

# FCC Test Report

Product Name : ID GEBER Display  
Model No. : 35up  
FCC ID. : 2ABPE-35UP

Applicant : HON HAI PRECISION IND.CO., LTD.  
Address : No.53, Sec. 4, Zhongyang Rd., Tucheng Dist., New  
Taipei City 236, Taiwan (R.O.C.)

Date of Receipt : 2015/06/12  
Issued Date : 2015/06/26  
Report No. : 1560364R-RFUSP14V00  
Report Version : V1.0



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# Test Report Certification

Issued Date : 2015/06/26

Report No. : 1560364R-RFUSP14V00



Product Name : ID GEBER Display  
Applicant : HON HAI PRECISION IND.CO., LTD.  
Address : No.53, Sec. 4, Zhongyang Rd., Tucheng Dist., New Taipei  
City 236, Taiwan (R.O.C.)  
Manufacturer : Foxconn Technology Co., Ltd.  
Model No. : 35up  
FCC ID. : 2ABPE-35UP  
EUT Voltage : Mode 1/3: DC 5V (Power by PC)  
Mode 2/4: DC 3.7V (Power by Battery)  
Trade Name : BMW  
Applicable Standard : FCC 15 Subpart C Section 15.231(b): 2014  
Test Result : Complied

The test results relate only to the samples tested.

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## Laboratory Information

We, **Quietek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>TAF, Accreditation Number: 3024</b>
<b>USA</b>	<b>:</b>	<b>FCC, Registration Number: 365520</b>
<b>Canada</b>	<b>:</b>	<b>IC, Submission No: 181665</b>

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site:<http://www.quietek.com/english/about/certificates.aspx?bval=5>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site :  
[http://www.quietek.com/index\\_en.aspx](http://www.quietek.com/index_en.aspx)

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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## 1. General Information

### 1.1. EUT Description

Product Name	ID GEBER Display
Trade Name	BMW
Model No.	35up
Frequency Range	433.2 MHz / 434.64 MHz
Antenna Gain	-12dBi
Channel Number	2
Type of Modulation	FSK
Channel Control	Auto
Antenna Type	Printed

Working Frequency of Each Channel	
Channel	Frequency
001	433.2 MHz
002	434.64 MHz

**Note:**

1. This device is an ID GEBER Display included a 433.2MHz/434.64MHz transceiver function and 125KHz Receiver function.
2. These tests are conducted on a sample for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.231.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 1560364R-RFUSP01V00 under Declaration of Conformity.

## 1.2. Test Mode

QuieTek verified the construction and function in typical operation. All the test modes are performed in normal operation and are defined as:

Pre-Test Mode	
TX	Mode 1: 433.2MHz (Power by PC) Mode 2: 433.2MHz (Power by Battery) Mode 3: 434.64MHz (Power by PC) Mode 4: 434.64MHz (Power by Battery)
Final Test Mode	
TX	Mode 1: 433.2MHz (Power by PC) Mode 2: 433.2MHz (Power by Battery) Mode 3: 434.64MHz (Power by PC) Mode 4: 434.64MHz (Power by Battery)

Emission				
Performed Item	Mode 1	Mode 2	Mode 3	Mode 4
Conducted Emission	Yes	No	Yes	No
Radiated Emission	Yes	Yes	Yes	Yes
Occupied Bandwidth	Yes	Yes	Yes	Yes
Duty cycle	Yes	Yes	Yes	Yes
Transmitter time	Yes	Yes	Yes	Yes

### 1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

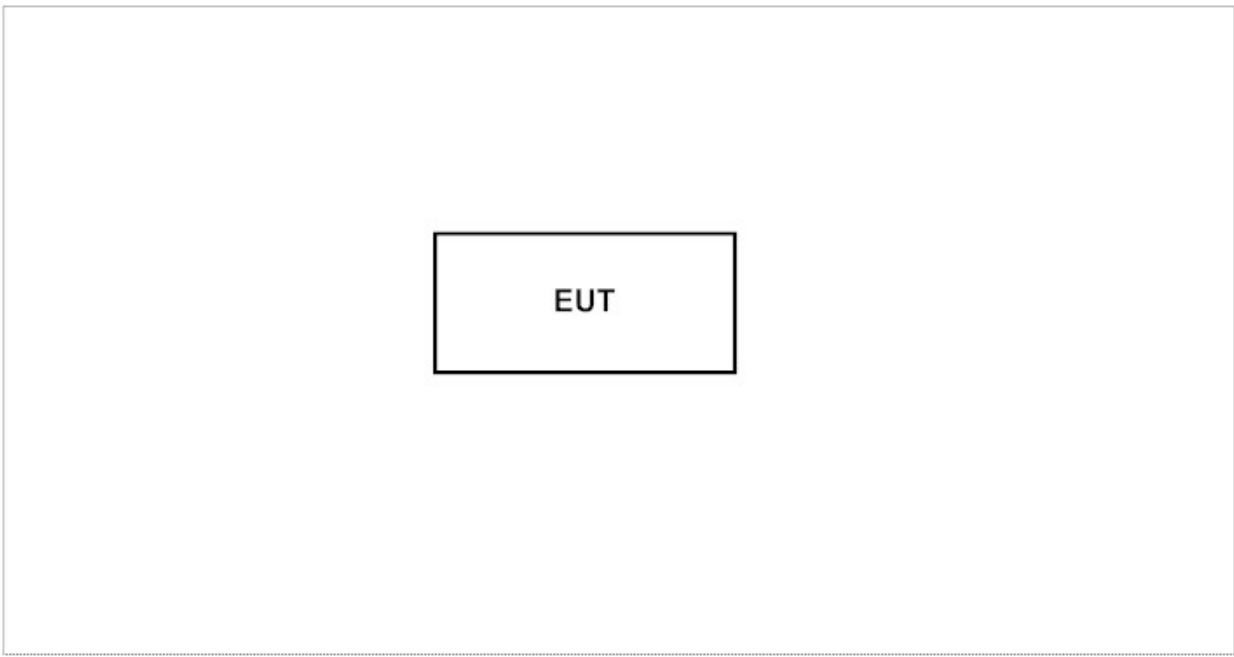
Test Mode		Mode 1: 433.2MHz (Power by PC) Mode 3: 434.64MHz (Power by PC)				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	HP	HSTNN-146C	CNU8253S1X	DoC	Non-Shielded, 1.8m
2	USB Mouse	Logitech	M-UV83	LZE35006065	DoC	--
3	Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--

Test Mode		Mode 2: 433.2MHz (Power by Battery) Mode 4: 434.64MHz (Power by Battery)				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
N/A						



### 1.4. Configuration of tested System

Test Mode		Mode 1: 433.2MHz (Power by PC) Mode 3: 434.64MHz (Power by PC)
Connection Diagram		
<pre> graph TD     EUT[EUT] --- D[USB Cable] --- PC[Notebook PC (1)]     PC --- A[LAN Cable] --- Internet[Internet]     PC --- B[USB Mouse Cable] --- Mouse[USB Mouse (2)]     PC --- C[Microphone &amp; Earphone Cable] --- Mic[Microphone &amp; Earphone (3)]         </pre>		
Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3m
B	USB Mouse Cable	Shielded, 1.8m
C	Microphone & Earphone Cable	Non-Shielded, 1.2m
D	USB Cable	Shielded, 1m

Test Mode	Mode 2: 433.2MHz (Power by Battery) Mode 4: 434.64MHz (Power by Battery)
Connection Diagram	
 <p>The diagram area contains a single rectangular box with the text "EUT" centered inside it. This box is positioned in the middle of a larger rectangular frame that represents the connection diagram.</p>	

### 1.5. EUT Exercise Software

1	Setup the EUT as shown in section 1.5.
2	Turn on the EUT power.
3	The RF signal's status will continue transmit through EUT.
4	Repeat the above procedure.

## 2. Conducted Emission

### 2.1. Test Equipment

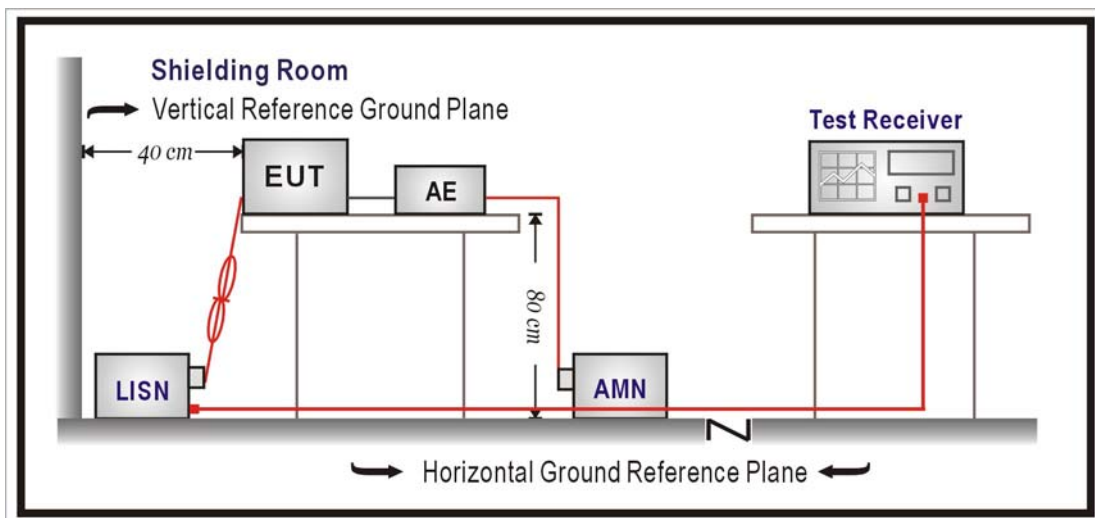
The following test equipments are used during the test:

Conducted Emission / SR2

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2016/01/25
LISN	R&S	ENV216	100092	2015/08/24
Test Receiver	R&S	ESCS 30	825442/014	2015/07/13

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 2.2. Test Setup



**2.3. Limits**

<b>FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)</b>		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

**2.4. Test Procedure**

The EUT was setup according to ANSI C63.10: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

**2.5. Test Specification**

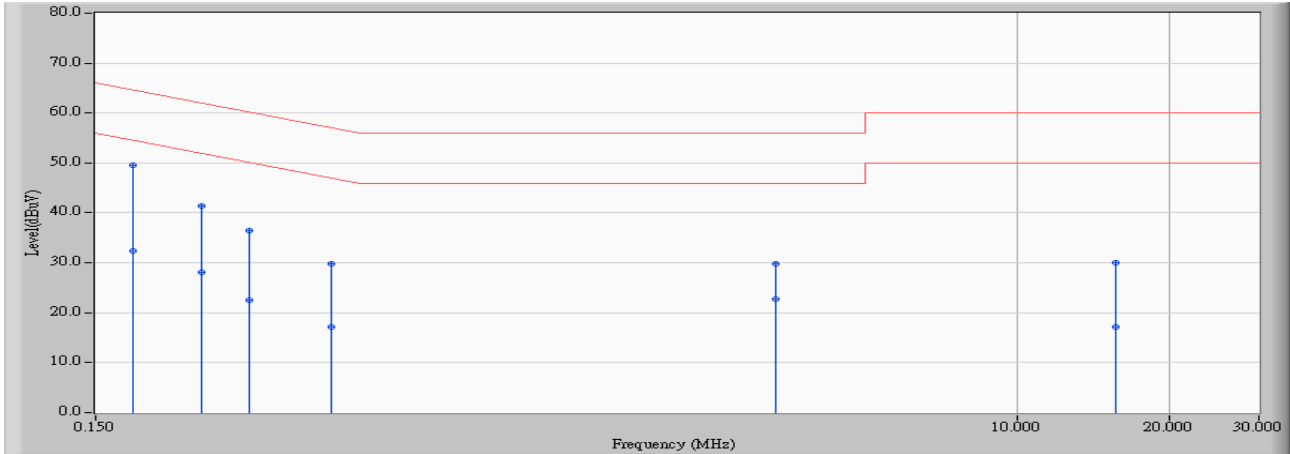
According to FCC Part 15 Subpart C Paragraph 15.207: 2014

**2.6. Uncertainty**

The measurement uncertainty is defined as  $\pm 2.26$  dB.

## 2.7. Test Result

Site : SR2	Time : 2015/06/17 - 18:44
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-4_0825 - Line1	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 1: 433.2MHz (Power by PC)

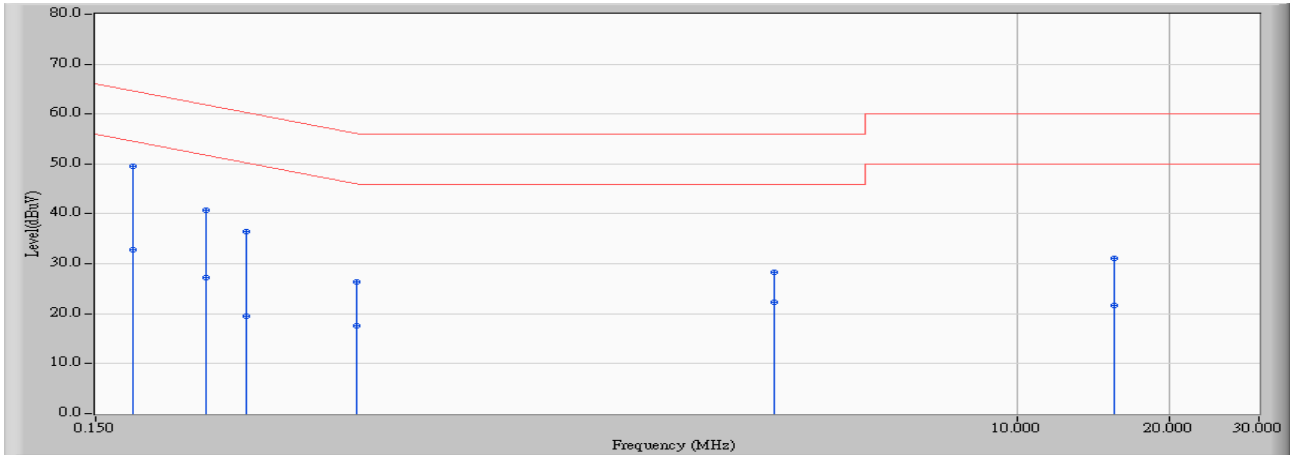


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.177	9.760	39.860	49.620	-14.989	64.609	QUASPEAK
2		0.177	9.760	22.710	32.470	-22.139	54.609	AVERAGE
3		0.244	9.758	31.600	41.358	-20.610	61.967	QUASPEAK
4		0.244	9.758	18.350	28.108	-23.860	51.967	AVERAGE
5		0.302	9.755	26.680	36.435	-23.743	60.178	QUASPEAK
6		0.302	9.755	12.830	22.585	-27.593	50.178	AVERAGE
7		0.439	9.751	20.060	29.811	-27.269	57.079	QUASPEAK
8		0.439	9.751	7.360	17.111	-29.969	47.079	AVERAGE
9		3.330	9.885	19.860	29.744	-26.256	56.000	QUASPEAK
10		3.330	9.885	12.910	22.794	-23.206	46.000	AVERAGE
11		15.576	10.201	19.840	30.041	-29.959	60.000	QUASPEAK
12		15.576	10.201	6.910	17.111	-32.889	50.000	AVERAGE

