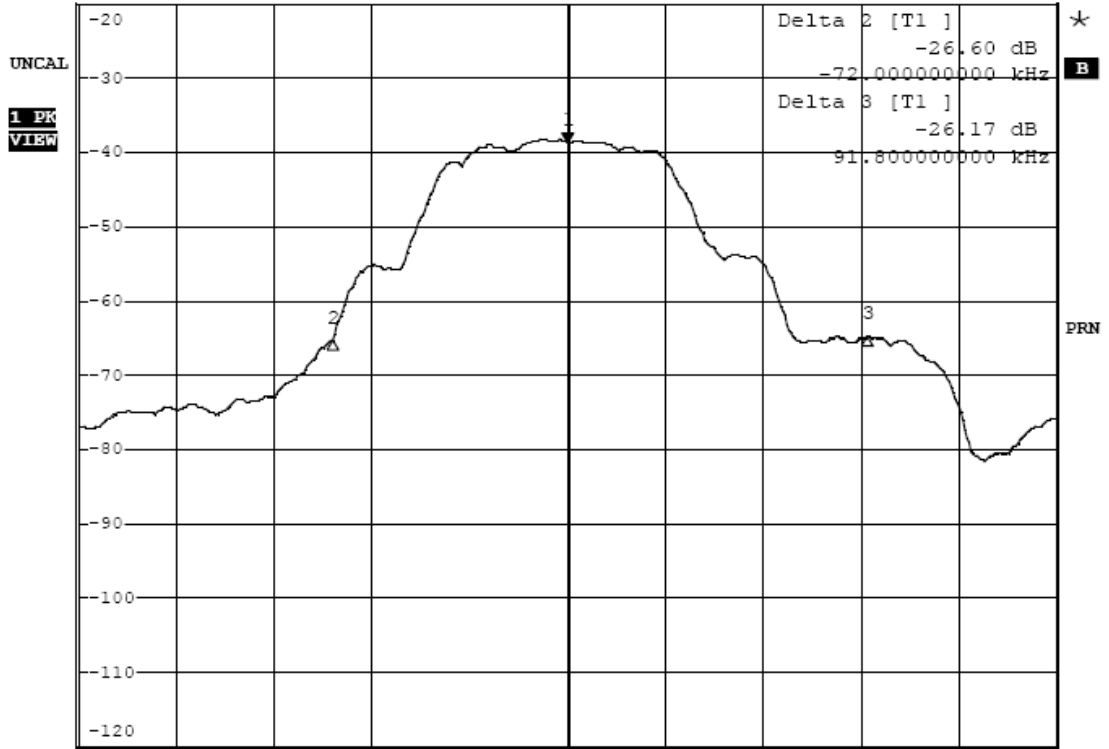


\*RBW 3 kHz      Marker 1 [T1 ]  
\*VBW 10 kHz      -38.69 dBm  
\*SWT 5 ms      106.700600000 MHz

Ref -20 dBm

Att 10 dB

106.700600000 MHz



Center 106.7006 MHz      30 kHz/      Span 300 kHz



Ref -20 dBm Att 10 dB \*RBW 3 kHz Marker 1 [T1 ] -40.21 dBm  
\*VBW 10 kHz 107.900000000 MHz  
\*SWT 5 ms

