FCC Test Report

Product Name	：	ID GEBER Display
Trade Name	：	BMW
Model No.	：	Display Key
FCC ID.	：	2ABPEDISPLAYKEY

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	：	Feb. 01, 2016
Issued Date	：	Apr. 08, 2016
Report No.	：	1620117R-RFUSP14V00
Report Version	：	V1.0

Testing Laboratory
3024

The declaration results relate only to the samples calculated.
The declaration shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

Issued Date : Apr. 08, 2016
Report No. : 1620117R-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.	:	Display Key
FCC ID.	:	2ABPEDISPLAYKEY
EUT Voltage	:	Mode 1/3: DC 5V (Power by PC) Mode 2/4: DC 3.7V (Power by Battery)
Testing 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 Lab	:	QuieTek Hsin Chu Laboratory
Test Result	:	Complied

The test results relate only to the samples tested.
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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

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Approved By : Roy Wang

(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
1620117R-RFUSP14V00	V1.0	Initial issue of report.	Apr. 08, 2016

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:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 3024**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 181665 / IC Registration Number: 4075C-4**

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
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.	Display Key
Frequency Range	433.2 MHz / 434.64 MHz
Channel Number	2
Type of Modulation	FSK
Channel Control	Auto
Antenna Type	Printed
Antenna Gain	-12dBi

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.
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 1620117R-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	No	Yes	No
Duty cycle	Yes	No	Yes	No
Transmitter time	Yes	No	Yes	No

1.3. Tested System Details

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

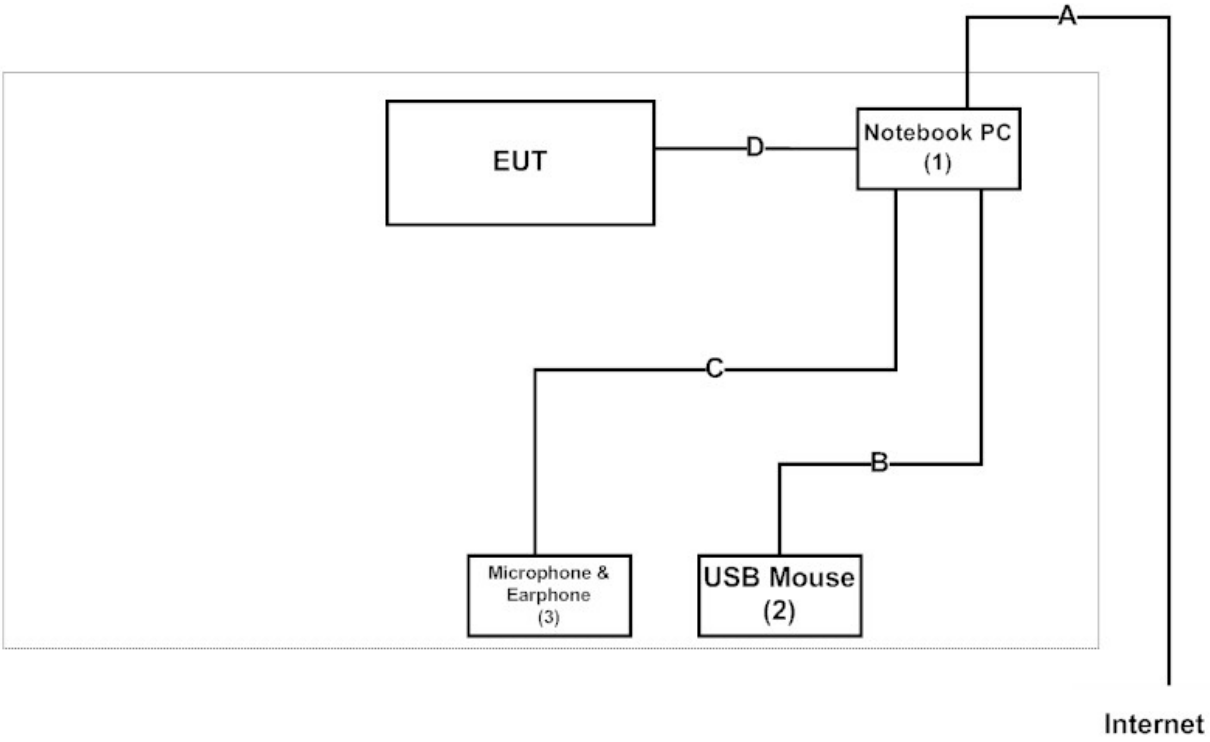
Test Mode		Mode 1: 433.2MHz (Power by PC) Mode 3: 434.64MHz (Power by PC)				
Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	HP	HSTNN-146C	CNU8253S1X	DoC	Non-Shielded, 1.8m
2	USB Mouse	Logitech	M-UV83	LZE35006065	DoC	--
3	Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--

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



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	

1.5. EUT Exercise Software

1	Setup the EUT as shown in section 1.4.
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

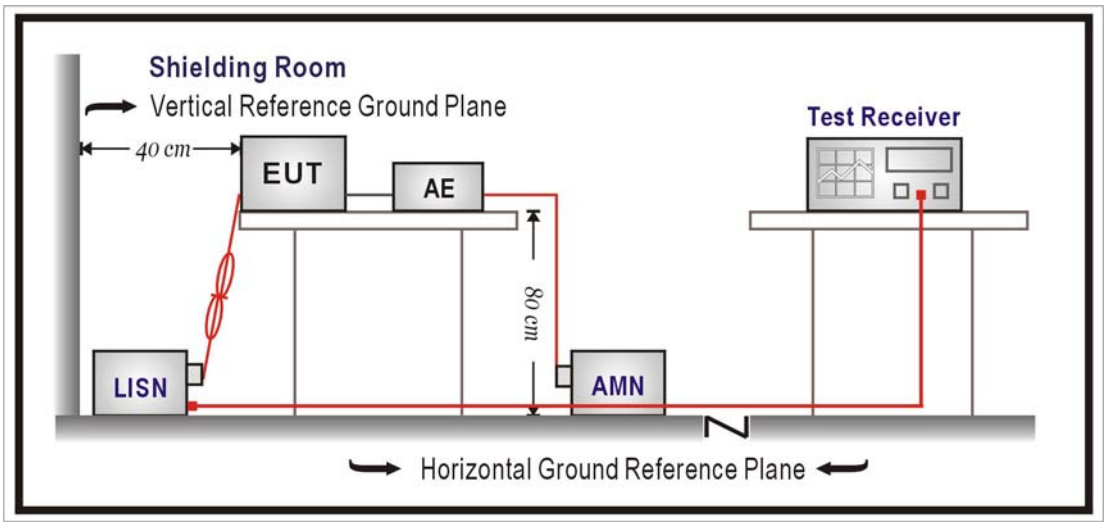
The following test equipments are used during the test:

Conducted Emission / SR6

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2017/01/20
LISN	R&S	ENV216	100092	2016/08/17
Test Receiver	R&S	ESCS 30	825442/014	2016/07/16

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

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
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

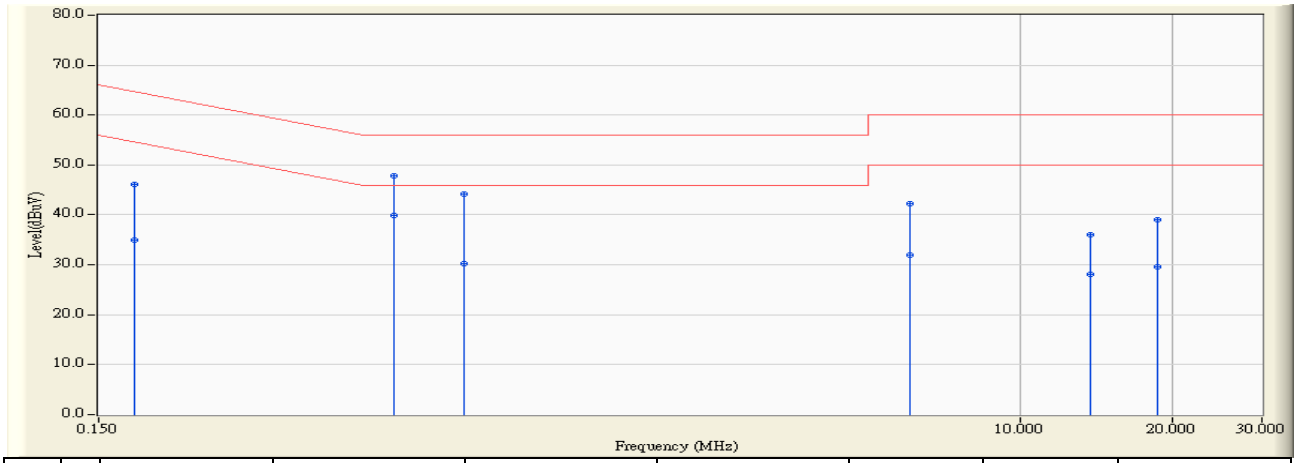
According to FCC Part 15 Subpart C Paragraph 15.207: 2014

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR3	**Time : 2016/03/11 - 23:16**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-5_0728 - Line1	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