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : SR2</b>	<b>Time : 2015/06/17 - 18:48</b>
<b>Limit : CISPR_B_00M_QP</b>	<b>Margin : 10</b>
<b>Probe : SR2_LISN(16A)-4_0825 - Line2</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b>

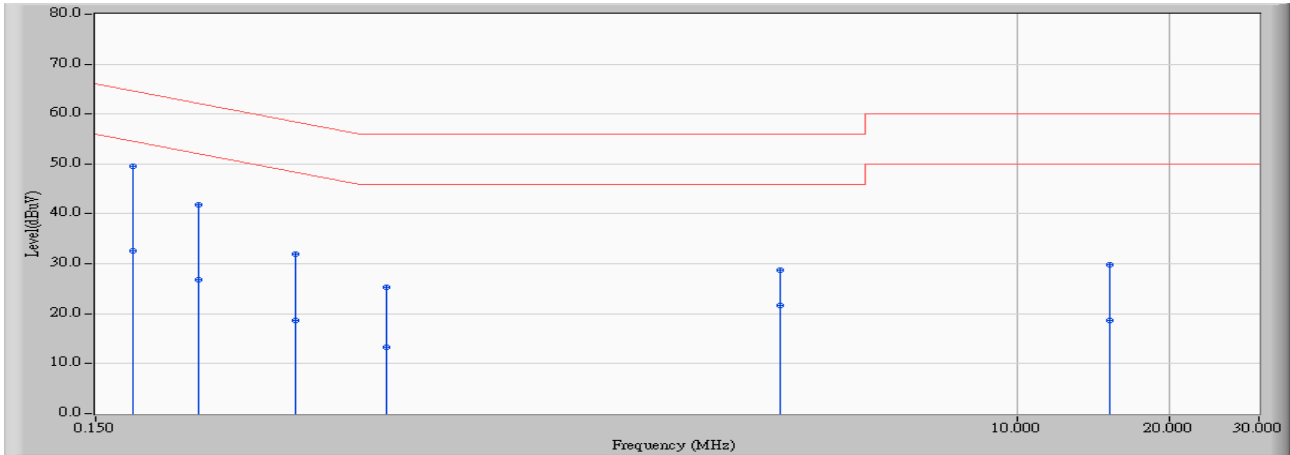


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV)</b>	<b>Detector Type</b>
1	*	0.177	9.810	39.840	49.650	-14.959	64.609	QUASPEAK
2		0.177	9.810	22.970	32.780	-21.829	54.609	AVERAGE
3		0.248	9.812	31.000	40.812	-21.023	61.835	QUASPEAK
4		0.248	9.812	17.350	27.162	-24.673	51.835	AVERAGE
5		0.298	9.815	26.680	36.495	-23.791	60.286	QUASPEAK
6		0.298	9.815	9.740	19.555	-30.731	50.286	AVERAGE
7		0.494	9.820	16.540	26.360	-29.744	56.104	QUASPEAK
8		0.494	9.820	7.800	17.620	-28.484	46.104	AVERAGE
9		3.306	9.950	18.260	28.210	-27.790	56.000	QUASPEAK
10		3.306	9.950	12.330	22.280	-23.720	46.000	AVERAGE
11		15.521	10.345	20.660	31.004	-28.996	60.000	QUASPEAK
12		15.521	10.345	11.330	21.674	-28.326	50.000	AVERAGE

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : SR2</b>	<b>Time : 2015/06/17 - 18:54</b>
<b>Limit : CISPR_B_00M_QP</b>	<b>Margin : 10</b>
<b>Probe : SR2_LISN(16A)-4_0825 - Line1</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b>



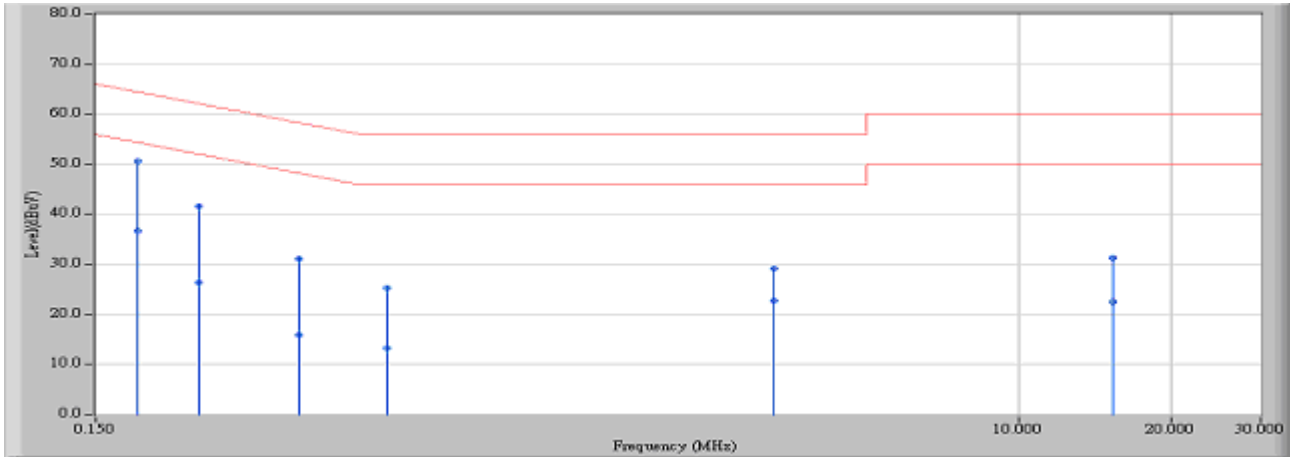
		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV)</b>	<b>Detector Type</b>
1	*	0.177	9.760	39.700	49.460	-15.149	64.609	QUASPEAK
2		0.177	9.760	22.870	32.630	-21.979	54.609	AVERAGE
3		0.240	9.758	32.120	41.878	-20.224	62.102	QUASPEAK
4		0.240	9.758	17.050	26.808	-25.294	52.102	AVERAGE
5		0.373	9.751	22.100	31.851	-26.590	58.442	QUASPEAK
6		0.373	9.751	8.950	18.701	-29.740	48.442	AVERAGE
7		0.564	9.759	15.500	25.259	-30.741	56.000	QUASPEAK
8		0.564	9.759	3.490	13.249	-32.751	46.000	AVERAGE
9		3.380	9.887	18.760	28.647	-27.353	56.000	QUASPEAK
10		3.380	9.887	11.750	21.637	-24.363	46.000	AVERAGE
11		15.240	10.191	19.600	29.791	-30.209	60.000	QUASPEAK
12		15.240	10.191	8.570	18.761	-31.239	50.000	AVERAGE

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.



Site : SR2	Time : 2015/06/17 - 18:57
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-4_0825 - Line2	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 3: 434.64MHz (Power by PC)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.181	9.810	40.740	50.550	-13.878	64.428	QUASPEAK
2		0.181	9.810	26.950	36.760	-17.668	54.428	AVERAGE
3		0.240	9.812	31.800	41.612	-20.490	62.102	QUASPEAK
4		0.240	9.812	16.640	26.452	-25.650	52.102	AVERAGE
5		0.377	9.819	21.260	31.079	-27.276	58.355	QUASPEAK
6		0.377	9.819	6.050	15.869	-32.486	48.355	AVERAGE
7		0.564	9.759	15.53	25.289	-30.711	56.000	QUASPEAK
8		0.564	9.759	3.62	13.379	-32.621	46.000	AVERAGE
9		3.287	9.949	19.280	29.229	-26.771	56.000	QUASPEAK
10		3.287	9.949	12.830	22.779	-23.221	46.000	AVERAGE
11		15.279	10.335	21.000	31.335	-28.665	60.000	QUASPEAK
12		15.279	10.335	12.110	22.445	-27.555	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

### 3. Radiated Emission

#### 3.1. Test Equipment

The following test equipments are used during the test:

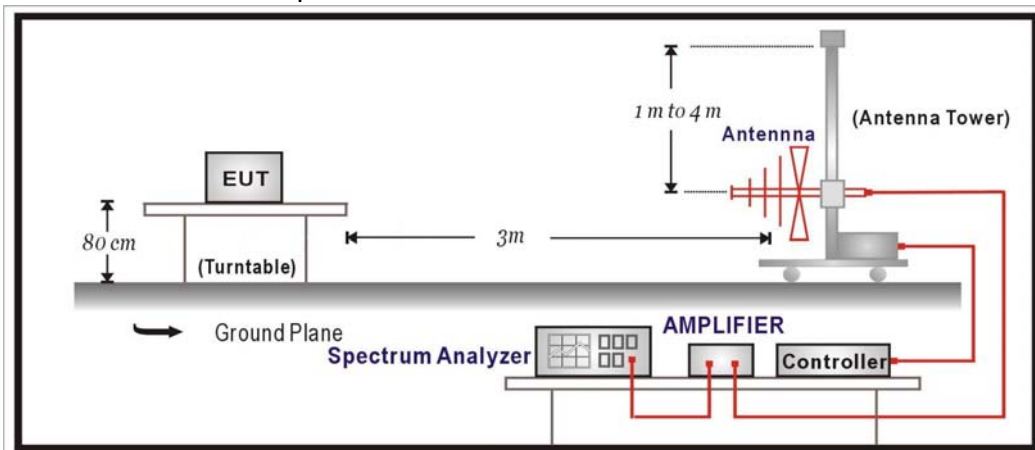
##### Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895(CB1)	2015/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2016/01/26
Pre-Amplifier	EMCI	EMC0031835	980233	2016/01/18
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2016/01/18
Spectrum Analyzer	Agilent	E4440A	MY46187335	2016/01/07
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2016/01/26

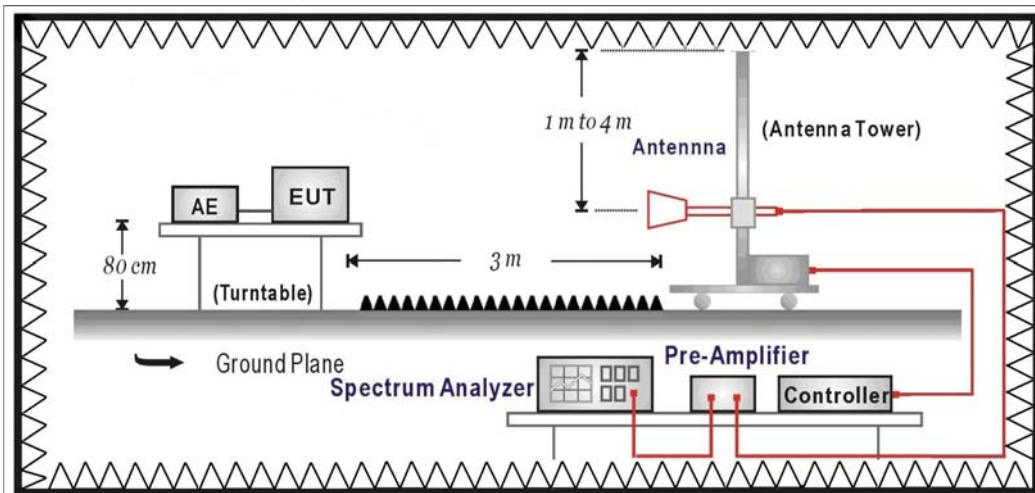
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

#### 3.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



### 3.3. Limits

➤ Fundamental and Harmonics Emission Limits

<b>FCC Part 15 Subpart C Paragraph 15.231(b) Limits</b>				
Fundamental Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	uV/m	dBuV/m	uV/m	dBuV/m
40.66-40.70	2250	67.04	225	47.04
70-130	1250	61.94	125	41.94
130-174	1250-3750	61.94-71.48	125-375	41.94-51.48
174-260	3750	71.48	375	51.48
260-470	3750-12500	71.48-81.94	375-1250	51.48-61.94
above 470	12500	81.94	1250	61.94

- Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)  
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.  
 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➤ Spurious electric field strength limits

<b>FCC Part 15 Subpart C Paragraph 15.209 Limits</b>			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	See Remark <sup>1</sup>	300
0.490-1.705	24000/F(kHz)	See Remark <sup>1</sup>	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

- Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)  
 2. In the Above Table, the tighter limit applies at the band edges.  
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

### **3.4. Test Procedure**

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB beamwidth of the antenna.

The worst radiated emission is measured on the Final Measurement.

The frequency range from 30MHz to 10th harmonics is checked.

### **3.5. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2014

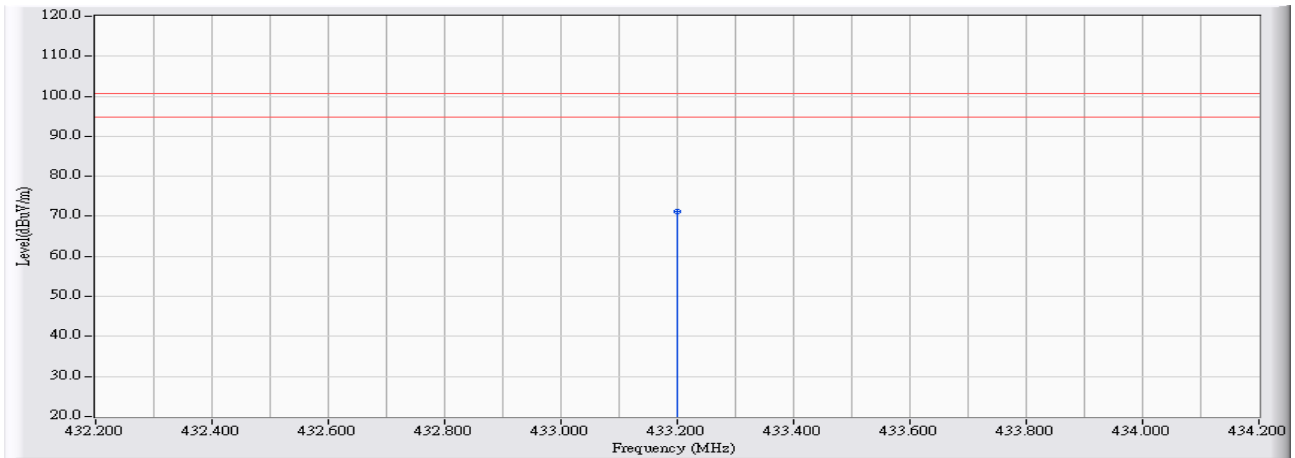
### **3.6. Uncertainty**

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

### 3.7. Test Result

Site : CB1	Time : 2015/06/18 - 03:21
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 1: 433.2MHz (Power by PC) X-axis

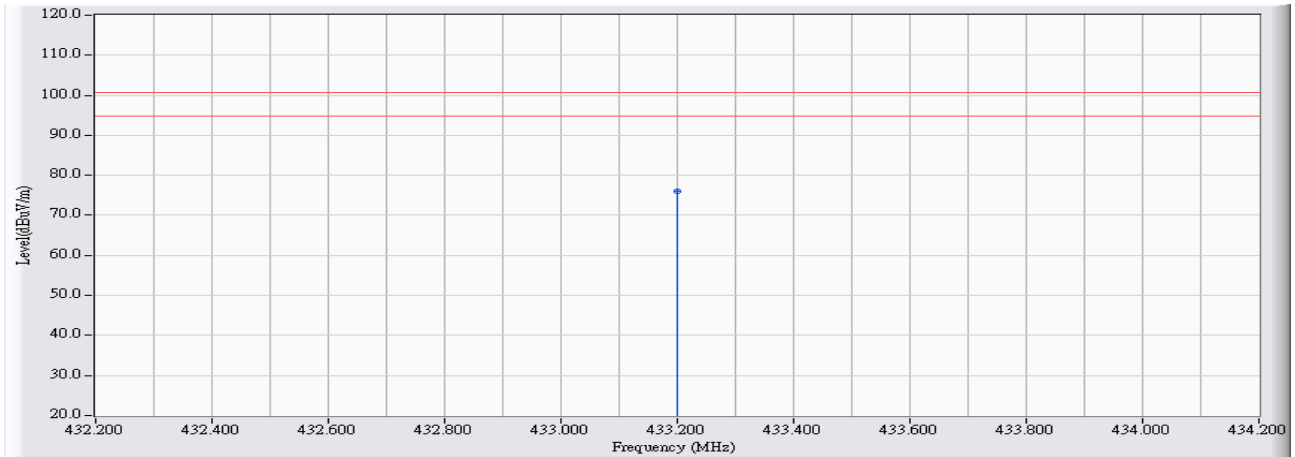


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.200	15.828	55.270	71.098	-29.732	100.801	PEAK

Note:

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 03:12</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b> <b>X-axis</b>

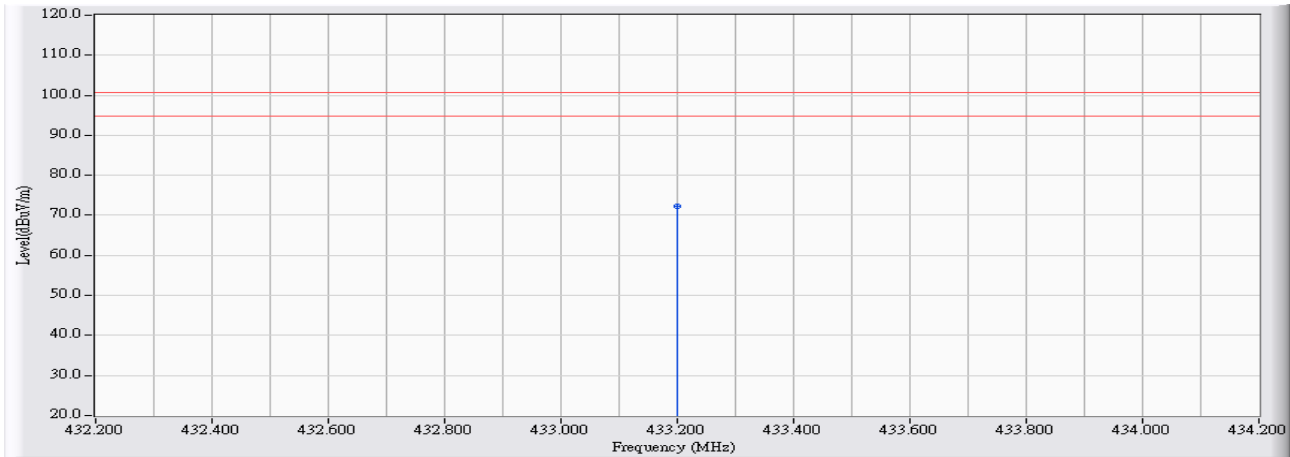


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.200	15.828	60.220	76.048	-24.782	100.801	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:44</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b> <b>Y-axis</b>

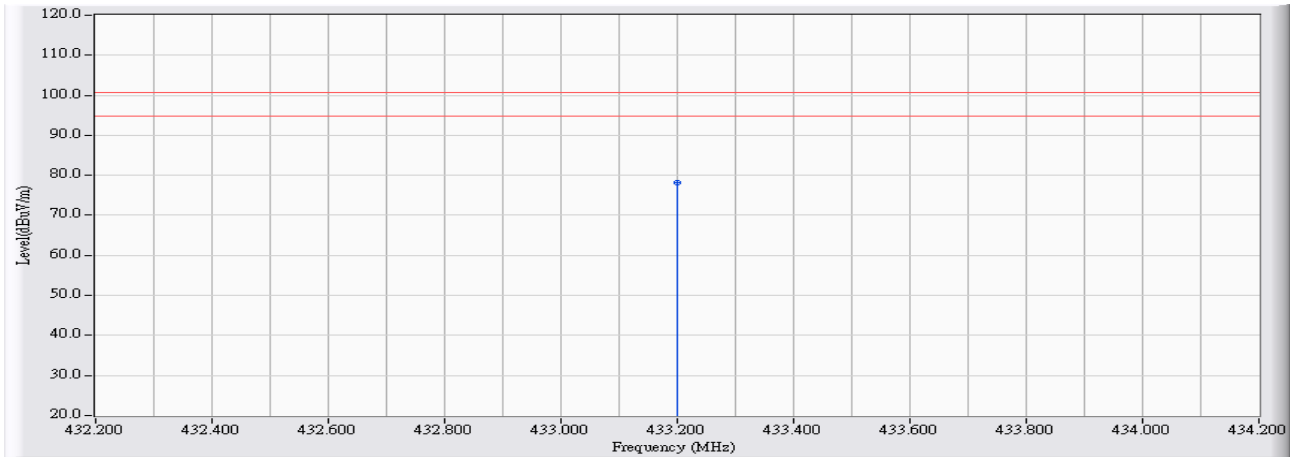


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.200	15.828	56.410	72.238	-28.592	100.801	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:54</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b> <b>Y-axis</b>



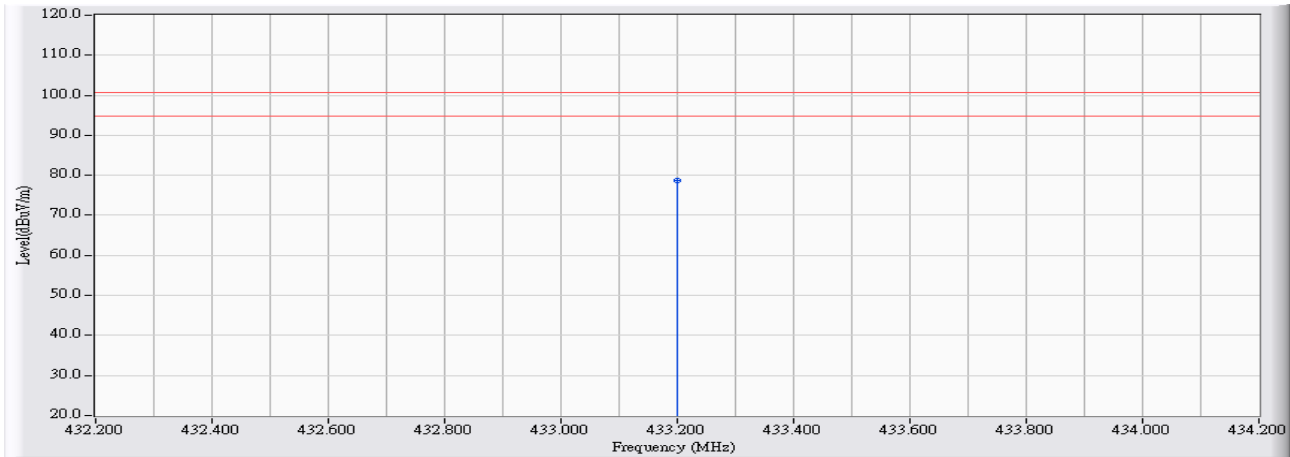
		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.200	15.828	62.420	78.248	-22.582	100.801	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.



<b>Site : CB1</b>	<b>Time : 2015/06/18 - 01:34</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b> <b>Z-axis</b>

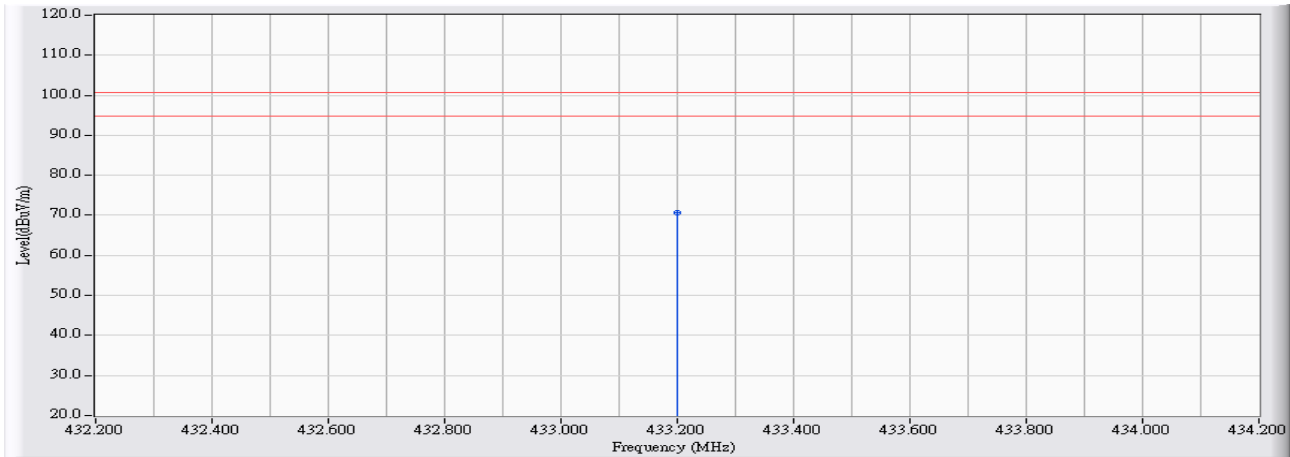


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.200	15.828	62.920	78.748	-22.082	100.801	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 01:57</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b> <b>Z-axis</b>



		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.200	15.828	54.810	70.638	-30.192	100.801	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product	ID GEBER Display		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2015/06/18	Test Site	CB1

Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Peak Measurement Level (dBuV/m)	Average Measurement Level (dBuV/m)	Average Limit (dBuV/m)
<b>Horizontal</b>					
433.200 (X-axis)	15.828	55.270	71.098	63.686	80.801
433.200 (Y-axis)	15.828	56.410	72.238	64.826	80.801
433.200 (Z-axis)	15.828	62.920	78.748	71.336	80.801
<b>Vertical</b>					
433.200 (X-axis)	15.828	60.220	76.048	68.636	80.801
433.200 (Y-axis)	15.828	62.420	78.248	70.836	80.801
433.200 (Z-axis)	15.828	54.810	70.638	63.226	80.801

Note1:

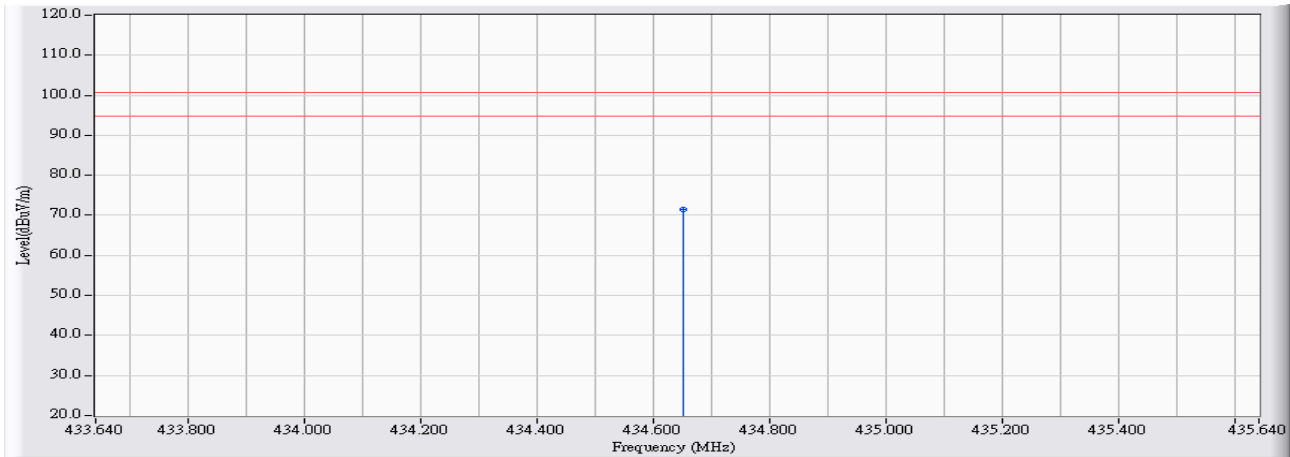
Peak Measurement Level = Reading Level + Correct Factor

Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

Duty Cycle(Only Ton)= Ton/ Ton+off=(42.3ms/99.3ms)=0.426

20\*Log(Duty Cycle) = -7.412

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 03:25</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>X-axis</b>