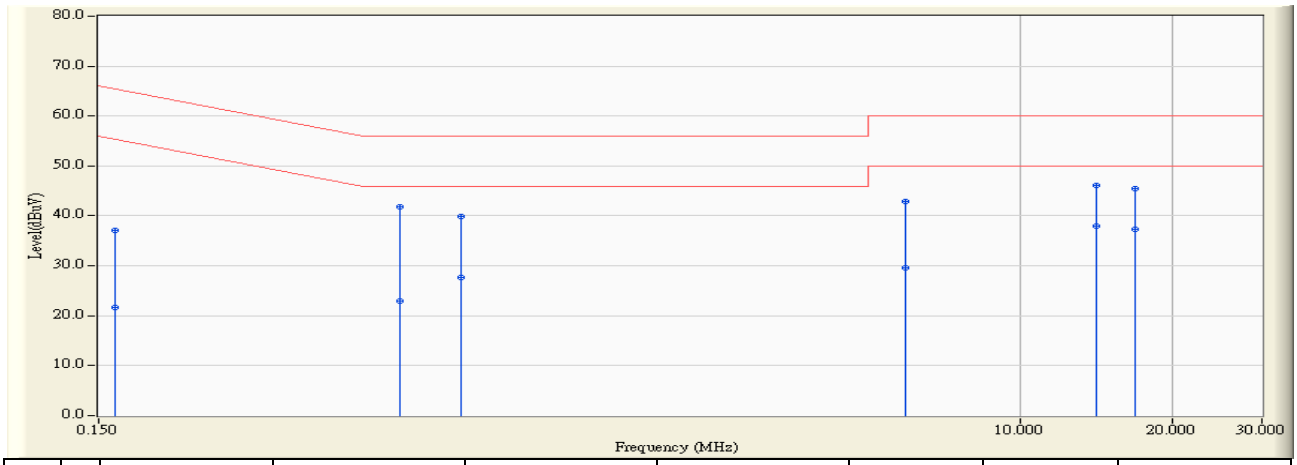


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.749	36.390	46.138	-18.484	64.623	QUASIPEAK
2		0.177	9.749	25.300	35.048	-19.574	54.623	AVERAGE
3		0.576	9.790	38.130	47.920	-8.080	56.000	QUASIPEAK
4	*	0.576	9.790	30.170	39.960	-6.040	46.000	AVERAGE
5		0.791	9.790	34.460	44.250	-11.750	56.000	QUASIPEAK
6		0.791	9.790	20.450	30.240	-15.760	46.000	AVERAGE
7		6.041	9.968	32.250	42.218	-17.782	60.000	QUASIPEAK
8		6.041	9.968	22.070	32.038	-17.962	50.000	AVERAGE
9		13.705	10.179	25.890	36.069	-23.931	60.000	QUASIPEAK
10		13.705	10.179	17.950	28.129	-21.871	50.000	AVERAGE
11		18.677	10.252	28.730	38.981	-21.019	60.000	QUASIPEAK
12		18.677	10.252	19.410	29.661	-20.339	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 : SR3	**Time : 2016/03/11 - 23:38**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-5_0728 - Line2	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

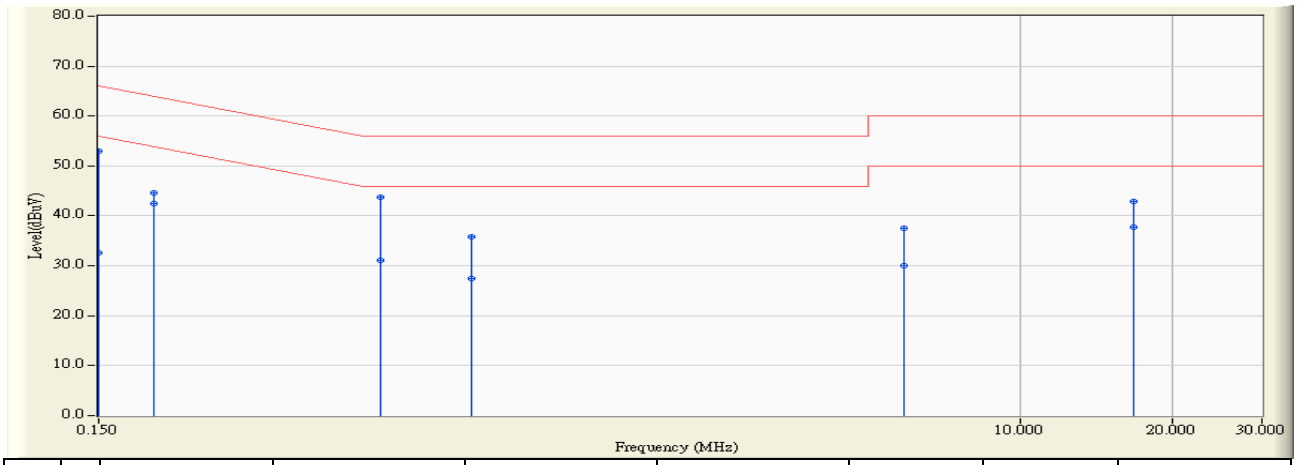


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.746	27.380	37.125	-28.250	65.375	QUASIPEAK
2		0.162	9.746	11.850	21.595	-33.780	55.375	AVERAGE
3		0.591	9.783	31.960	41.743	-14.257	56.000	QUASIPEAK
4		0.591	9.783	13.090	22.873	-23.127	46.000	AVERAGE
5		0.783	9.786	30.150	39.936	-16.064	56.000	QUASIPEAK
6		0.783	9.786	17.840	27.626	-18.374	46.000	AVERAGE
7		5.927	9.974	32.870	42.844	-17.156	60.000	QUASIPEAK
8		5.927	9.974	19.590	29.564	-20.436	50.000	AVERAGE
9		14.111	10.257	35.830	46.087	-13.913	60.000	QUASIPEAK
10	*	14.111	10.257	27.610	37.867	-12.133	50.000	AVERAGE
11		16.864	10.340	35.110	45.450	-14.550	60.000	QUASIPEAK
12		16.864	10.340	27.070	37.410	-12.590	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 : SR3	**Time : 2016/03/12 - 00:06**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-5_0728 - Line1	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Mode 3: 434.64MHz (Power by PC)**

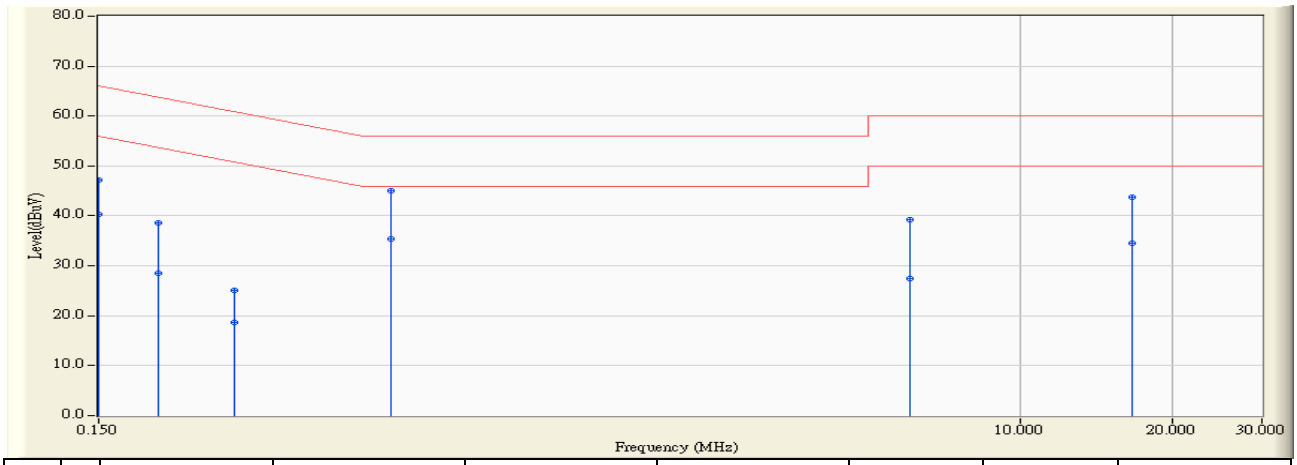


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.751	43.290	53.041	-12.959	66.000	QUASIPEAK
2		0.150	9.751	22.920	32.671	-23.329	56.000	AVERAGE
3		0.193	9.748	34.800	44.548	-19.360	63.908	QUASIPEAK
4	*	0.193	9.748	32.720	42.468	-11.440	53.908	AVERAGE
5		0.541	9.790	33.860	43.650	-12.350	56.000	QUASIPEAK
6		0.541	9.790	21.350	31.140	-14.860	46.000	AVERAGE
7		0.818	9.790	26.080	35.870	-20.130	56.000	QUASIPEAK
8		0.818	9.790	17.650	27.440	-18.560	46.000	AVERAGE
9		5.892	9.963	27.620	37.582	-22.418	60.000	QUASIPEAK
10		5.892	9.963	20.040	30.002	-19.998	50.000	AVERAGE
11		16.740	10.225	32.570	42.794	-17.206	60.000	QUASIPEAK
12		16.740	10.225	27.590	37.814	-12.186	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 : SR3	**Time : 2016/03/12 - 00:08**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-5_0728 - Line2	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**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		0.150	9.746	37.530	47.276	-18.724	66.000	QUASIPEAK
2		0.150	9.746	30.600	40.346	-15.654	56.000	AVERAGE
3		0.197	9.748	28.940	38.687	-25.054	63.741	QUASIPEAK
4		0.197	9.748	18.860	28.607	-25.134	53.741	AVERAGE
5		0.279	9.754	15.370	25.124	-35.724	60.848	QUASIPEAK
6		0.279	9.754	8.950	18.704	-32.144	50.848	AVERAGE
7		0.568	9.783	35.160	44.943	-11.057	56.000	QUASIPEAK
8	*	0.568	9.783	25.650	35.433	-10.567	46.000	AVERAGE
9		6.029	9.978	29.270	39.248	-20.752	60.000	QUASIPEAK
10		6.029	9.978	17.550	27.528	-22.472	50.000	AVERAGE
11		16.642	10.332	33.490	43.823	-16.177	60.000	QUASIPEAK
12		16.642	10.332	24.120	34.453	-15.547	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:

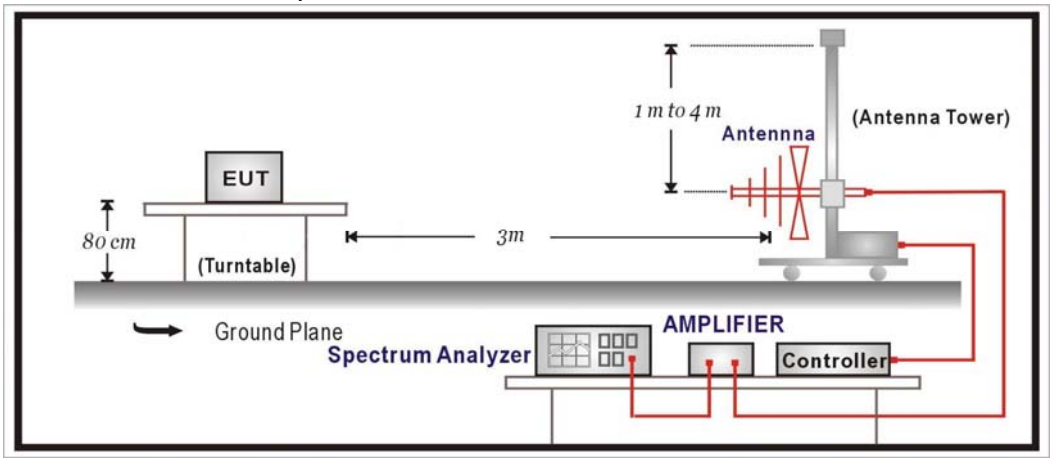
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	Schaffner	CBL6112B	2895	2016/08/14
Double Ridged Guide Horn Antenna	Schwarzbeck	BBHA 9120	D743	2017/01/14
Pre-Amplifier	EMCI	EMC0031835	4583/10/13	2017/01/26
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2017/01/03
Spectrum Analyzer	Agilent	E4440A	MY46187335	2016/12/24
k Type Cable	Huber+Suhner	SF 102	25623/2	2017/01/11
Horn Antenna	Schwarzbeck	BBHA 9170	203	2016/09/07
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/05

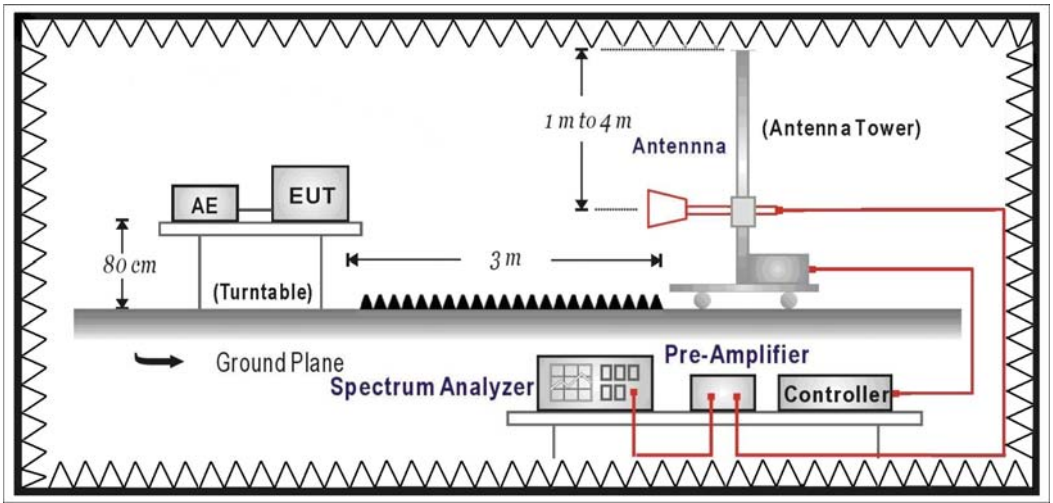
Note: All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



3.3. Limits

➢ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.231(b) Limits				
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

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009 - 0.490	2400/F(kHz)	See Remark[1]	300
0.490 - 1.705	24000/F(kHz)	See Remark[1]	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 harminics is checked.

3.5. Test Specification

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

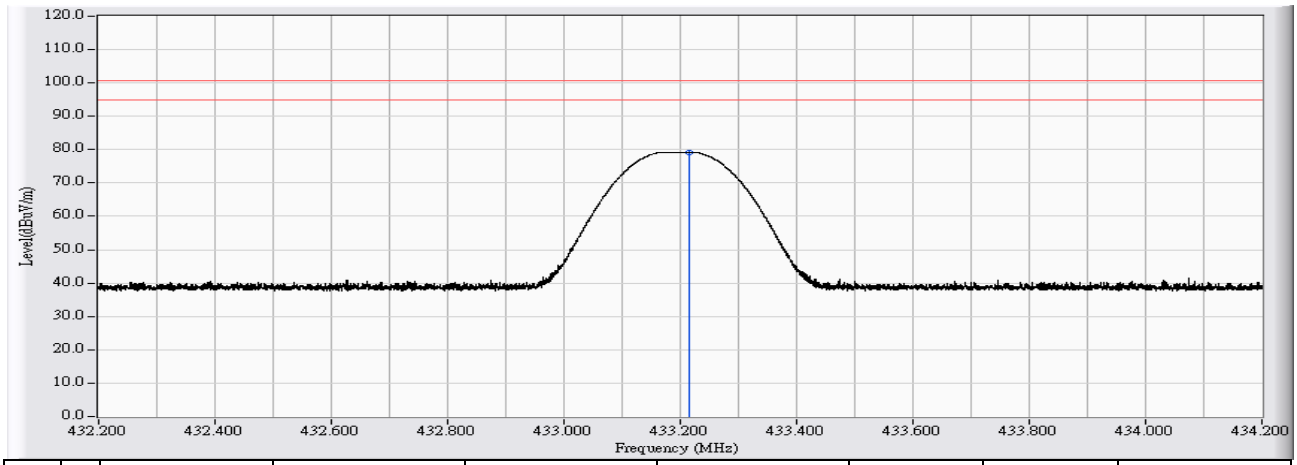
3.6. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

3.7. Test Result

Site : CB1	**Time : 2016/03/10 - 01:53**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) X-axis**

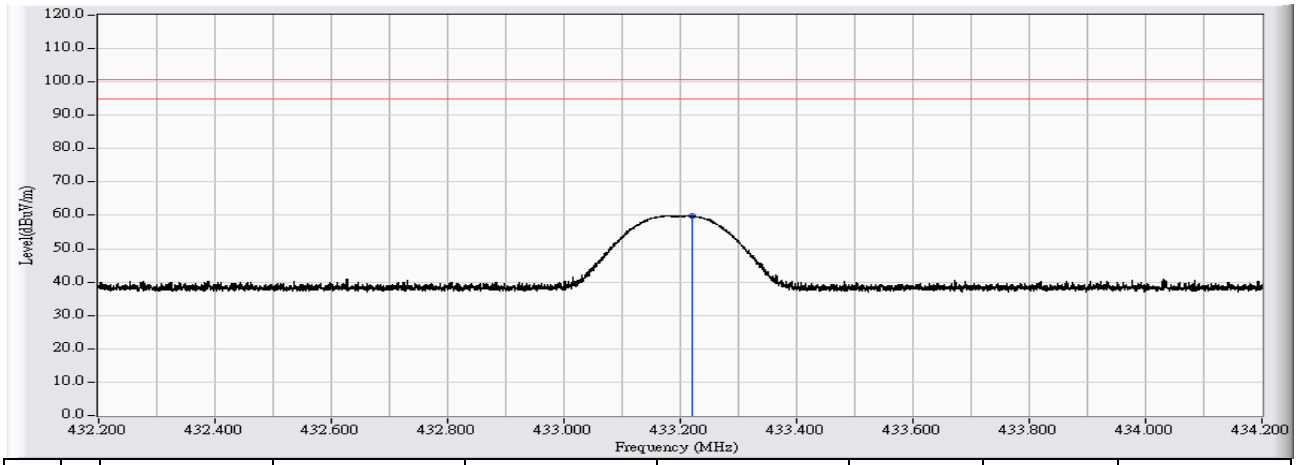


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.216	16.755	62.526	79.280	-21.550	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 01:50**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) X-axis**