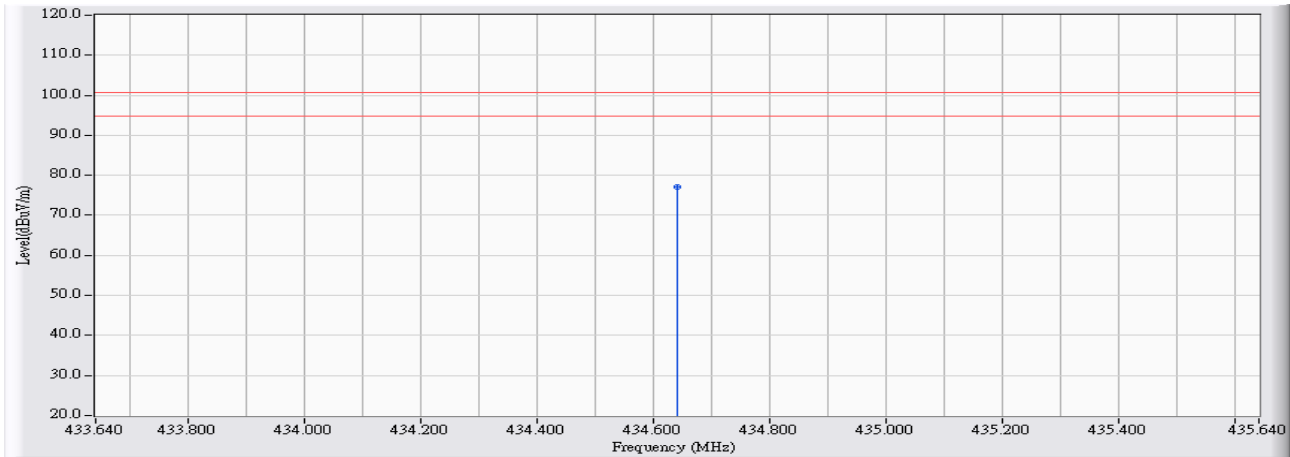


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.650	15.857	55.650	71.507	-29.323	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 03:11</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>X-axis</b>

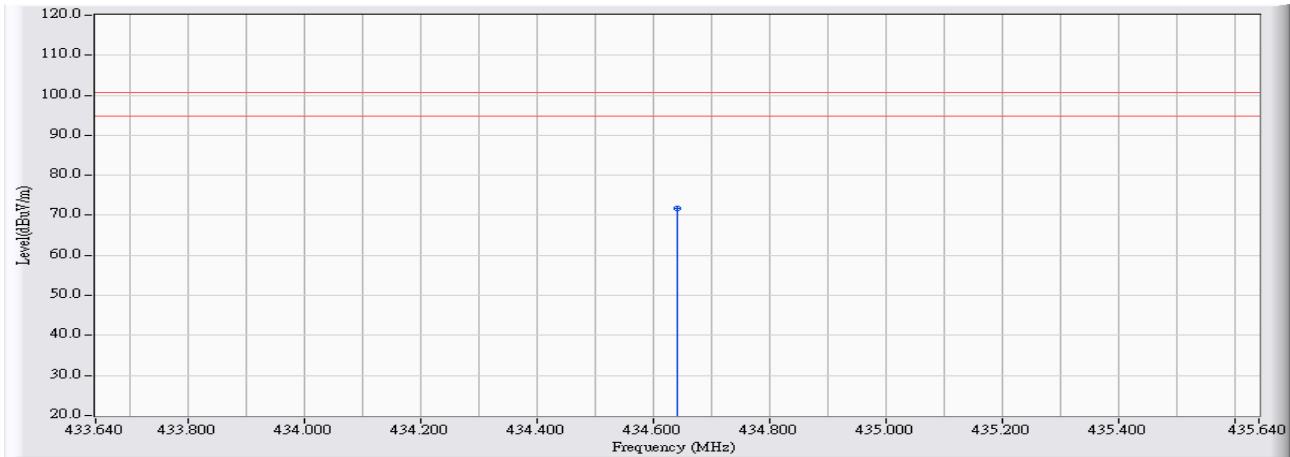


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.640	15.857	61.250	77.107	-23.723	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:38</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>Y-axis</b>

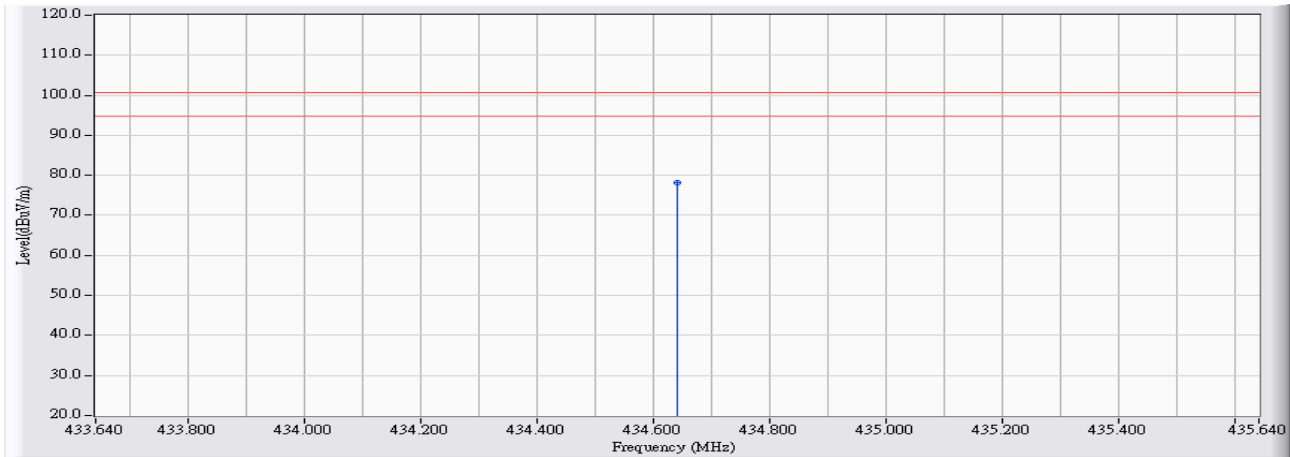


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.640	15.857	55.880	71.737	-29.093	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:56</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>Y-axis</b>

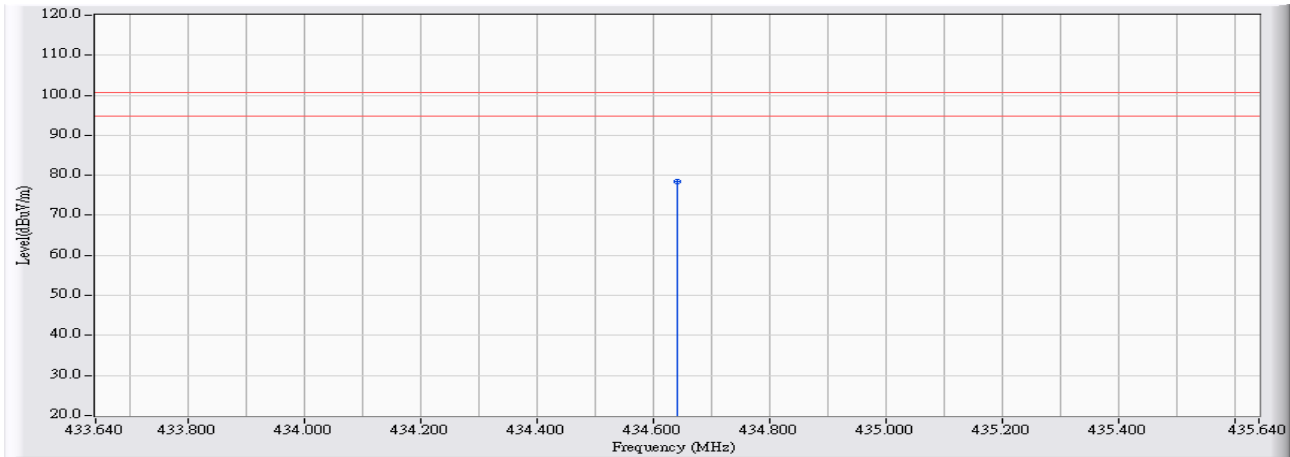


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.640	15.857	62.240	78.097	-22.733	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:31</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>Z-axis</b>



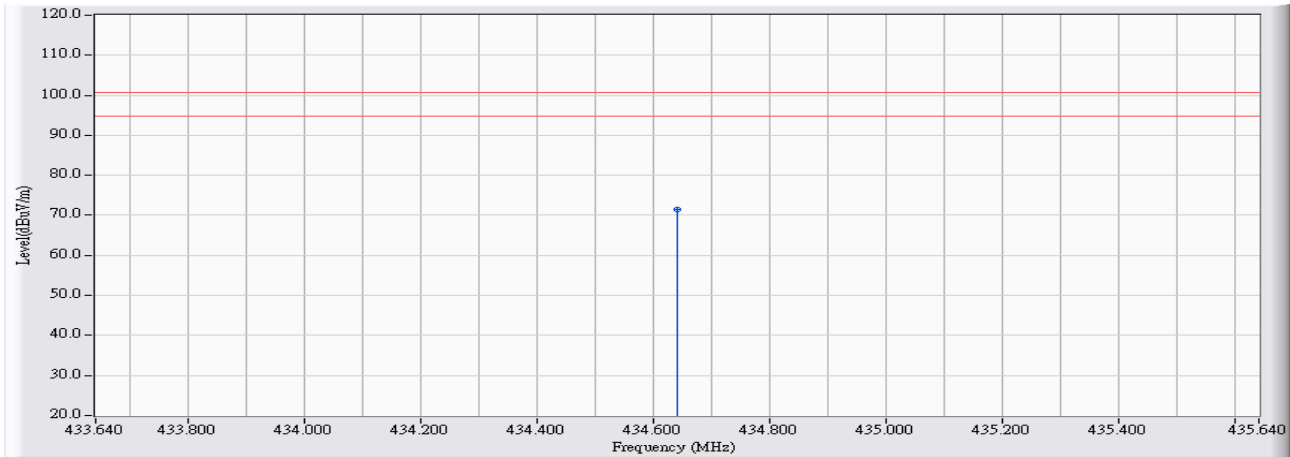
		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.640	15.857	62.500	78.357	-22.473	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.



<b>Site : CB1</b>	<b>Time : 2015/06/18 - 02:31</b>
<b>Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b> <b>Z-axis</b>



		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	434.640	15.857	55.600	71.457	-29.373	100.849	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product	ID GEBER Display		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 3: 434.64MHz (Power by PC)		
Date of Test	2015/06/18	Test Site	CB1

Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Peak Measurement Level (dBuV/m)	Average Measurement Level (dBuV/m)	Average Limit (dBuV/m)
<b>Horizontal</b>					
434.640 (X-axis)	15.857	55.650	71.507	64.095	80.849
434.640 (Y-axis)	15.857	55.880	71.737	64.325	80.849
434.640 (Z-axis)	15.857	62.500	78.357	70.945	80.849
<b>Vertical</b>					
434.640 (X-axis)	15.857	61.250	77.107	69.695	80.849
434.640 (Y-axis)	15.857	62.240	78.097	70.685	80.849
434.640 (Z-axis)	15.857	55.600	71.457	64.045	80.849

Note1:

Peak Measurement Level = Reading Level + Correct Factor

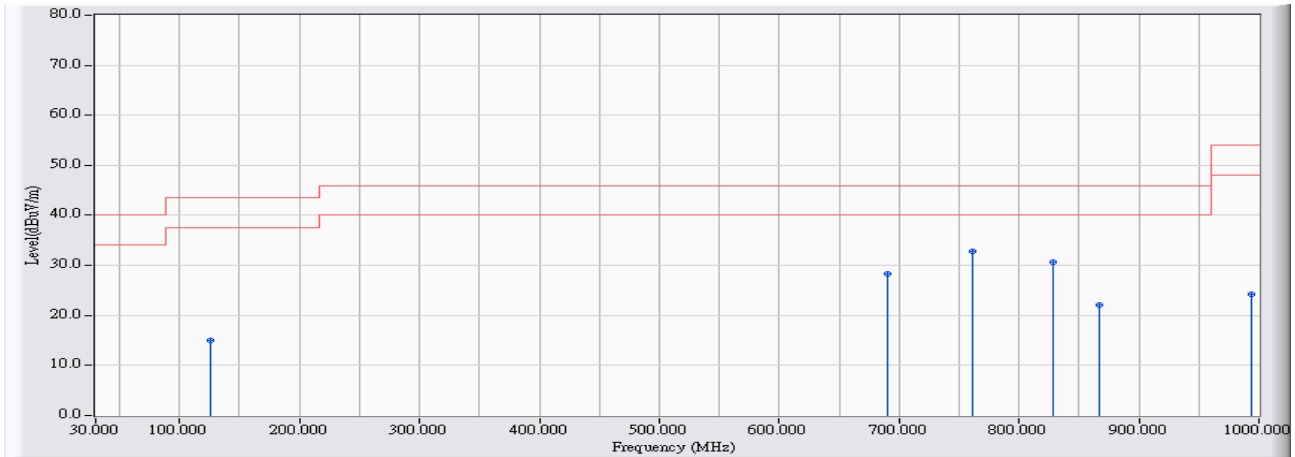
Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

Duty Cycle(Only Ton)= Ton/ Ton+off=(42.3ms/99.3ms)=0.426

20\*Log(Duty Cycle) = -7.412

**30MHz-1GHz Spurious :**

Site : CB1	Time : 2015/06/18 - 15:27
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 1: 433.2MHz (Power by PC)

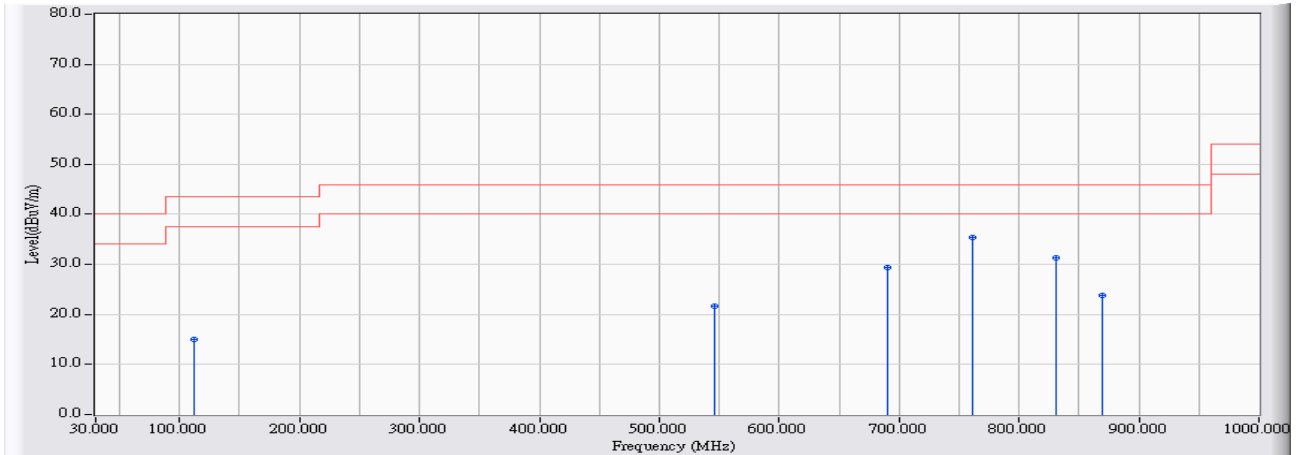


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	125.497	10.629	4.350	14.979	-28.521	43.500	QUASPEAK
2	689.755	17.940	10.330	28.270	-17.730	46.000	QUASPEAK
3	* 761.499	18.744	14.080	32.824	-13.176	46.000	QUASPEAK
4	827.911	19.286	11.287	30.573	-15.427	46.000	QUASPEAK
5	866.400	19.386	2.690	22.075	-23.925	46.000	QUASPEAK
6	993.213	20.233	3.937	24.171	-29.829	54.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 15:32</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 1: 433.2MHz (Power by PC)</b>