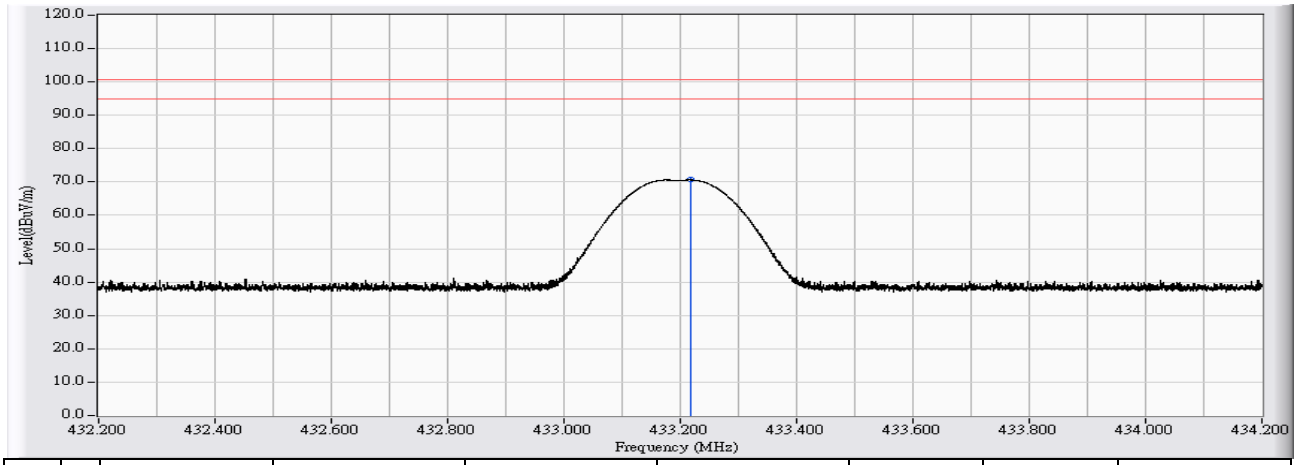


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.221	16.755	43.190	59.945	-40.885	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 01:42**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) Y-axis**

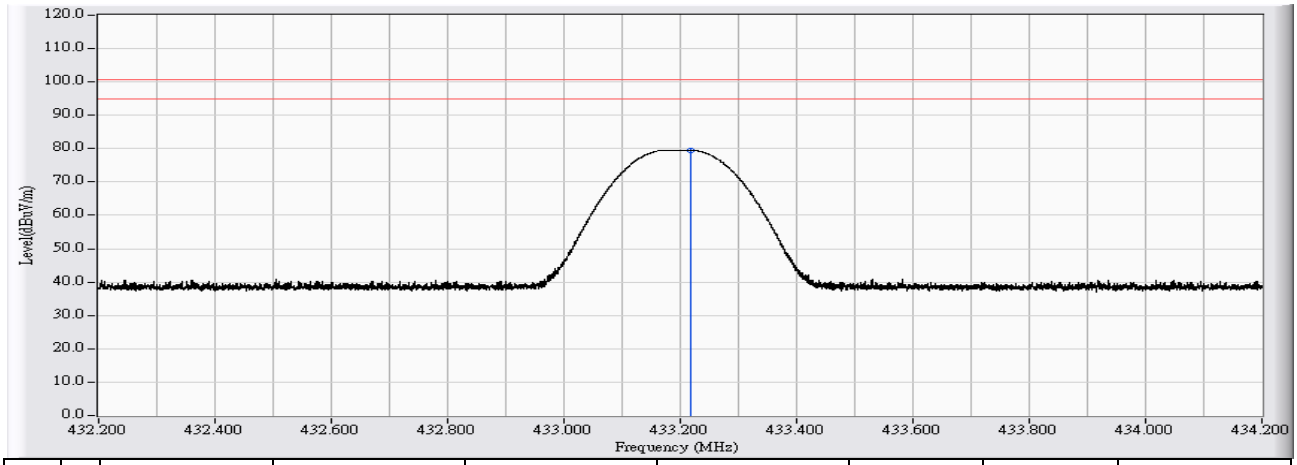


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.217	16.755	53.903	70.657	-30.173	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 01:45**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) Y-axis**

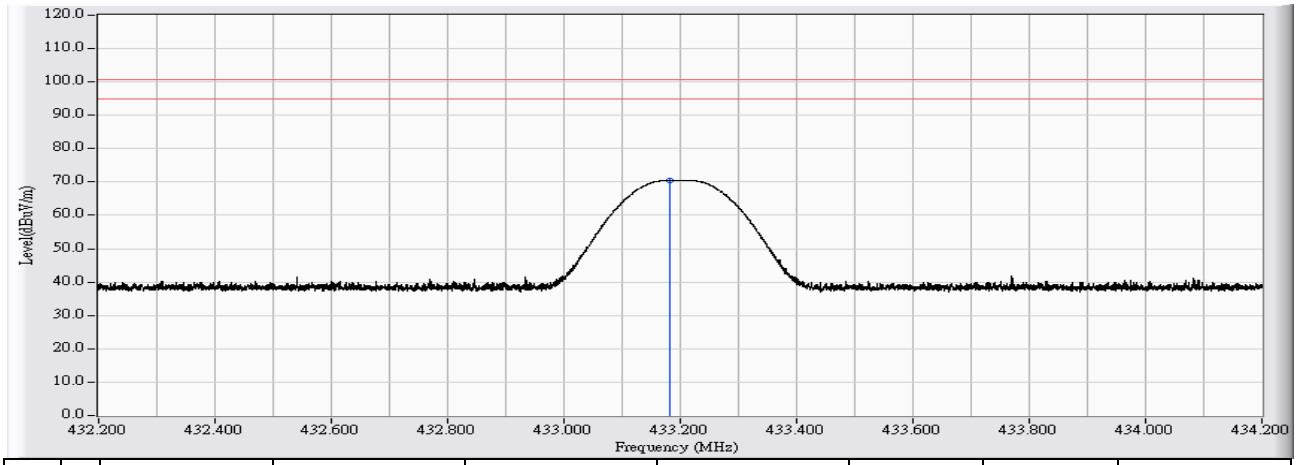


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.219	16.755	62.816	79.571	-21.259	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 01:39**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) Z-axis**

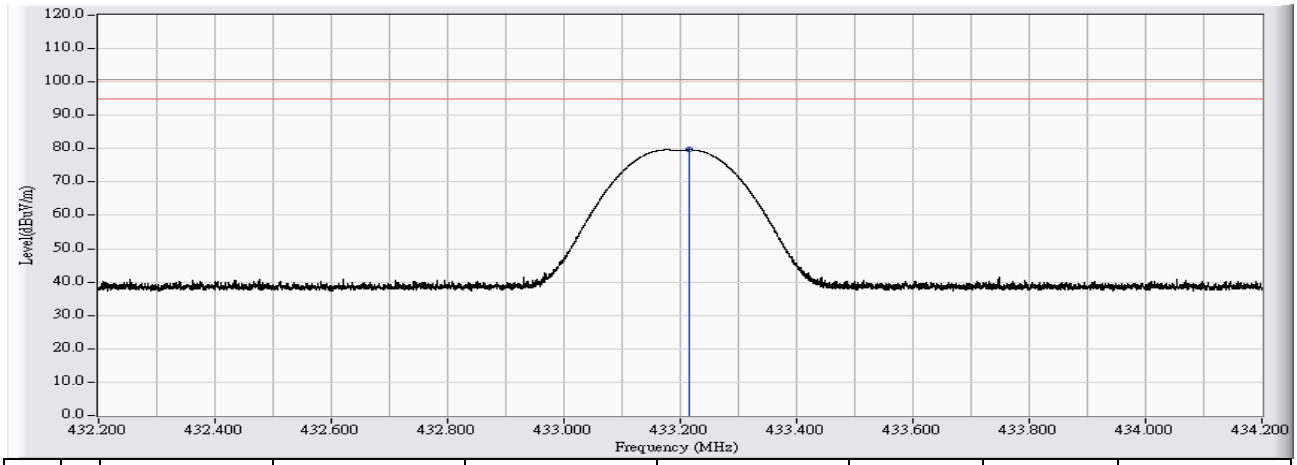


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.183	16.754	53.776	70.530	-30.300	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 01:36**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC) Z-axis**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.216	16.755	62.907	79.661	-21.169	100.830	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	2016/03/10	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)
Horizontal					
433.200 (X-axis)	16.755	62.526	79.280	71.868	80.830
433.200 (Y-axis)	16.755	53.903	70.657	63.245	80.830
433.200 (Z-axis)	16.754	53.776	70.530	63.118	80.830
Vertical					
433.200 (X-axis)	16.755	43.190	59.945	52.533	80.830
433.200 (Y-axis)	16.755	62.816	79.571	72.159	80.830
433.200 (Z-axis)	16.755	62.907	79.661	72.249	80.830

Note1:

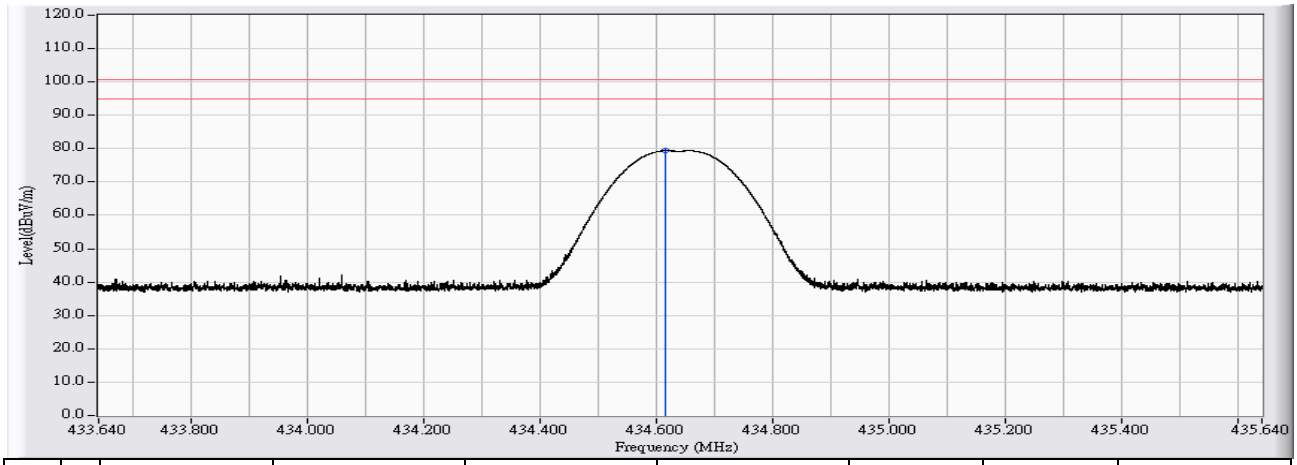
Peak Measurement Level = Reading Level + Correct Factor

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

Duty Cycle(Only Ton)= Ton/ Ton+off=(42ms/99.72ms)=0.42

20*Log(Duty Cycle) = -7.412

Site : CB1	**Time : 2016/03/10 - 01:58**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) X-axis**

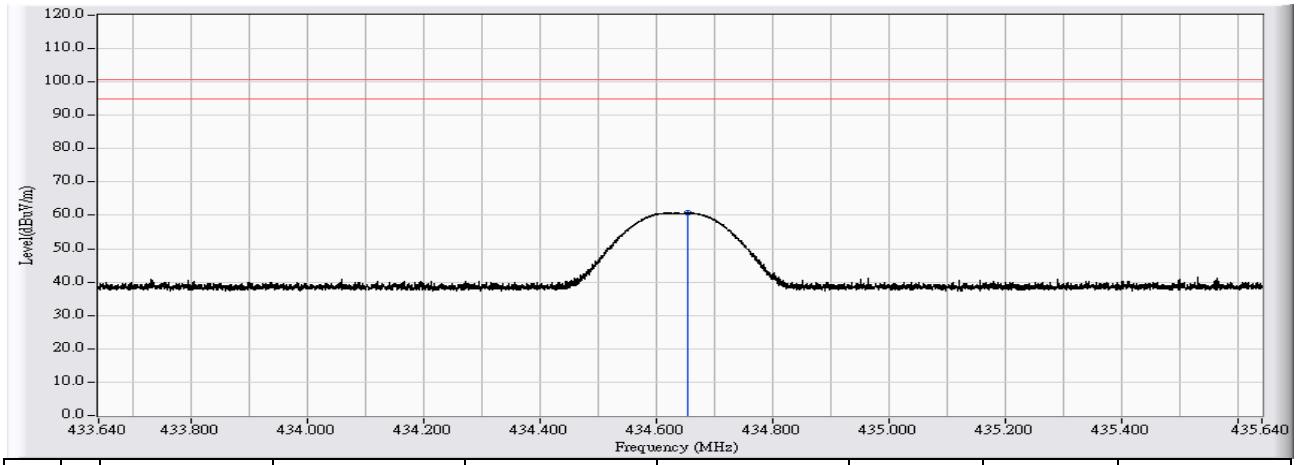


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.614	16.787	62.582	79.370	-21.460	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 02:00**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) X-axis**

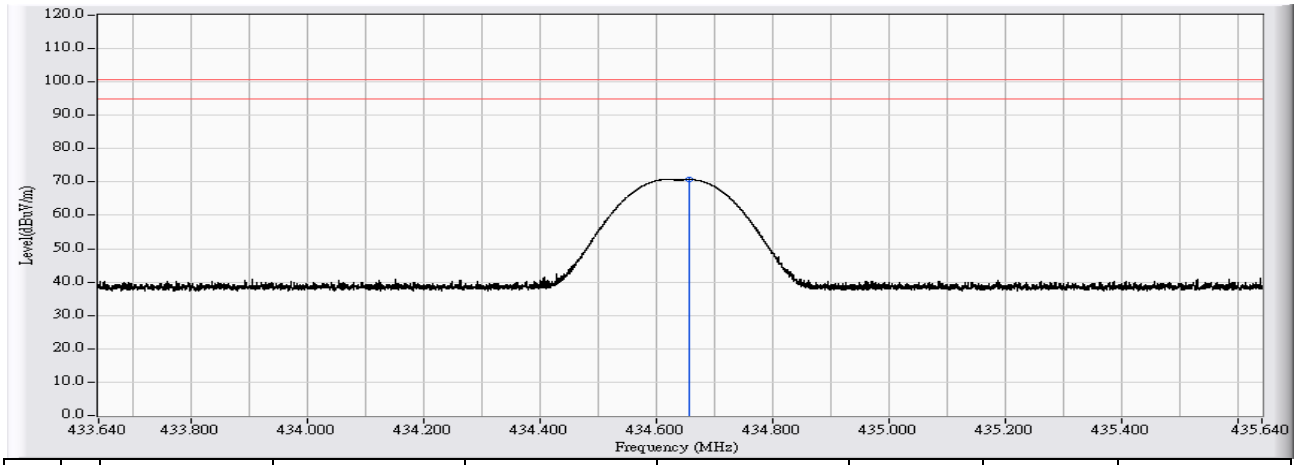


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.652	16.788	44.054	60.843	-39.987	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 02:06**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) Y-axis**

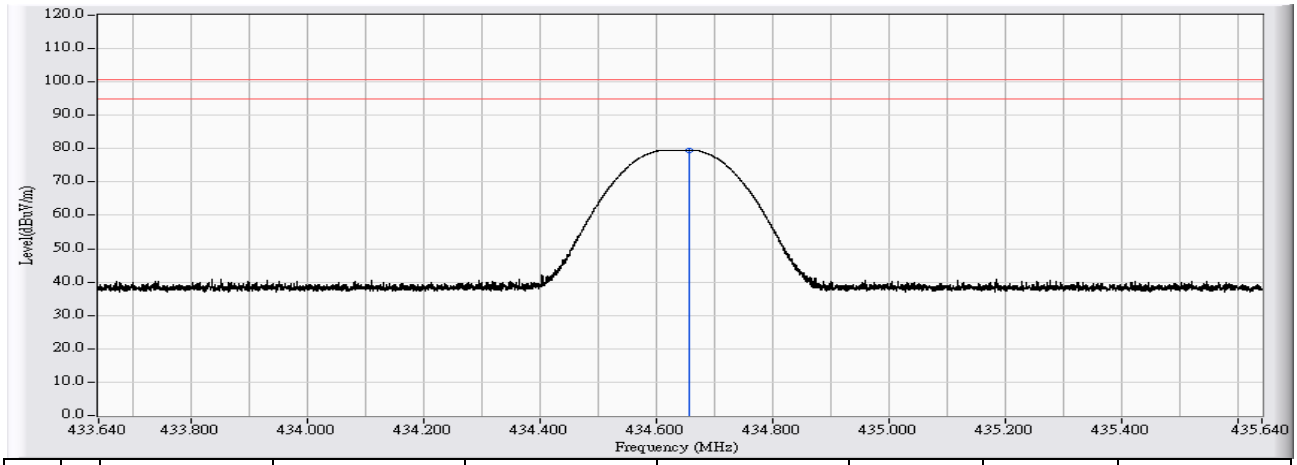


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.656	16.788	53.960	70.749	-30.081	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 02:04**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) Y-axis**