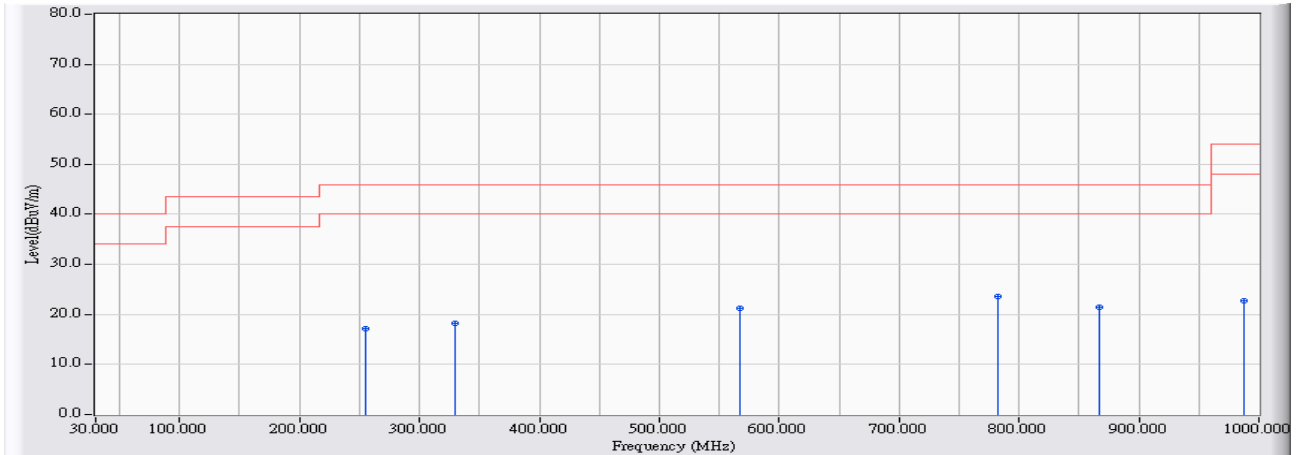


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	112.409	10.448	4.530	14.978	-28.522	43.500	QUASPEAK
2	546.267	17.322	4.265	21.587	-24.413	46.000	QUASPEAK
3	689.755	17.940	11.442	29.382	-16.618	46.000	QUASPEAK
4	* 761.499	18.744	16.723	35.467	-10.533	46.000	QUASPEAK
5	831.304	19.295	12.094	31.389	-14.611	46.000	QUASPEAK
6	869.115	19.393	4.450	23.842	-22.158	46.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 15:36</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 3.7V (Power by Battery)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 2: 433.2MHz (Power by Battery)</b>

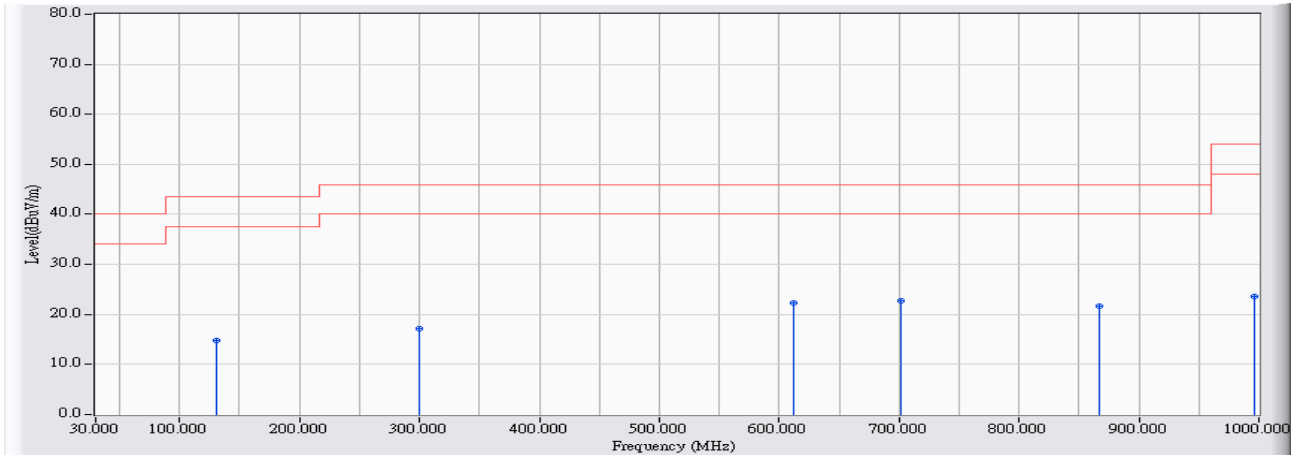


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	255.412	11.978	5.241	17.219	-28.781	46.000	QUASIPeAK
2	329.095	13.451	4.745	18.196	-27.804	46.000	QUASIPeAK
3	566.627	17.383	3.944	21.327	-24.673	46.000	QUASIPeAK
4	* 782.344	18.998	4.673	23.671	-22.329	46.000	QUASIPeAK
5	866.400	19.386	2.095	21.480	-24.520	46.000	QUASIPeAK
6	987.396	20.186	2.482	22.668	-31.332	54.000	QUASIPeAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 15:41</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 3.7V (Power by Battery)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 2: 433.2MHz (Power by Battery)</b>

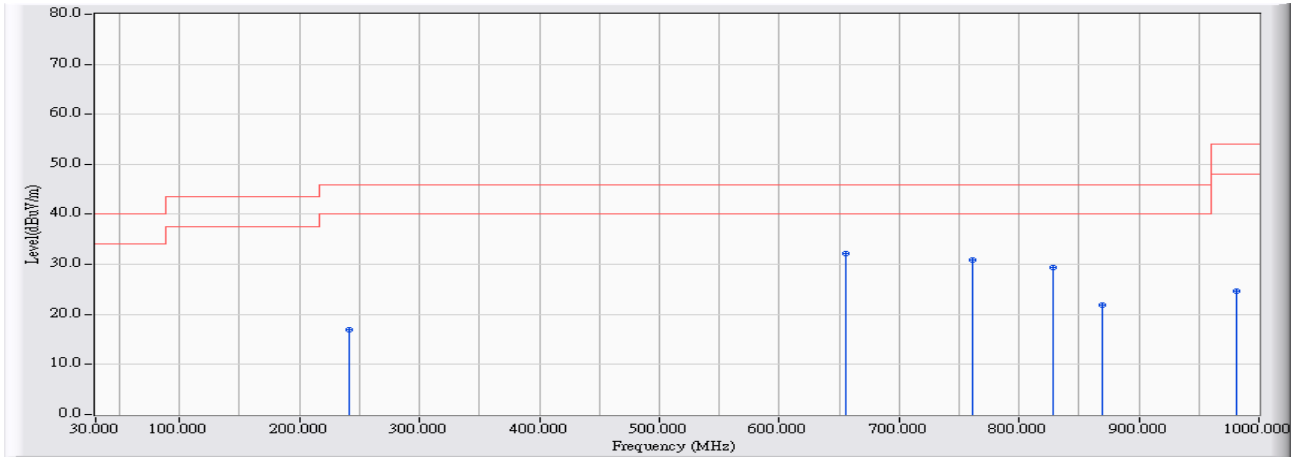


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	130.345	10.463	4.391	14.854	-28.646	43.500	QUASIPeAK
2	300.010	12.754	4.478	17.232	-28.768	46.000	QUASIPeAK
3	611.709	17.543	4.835	22.378	-23.622	46.000	QUASIPeAK
4	* 701.874	18.015	4.816	22.831	-23.169	46.000	QUASIPeAK
5	866.400	19.386	2.307	21.692	-24.308	46.000	QUASIPeAK
6	996.122	20.258	3.403	23.660	-30.340	54.000	QUASIPeAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 15:56</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b>

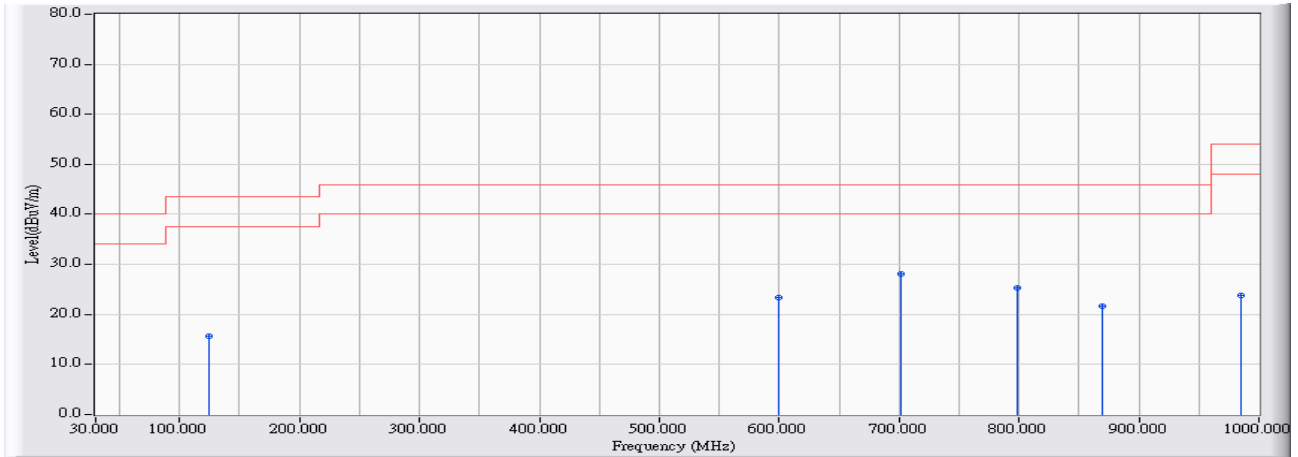


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	241.839	11.277	5.642	16.919	-29.081	46.000	QUASPEAK
2	* 655.337	17.766	14.323	32.088	-13.912	46.000	QUASPEAK
3	761.499	18.744	12.097	30.841	-15.159	46.000	QUASPEAK
4	828.396	19.287	10.036	29.323	-16.677	46.000	QUASPEAK
5	869.280	19.393	2.521	21.914	-24.086	46.000	QUASPEAK
6	981.579	20.139	4.537	24.675	-29.325	54.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 16:01</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b>



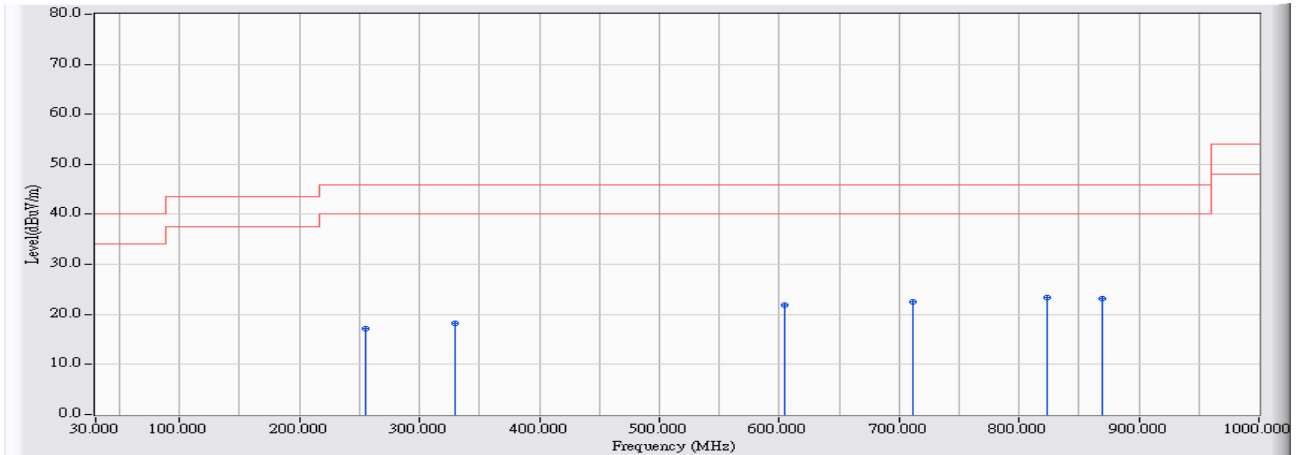
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	125.012	10.646	5.007	15.653	-27.847	43.500	QUASPEAK
2	599.590	17.482	5.919	23.401	-22.599	46.000	QUASPEAK
3	* 701.389	18.010	10.136	28.145	-17.855	46.000	QUASPEAK
4	798.826	19.200	6.005	25.205	-20.795	46.000	QUASPEAK
5	869.280	19.393	2.315	21.708	-24.292	46.000	QUASPEAK
6	984.973	20.166	3.563	23.729	-30.271	54.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.