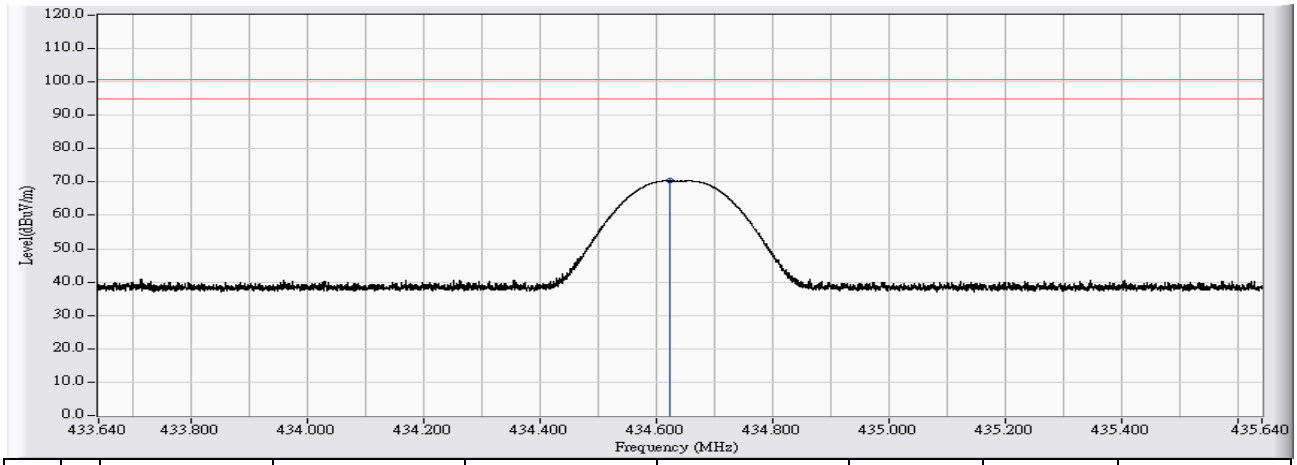


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.655	16.788	62.821	79.610	-21.220	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 02:09**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) Z-axis**

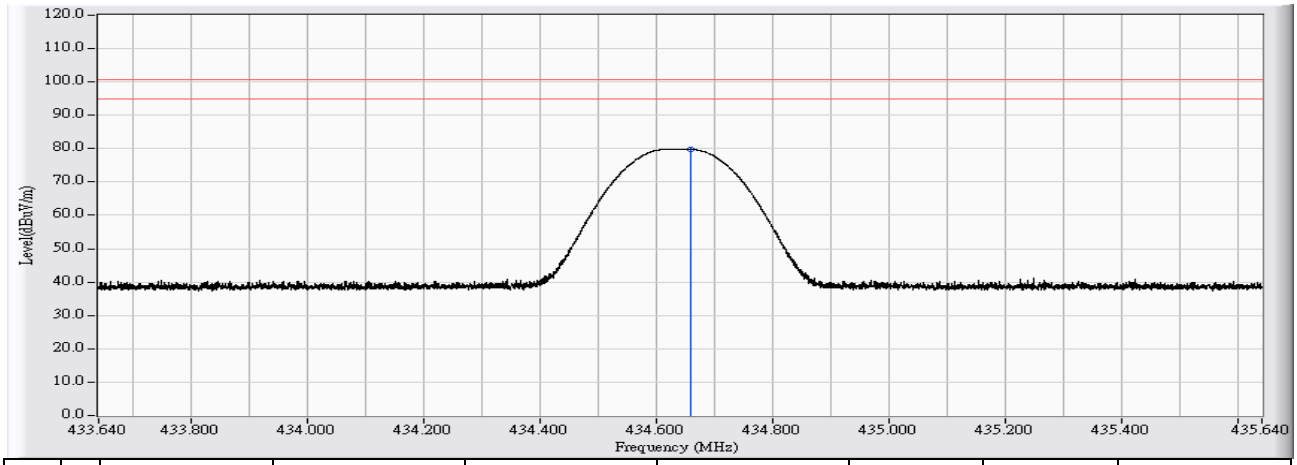


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.622	16.787	53.593	70.381	-30.449	100.830	PEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 02:11**
Limit : FCC_SPARTC_15.231(b)_F_433.92_03M_PK	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC) Z-axis**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	434.659	16.788	63.031	79.820	-21.010	100.830	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	2016/03/10	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)
Horizontal					
434.640 (X-axis)	16.787	62.582	79.370	71.958	80.830
434.640 (Y-axis)	16.788	53.960	70.749	63.337	80.830
434.640 (Z-axis)	16.787	53.593	70.381	62.969	80.830
Vertical					
434.640 (X-axis)	16.788	44.054	60.843	53.431	80.830
434.640 (Y-axis)	16.788	62.821	79.610	72.198	80.830
434.640 (Z-axis)	16.788	63.031	79.820	72.408	80.830

Note1:

Peak Measurement Level = Reading Level + Correct Factor

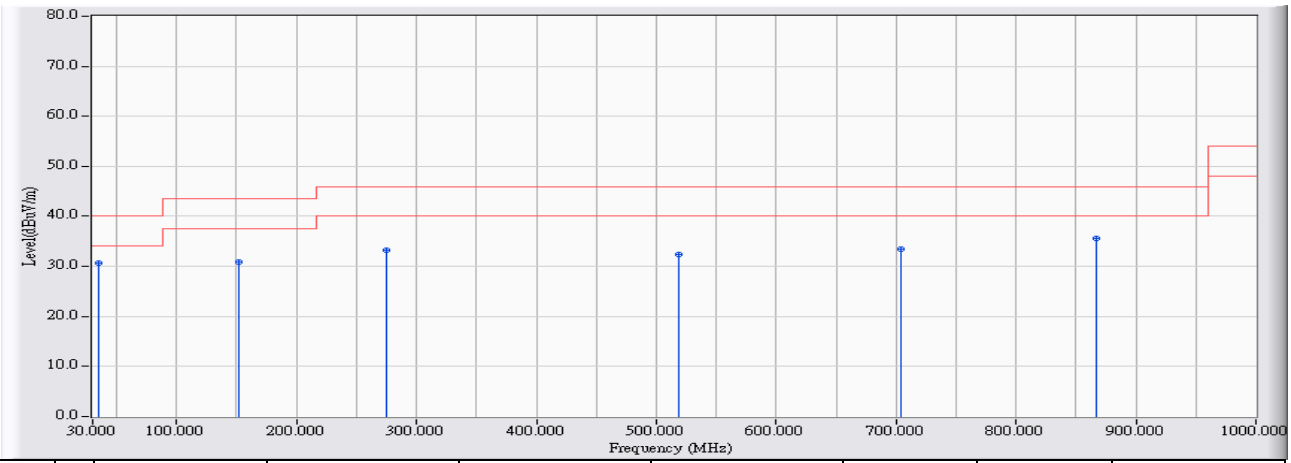
Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

Duty Cycle(Only Ton)= Ton/ Ton+off=(42.1ms/99.72ms)=0.42

20*Log(Duty Cycle) = -7.412

30MHz-1GHz Spurious :

Site : CB1	**Time : 2016/03/11 - 01:23**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

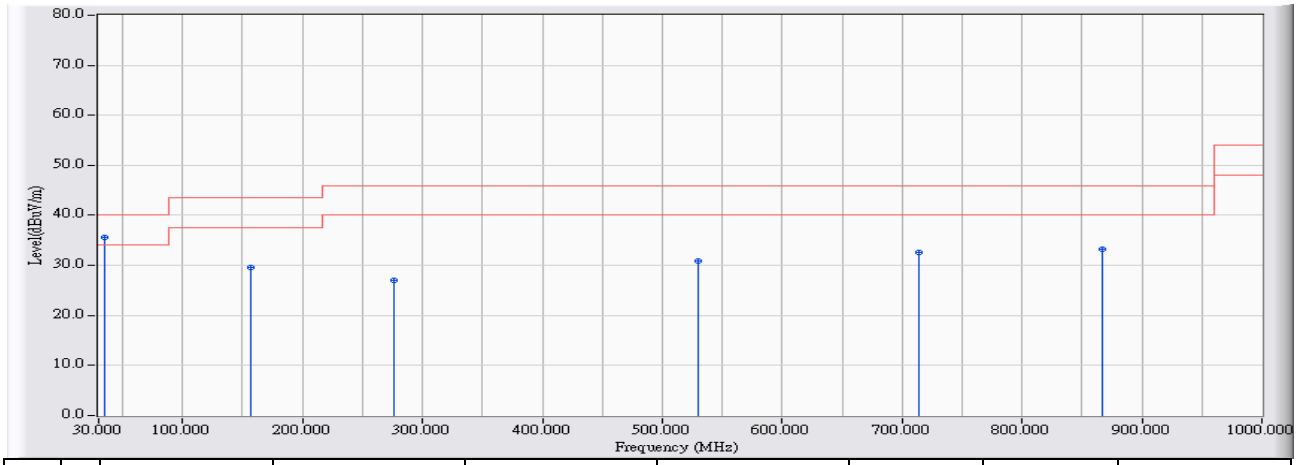


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	34.947	11.886	18.770	30.656	-9.344	40.000	QUASIPEAK
2		152.014	17.819	12.978	30.797	-12.703	43.500	QUASIPEAK
3		275.191	13.084	20.112	33.196	-12.804	46.000	QUASIPEAK
4		518.152	18.107	14.222	32.329	-13.671	46.000	QUASIPEAK
5		704.180	21.115	12.439	33.554	-12.446	46.000	QUASIPEAK
6		866.832	23.078	12.566	35.644	-10.356	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/11 - 01:26**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

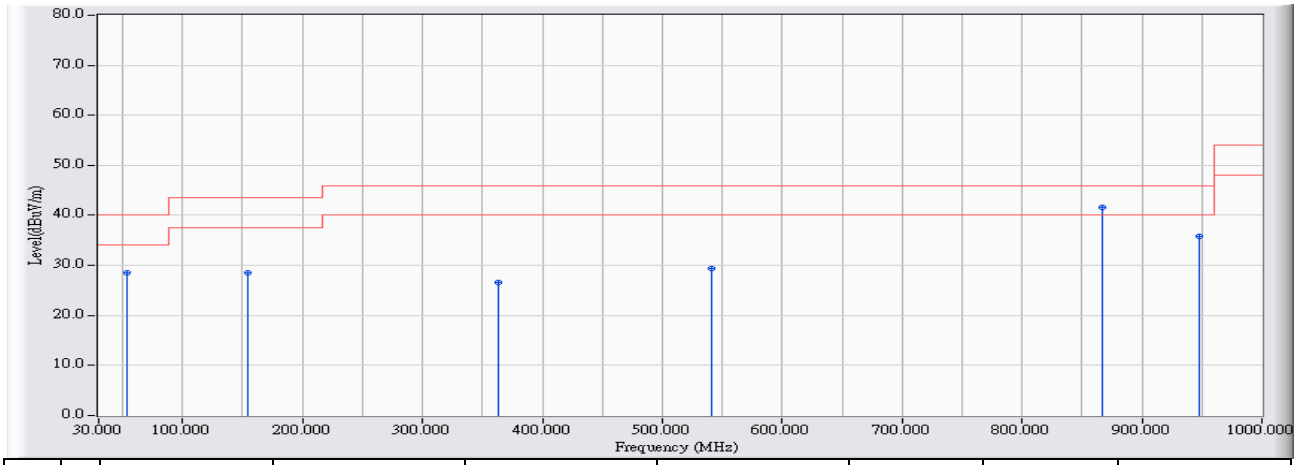


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	35.043	11.894	23.701	35.595	-4.405	40.000	QUASIPEAK
2		156.863	17.915	11.578	29.492	-14.008	43.500	QUASIPEAK
3		276.355	13.119	13.954	27.073	-18.927	46.000	QUASIPEAK
4		529.306	18.324	12.551	30.875	-15.125	46.000	QUASIPEAK
5		714.267	21.243	11.359	32.601	-13.399	46.000	QUASIPEAK
6		866.444	23.074	10.277	33.351	-12.649	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 00:28**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 2: 433.2MHz (Power by Battery)**

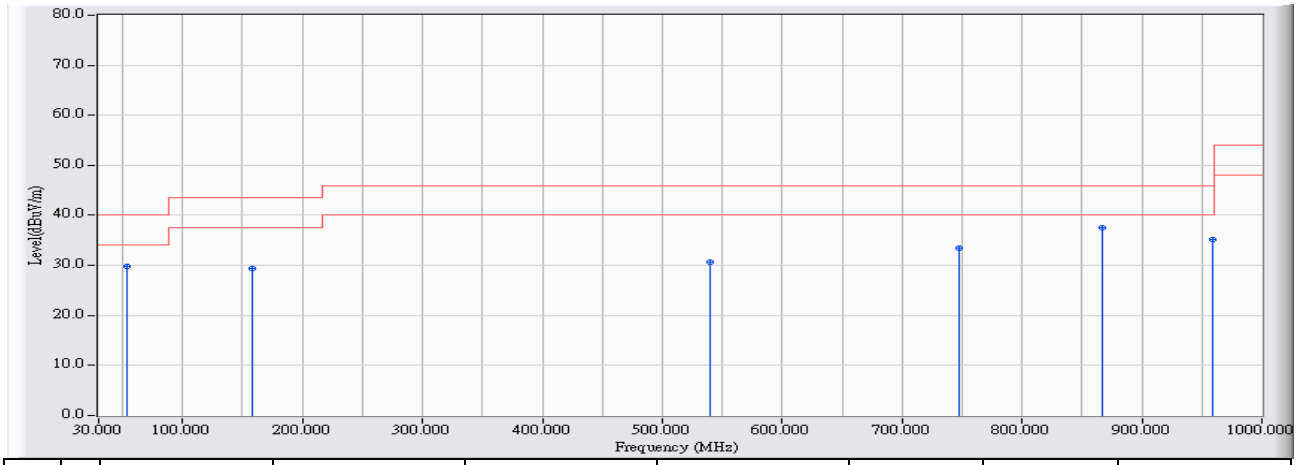


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		53.472	11.504	17.002	28.505	-11.495	40.000	QUASIPEAK
2		154.633	17.870	10.751	28.621	-14.879	43.500	QUASIPEAK
3		363.356	15.124	11.394	26.518	-19.482	46.000	QUASIPEAK
4		541.042	18.553	10.883	29.436	-16.564	46.000	QUASIPEAK
5	*	866.444	23.074	18.521	41.595	-4.405	46.000	QUASIPEAK
6		947.916	23.910	11.945	35.856	-10.144	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 00:30**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 2: 433.2MHz (Power by Battery)**

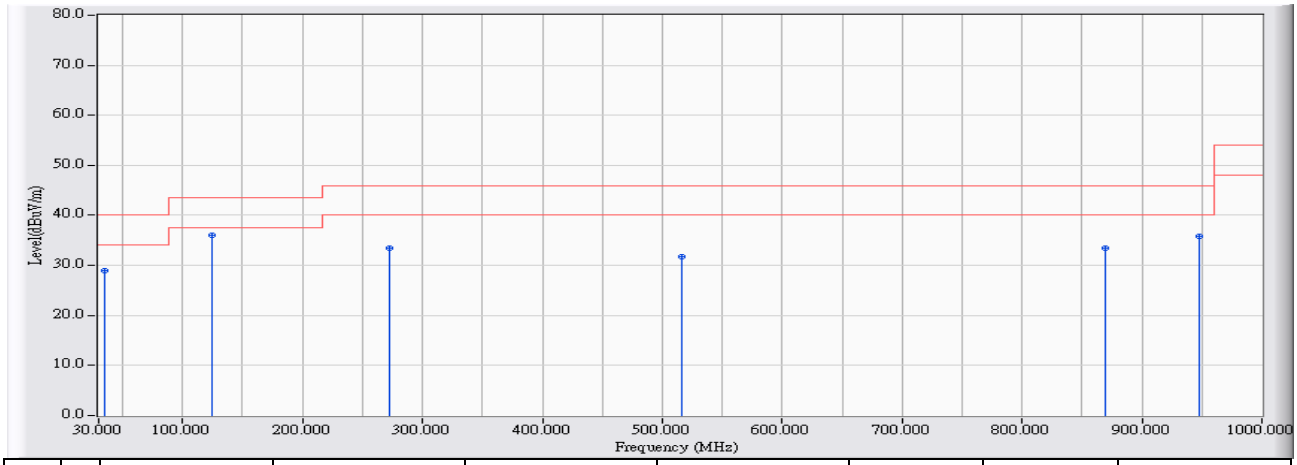


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		53.472	11.504	18.391	29.894	-10.106	40.000	QUASIPEAK
2		158.318	17.943	11.446	29.389	-14.111	43.500	QUASIPEAK
3		539.975	18.533	12.035	30.568	-15.432	46.000	QUASIPEAK
4		747.437	21.661	11.872	33.533	-12.467	46.000	QUASIPEAK
5	*	866.444	23.074	14.452	37.526	-8.474	46.000	QUASIPEAK
6		959.070	24.018	11.157	35.174	-10.826	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/11 - 01:47**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC)**

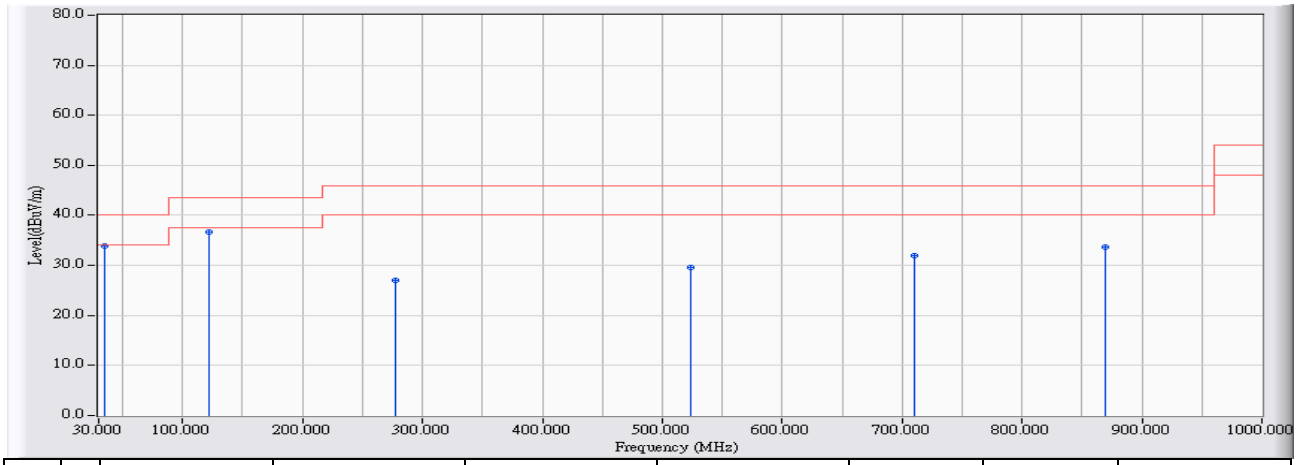


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		35.043	11.894	17.141	29.035	-10.965	40.000	QUASIPEAK
2	*	124.566	13.623	22.334	35.957	-7.543	43.500	QUASIPEAK
3		272.670	13.006	20.508	33.515	-12.485	46.000	QUASIPEAK
4		515.921	18.063	13.583	31.646	-14.354	46.000	QUASIPEAK
5		869.160	23.104	10.348	33.452	-12.548	46.000	QUASIPEAK
6		948.304	23.915	11.946	35.860	-10.140	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/11 - 01:50**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC)**