<b>Site : CB1</b>	<b>Time : 2015/06/18 - 16:06</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL</b>	<b>Power : DC 3.7V (Power by Battery)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 4: 434.64MHz (Power by Battery)</b>

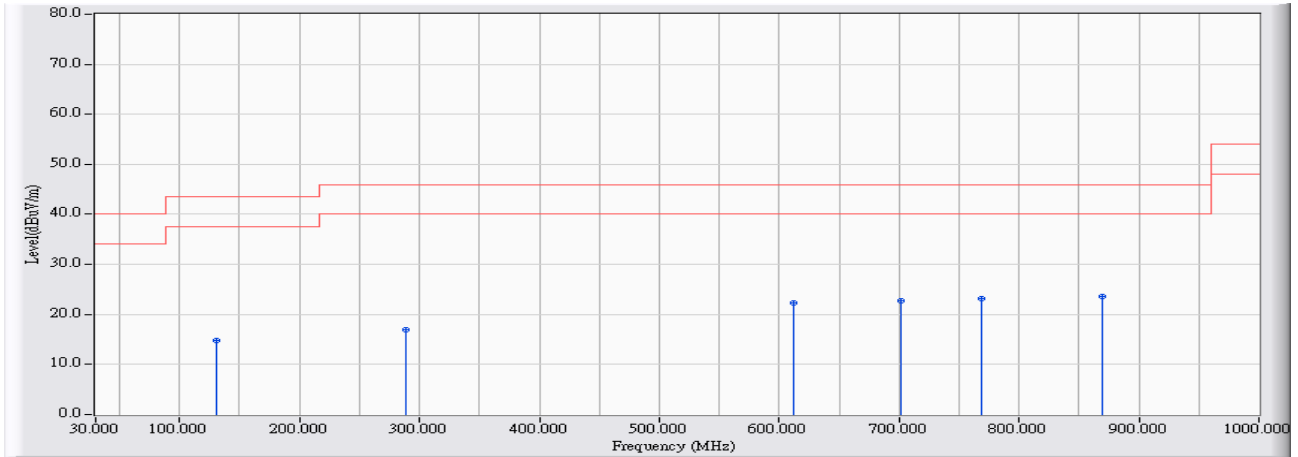


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	255.412	11.978	5.241	17.219	-28.781	46.000	QUASPEAK
2	329.095	13.451	4.745	18.196	-27.804	46.000	QUASPEAK
3	604.438	17.506	4.359	21.865	-24.135	46.000	QUASPEAK
4	711.569	18.134	4.302	22.436	-23.564	46.000	QUASPEAK
5	* 823.548	19.275	4.121	23.396	-22.604	46.000	QUASPEAK
6	869.280	19.393	3.730	23.123	-22.877	46.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB1</b>	<b>Time : 2015/06/18 - 16:11</b>
<b>Limit : FCC_CLASS_B_03M_QP</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL</b>	<b>Power : DC 3.7V (Power by Battery)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 4: 434.64MHz (Power by Battery)</b>



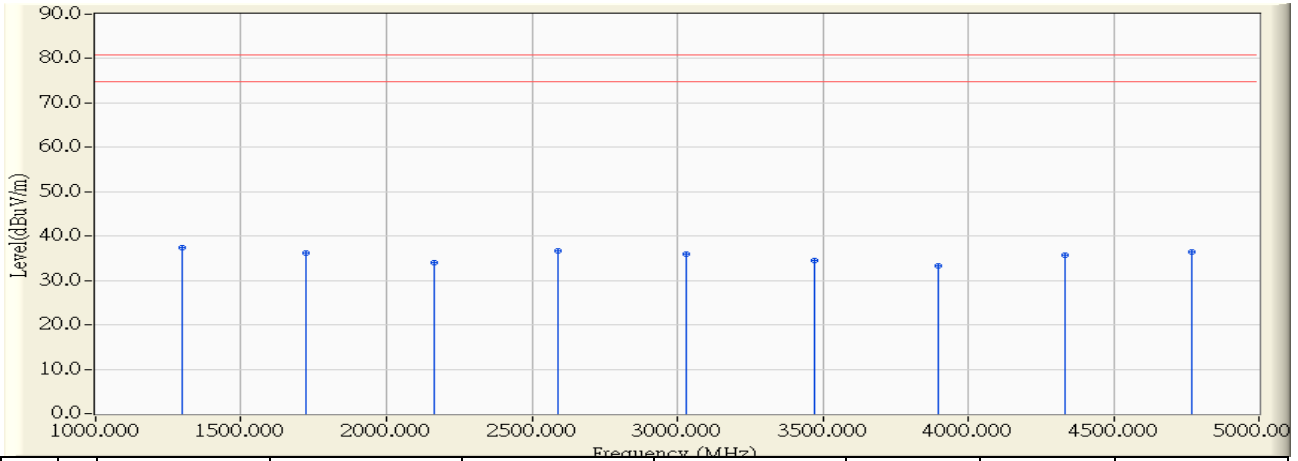
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	130.345	10.463	4.391	14.854	-28.646	43.500	QUASPEAK
2	288.376	12.550	4.396	16.946	-29.054	46.000	QUASPEAK
3	611.709	17.543	4.835	22.378	-23.622	46.000	QUASPEAK
4	701.874	18.015	4.816	22.831	-23.169	46.000	QUASPEAK
5	768.286	18.827	4.275	23.102	-22.898	46.000	QUASPEAK
6	* 869.280	19.393	4.149	23.542	-22.458	46.000	QUASPEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

**Above 1GHz Spurious:**

Site : CB1	Time : 2015/06/17 - 20:03
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2_Ant3 - HORIZONTAL	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 1: 433.2MHz (Power by PC)

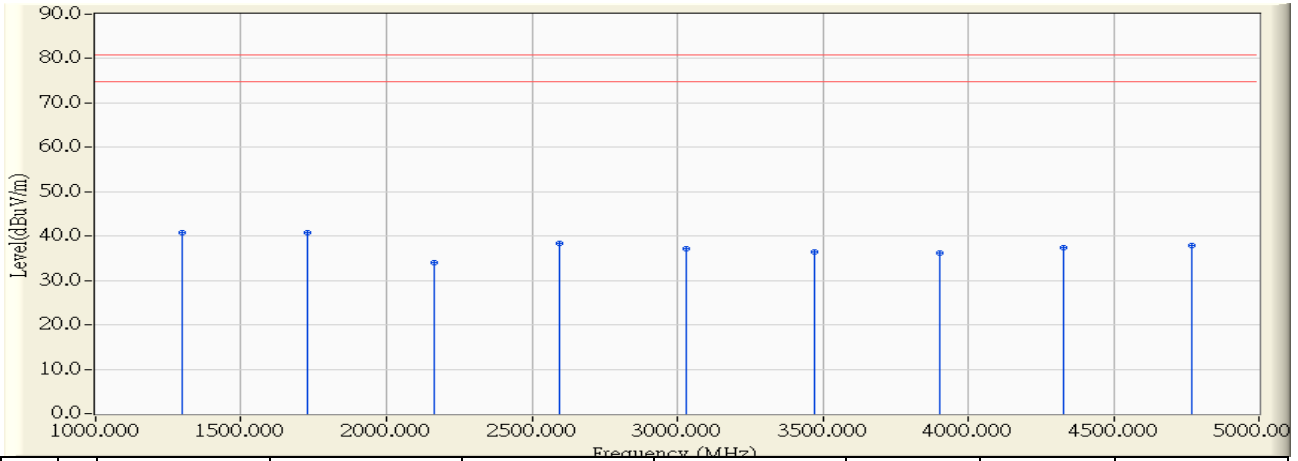


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1299.880	-9.867	47.150	37.283	-43.518	80.801	PEAK
2		1724.714	-10.532	46.820	36.288	-44.513	80.801	PEAK
3		2165.390	-9.227	43.230	34.004	-46.797	80.801	PEAK
4		2590.404	-5.125	41.870	36.744	-44.057	80.801	PEAK
5		3031.560	-6.261	42.100	35.839	-44.962	80.801	PEAK
6		3473.690	-6.521	41.070	34.549	-46.252	80.801	PEAK
7		3897.551	-5.917	39.310	33.392	-47.409	80.801	PEAK
8		4333.429	-4.330	40.070	35.739	-45.062	80.801	PEAK
9		4771.567	-3.291	39.740	36.449	-44.352	80.801	PEAK

**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. “ \* ”, means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 Duty Cycle(Only Ton)= Ton/ Ton+off=(42.3ms/99.3ms)=0.426  
 20\*Log(Duty Cycle) = -7.412
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

Site : CB1	Time : 2015/06/17 - 20:16
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2_Ant3 - VERTICAL	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 1: 433.2MHz (Power by PC)

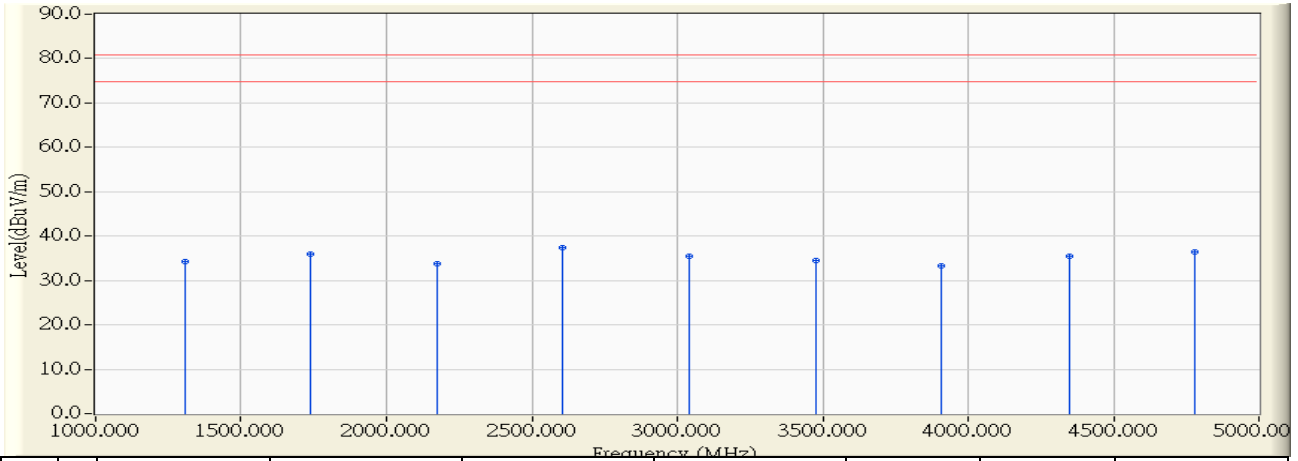


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	1299.540	-9.184	49.900	40.716	-40.085	80.801	PEAK
2	* 1727.253	-10.288	51.160	40.872	-39.929	80.801	PEAK
3	2165.290	-8.863	42.860	33.997	-46.804	80.801	PEAK
4	2595.652	-3.915	42.400	38.485	-42.316	80.801	PEAK
5	3029.811	-4.214	41.490	37.277	-43.524	80.801	PEAK
6	3472.067	-4.032	40.490	36.459	-44.342	80.801	PEAK
7	3900.909	-2.996	39.290	36.295	-44.506	80.801	PEAK
8	4327.920	-2.216	39.530	37.314	-43.487	80.801	PEAK
9	4767.569	-2.259	40.100	37.841	-42.960	80.801	PEAK

**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. “ \* ”, means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 Duty Cycle(Only Ton)= Ton/ Ton+off=(42.3ms/99.3ms)=0.426  
 20\*Log(Duty Cycle) = -7.412
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

Site : CB1	Time : 2015/06/17 - 20:33
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2_Ant3 - HORIZONTAL	Power : DC 5V (Power by PC)
EUT : ID GEBER Display	Note : Mode 3: 434.64MHz (Power by PC)

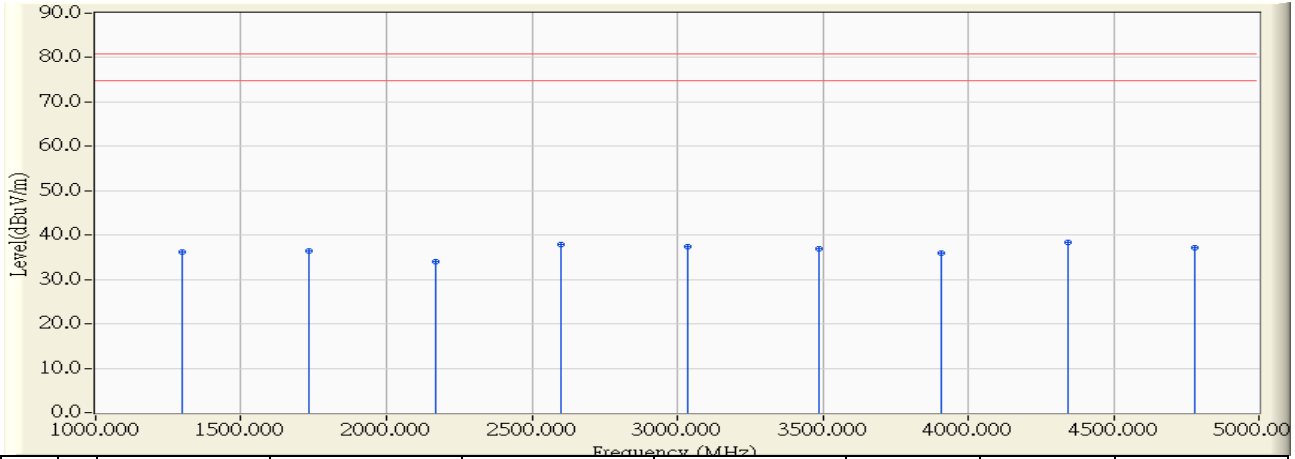


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	1306.968	-9.849	44.200	34.352	-46.497	80.849	PEAK
2	1738.560	-10.598	46.530	35.933	-44.916	80.849	PEAK
3	2173.920	-9.108	42.890	33.782	-47.067	80.849	PEAK
4	* 2604.012	-5.164	42.610	37.446	-43.403	80.849	PEAK
5	3043.410	-6.269	41.680	35.412	-45.437	80.849	PEAK
6	3478.040	-6.524	40.910	34.386	-46.463	80.849	PEAK
7	3909.401	-5.900	39.180	33.279	-47.570	80.849	PEAK
8	4349.169	-4.265	39.620	35.355	-45.494	80.849	PEAK
9	4777.322	-3.284	39.730	36.447	-44.402	80.849	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. " \* ", means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 Duty Cycle(Only Ton)= Ton/ Ton+off=(42.3ms/99.3ms)=0.426  
 20\*Log(Duty Cycle) = -7.412
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

<b>Site : CB1</b>	<b>Time : 2015/06/17 - 20:42</b>
<b>Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB1_FCC_EFS_1-18G_H2_Ant3 - VERTICAL</b>	<b>Power : DC 5V (Power by PC)</b>
<b>EUT : ID GEBER Display</b>	<b>Note : Mode 3: 434.64MHz (Power by PC)</b>



	<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	1295.134	-9.192	45.430	36.239	-44.610	80.849	PEAK
2	1731.893	-10.315	46.680	36.365	-44.484	80.849	PEAK
3	2167.153	-8.834	42.920	34.087	-46.762	80.849	PEAK
4	2598.450	-3.917	41.810	37.892	-42.957	80.849	PEAK
5	3035.374	-4.211	41.540	37.329	-43.520	80.849	PEAK
6	3484.916	-4.021	40.940	36.920	-43.929	80.849	PEAK
7	3906.393	-2.981	38.950	35.968	-44.881	80.849	PEAK
8	* 4342.512	-2.192	40.520	38.328	-42.521	80.849	PEAK
9	4777.782	-2.269	39.460	37.190	-43.659	80.849	PEAK

**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. " \* ", means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 $Duty\ Cycle(Only\ Ton) = Ton / Ton+off = (42.3ms/99.3ms) = 0.426$   
 $20 * Log(Duty\ Cycle) = -7.412$
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

## 4. Occupied Bandwidth

### 4.1. Test Equipment

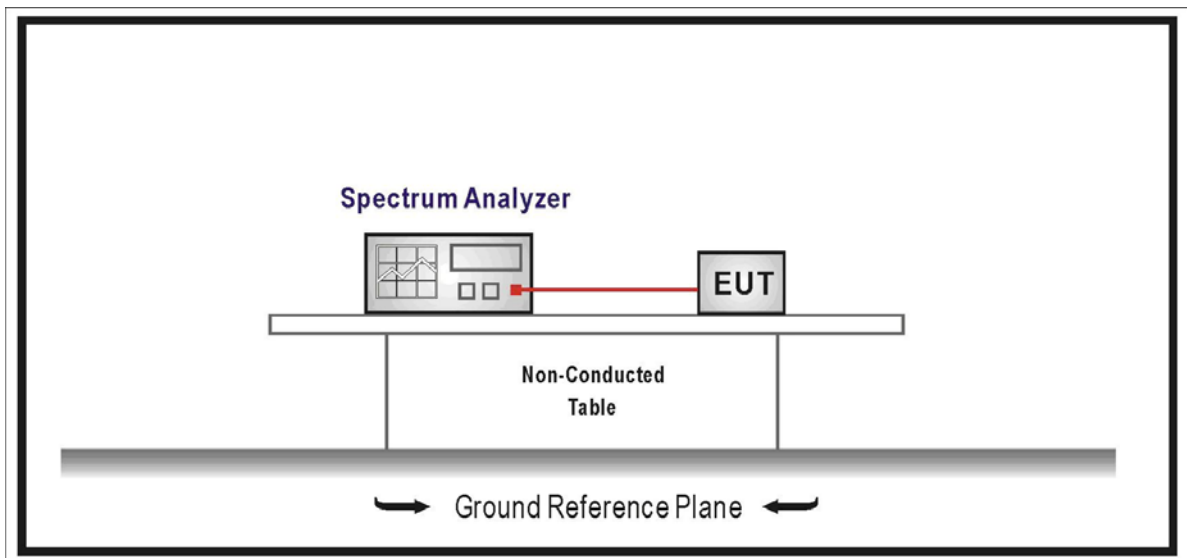
The following test equipments are used during the radiated emission tests:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2015/07/14

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

### 4.2. Test Setup



### 4.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

### 4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2014

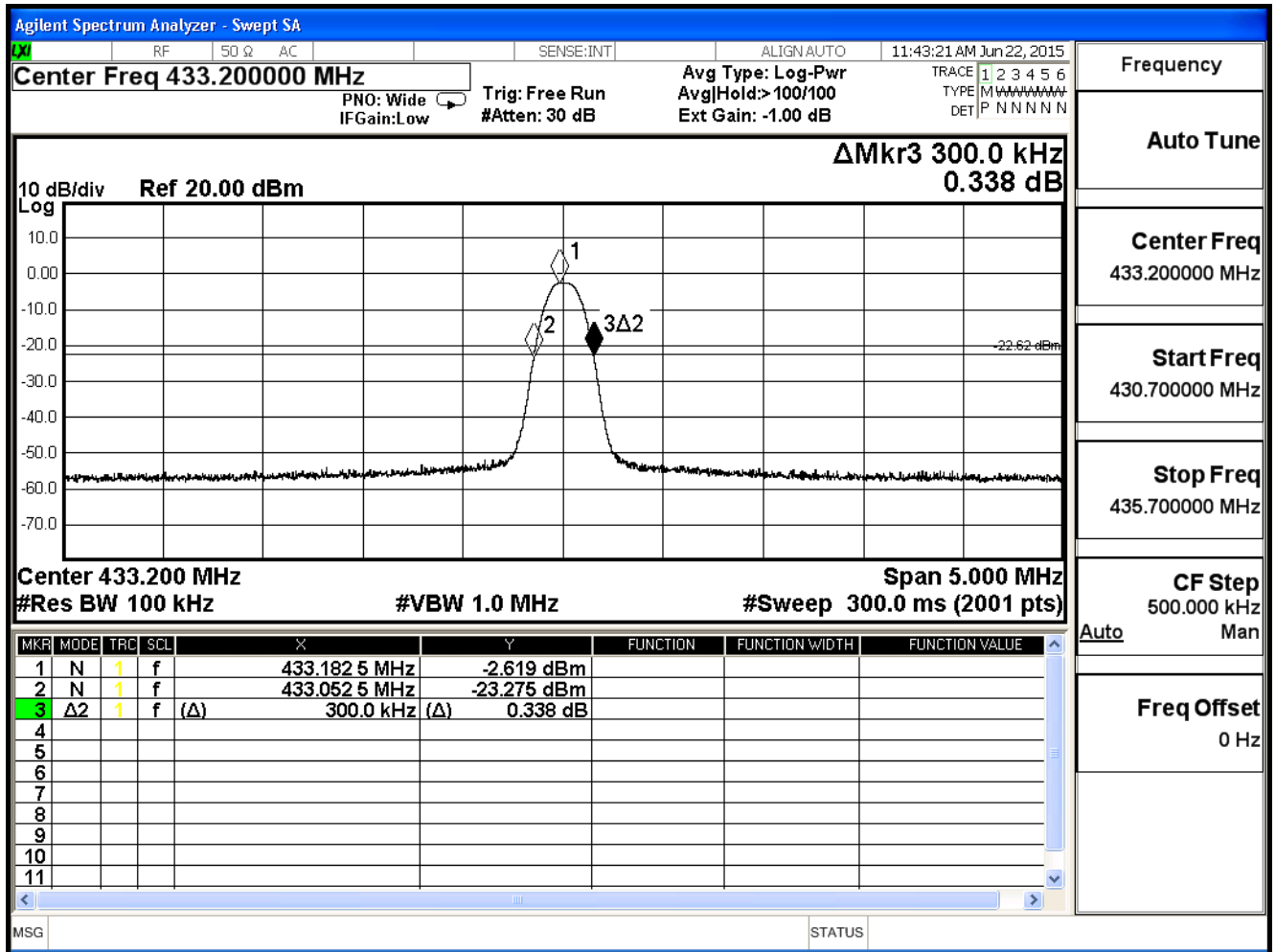
### 4.5. Uncertainty

± 150Hz

**4.6. Test Result**

Product	ID GEBER Display		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2015/06/22	Test Site	SR7

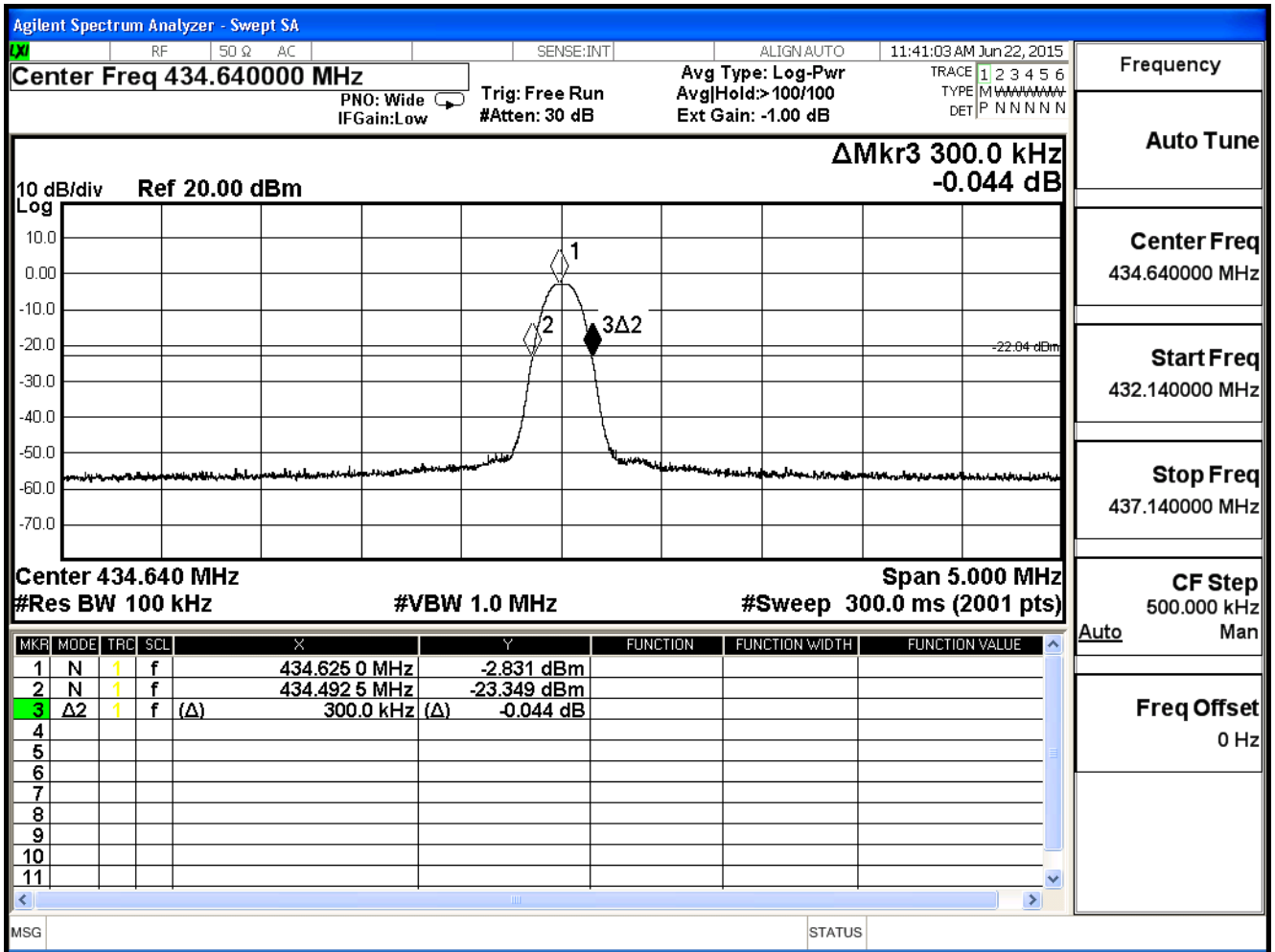
Center Frequency	433.2 MHz
Allowable Bandwidth (433.2 MHz: 0.25%)	1.083 MHz
Bandwidth at 20dB down (Max)	300 kHz
Result	PASS





Product	ID GEBER Display		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: 434.64MHz (Power by PC)		
Date of Test	2015/06/22	Test Site	SR7

Center Frequency	434.64 MHz
Allowable Bandwidth (434.64 MHz: 0.25%)	1.0866MHz
Bandwidth at 20dB down (Max)	300 kHz
Result	PASS



Frequency
Auto Tune
Center Freq 434.640000 MHz
Start Freq 432.140000 MHz
Stop Freq 437.140000 MHz
CF Step 500.000 kHz Man
Freq Offset 0 Hz

**5. Duty cycle**

**5.1. Test Equipment**

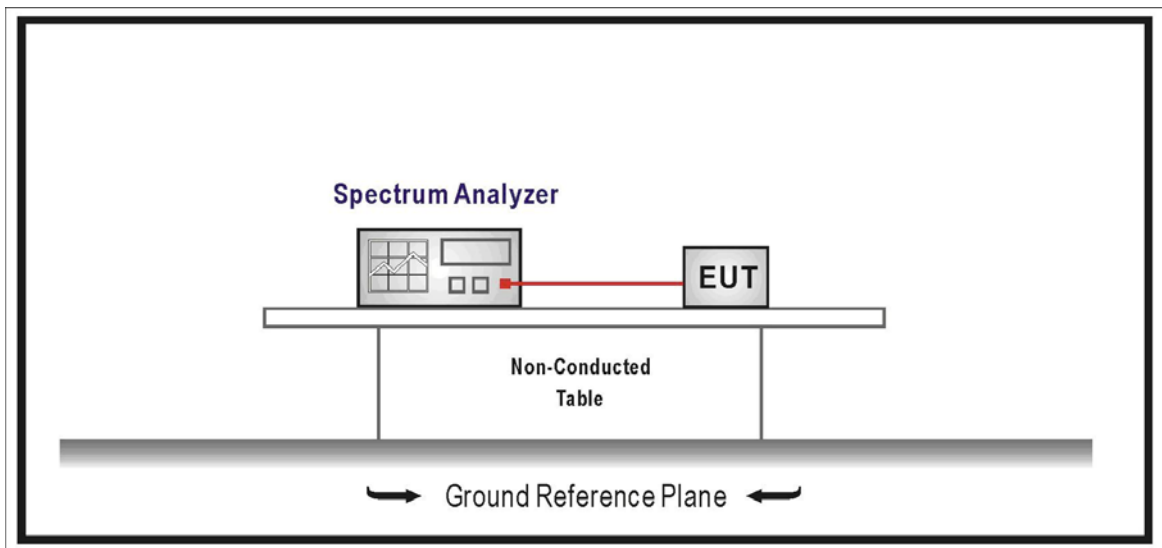
The following test equipments are used during the radiated emission tests:

Duty cycle / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2015/07/14

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

**5.2. Test Setup**



**5.3. Limits**

N/A

**5.4. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2014

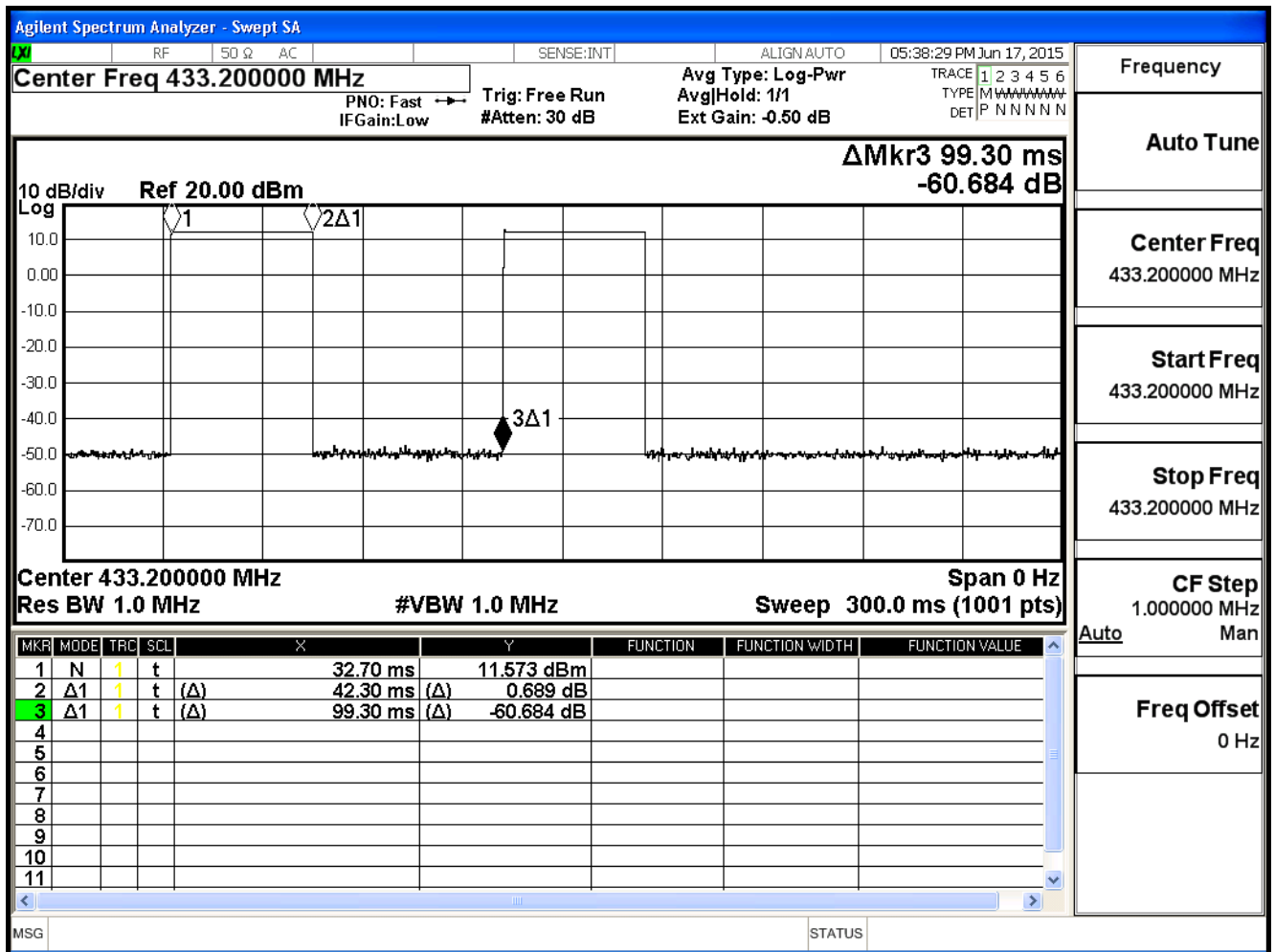
**5.5. Uncertainty**

± 25msec

**5.6. Test Result**

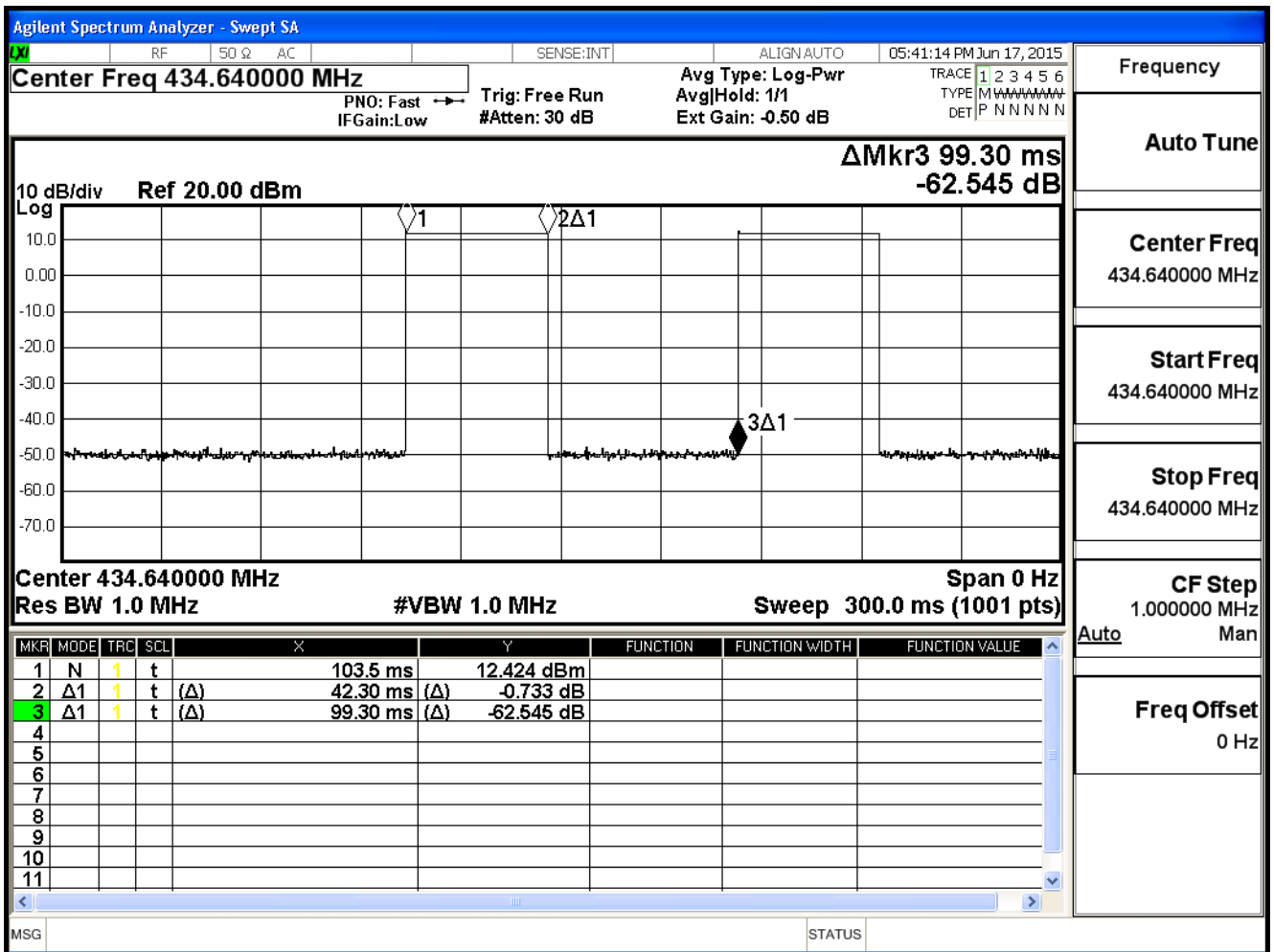
Product	ID GEBER Display		
Test Item	Duty Cycle		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2015/06/22	Test Site	SR7

Center Frequency	433.2 MHz
$T_{ON} = 42.3ms$	
$T_{ON} + T_{Off} = 99.3ms$	
Duty Cycle=42.6/100	0.426%



Product	ID GEBER Display		
Test Item	Duty Cycle		
Test Mode	Mode 3: 434.64MHz (Power by PC)		
Date of Test	2015/06/22	Test Site	SR7

Center Frequency	434.64MHz
$T_{ON} = 42.3ms$	
$T_{ON} + T_{Off} = 99.3ms$	
Duty Cycle=42.6/100	0.426%



**6. Transmitter time**

**6.1. Test Equipment**

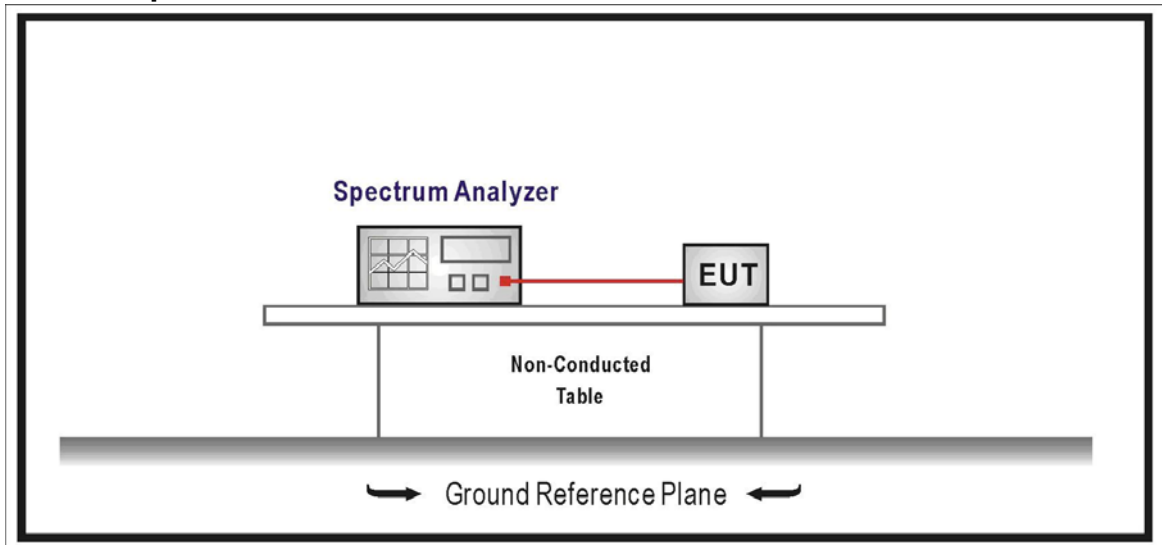
The following test equipments are used during the radiated emission tests:

Transmitter time / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2015/07/14

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

**6.2. Test Setup**



**6.3. Limits**

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released. A transmitter activated automatically shall cease transmission within 5 seconds after activation.

**6.4. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2014

**6.5. Uncertainty**

± 25msec

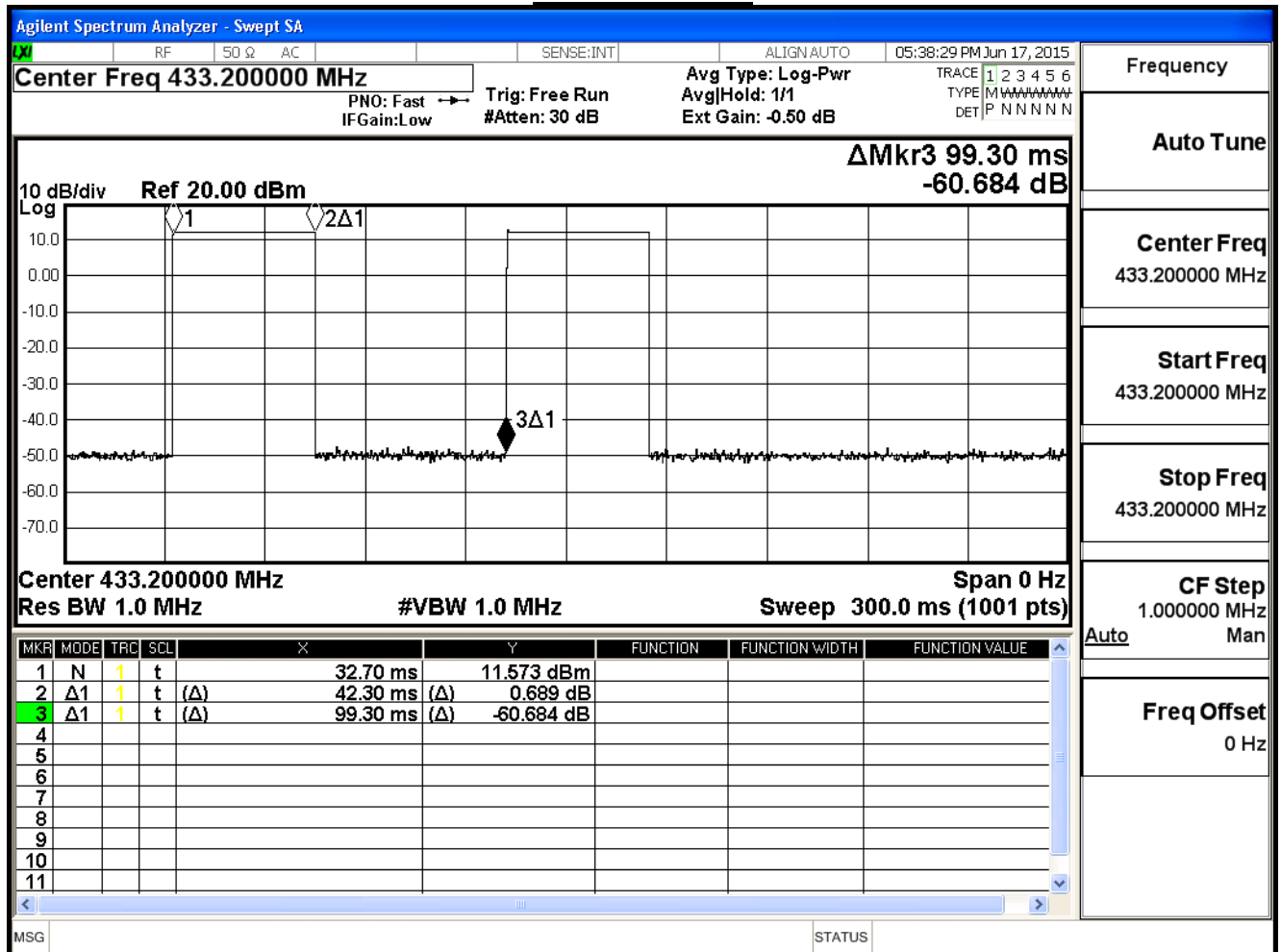
**6.6. Test Result**

Product	ID GEBER Display		
Test Item	Transmitter time		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2015/06/17	Test Site	SR7

Center Frequency	433.2 MHz
Transmitter time = 42.3ms < 5 sec.	Below 5 sec.

Result	PASS
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**Transmitter time**



Product	ID GEBER Display		
Test Item	Transmitter time		
Test Mode	Mode 3: 433.64MHz (Power by PC)		
Date of Test	2015/06/17	Test Site	SR7

Center Frequency	434.64 MHz
Transmitter time = 42.3ms < 5 sec.	Below 5 sec.

Result	PASS
--------	------

**Transmitter time**