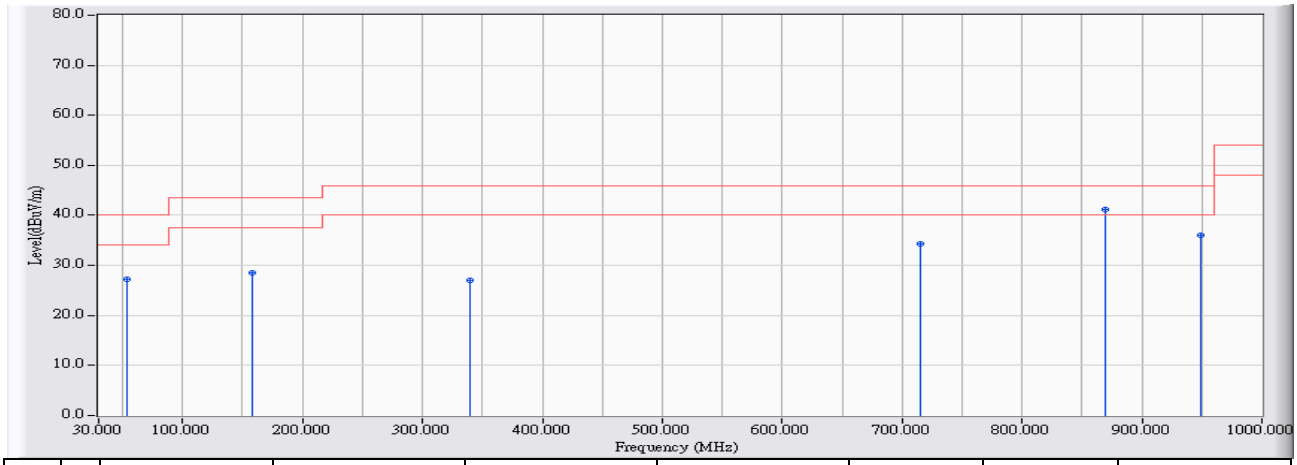


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	35.043	11.894	21.927	33.821	-6.179	40.000	QUASIPEAK
2		122.529	13.398	23.328	36.726	-6.774	43.500	QUASIPEAK
3		277.713	13.161	13.757	26.918	-19.082	46.000	QUASIPEAK
4		523.778	18.217	11.320	29.537	-16.463	46.000	QUASIPEAK
5		710.096	21.190	10.676	31.866	-14.134	46.000	QUASIPEAK
6		869.354	23.106	10.576	33.682	-12.318	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 00:48**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 4: 434.64MHz (Power by Battery)**

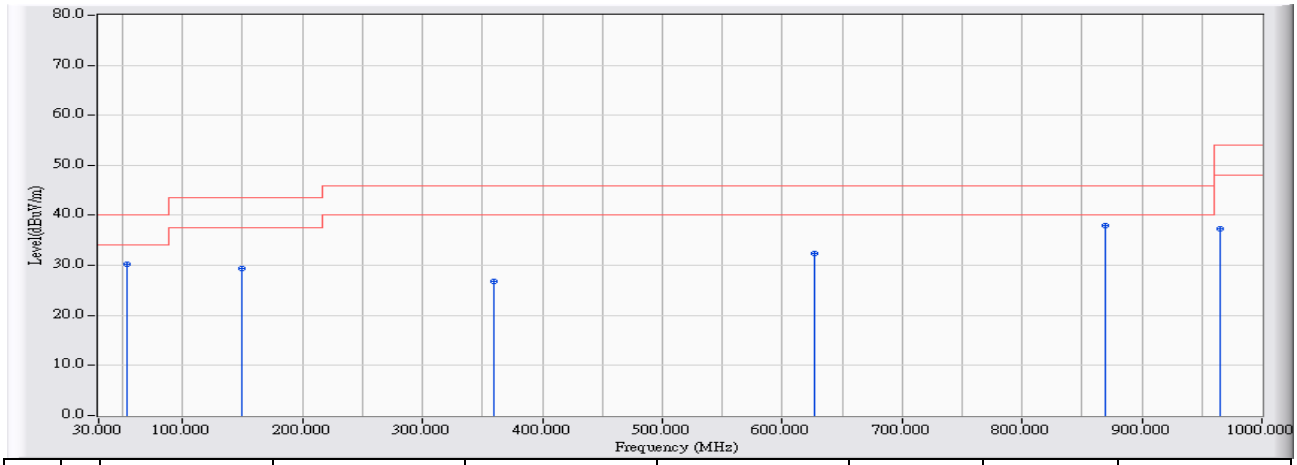


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		53.472	11.504	15.760	27.263	-12.737	40.000	QUASIPEAK
2		157.930	17.936	10.658	28.593	-14.907	43.500	QUASIPEAK
3		339.981	14.591	12.401	26.992	-19.008	46.000	QUASIPEAK
4		715.624	21.259	12.990	34.249	-11.751	46.000	QUASIPEAK
5	*	869.257	23.105	18.130	41.235	-4.765	46.000	QUASIPEAK
6		948.886	23.920	12.068	35.988	-10.012	46.000	QUASIPEAK

Note:

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

Site : CB1	**Time : 2016/03/10 - 00:45**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 4: 434.64MHz (Power by Battery)**



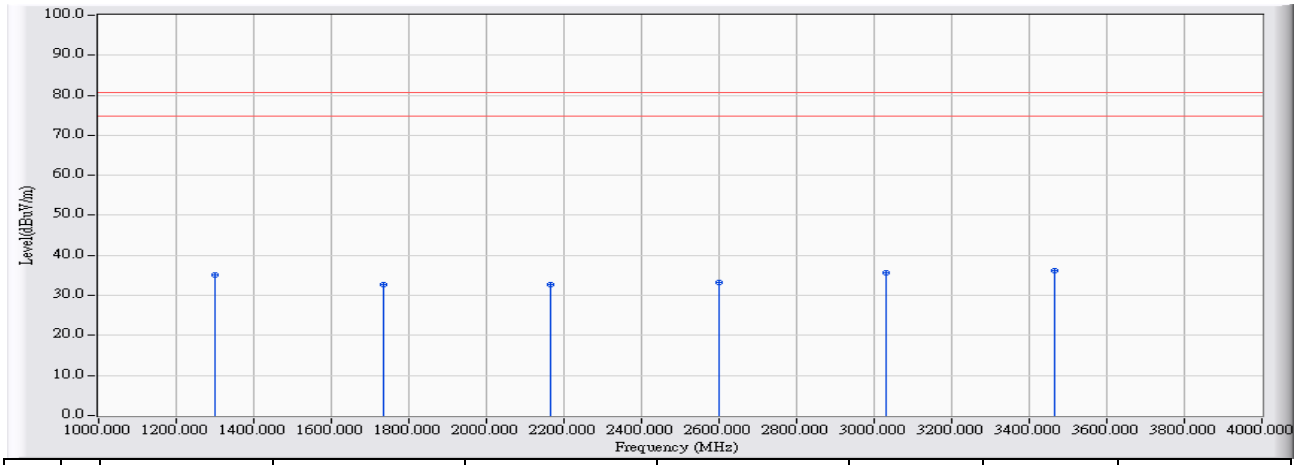
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		53.472	11.504	18.737	30.240	-9.760	40.000	QUASIPEAK
2		149.783	17.721	11.575	29.296	-14.204	43.500	QUASIPEAK
3		359.476	15.036	11.834	26.870	-19.130	46.000	QUASIPEAK
4		627.363	20.075	12.219	32.294	-13.706	46.000	QUASIPEAK
5	*	869.257	23.105	14.876	37.981	-8.019	46.000	QUASIPEAK
6		965.180	24.076	13.241	37.317	-16.683	54.000	QUASIPEAK

Note:

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

Above 1GHz Spurious:

Site : CB1	**Time : 2016/03/11 - 02:14**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

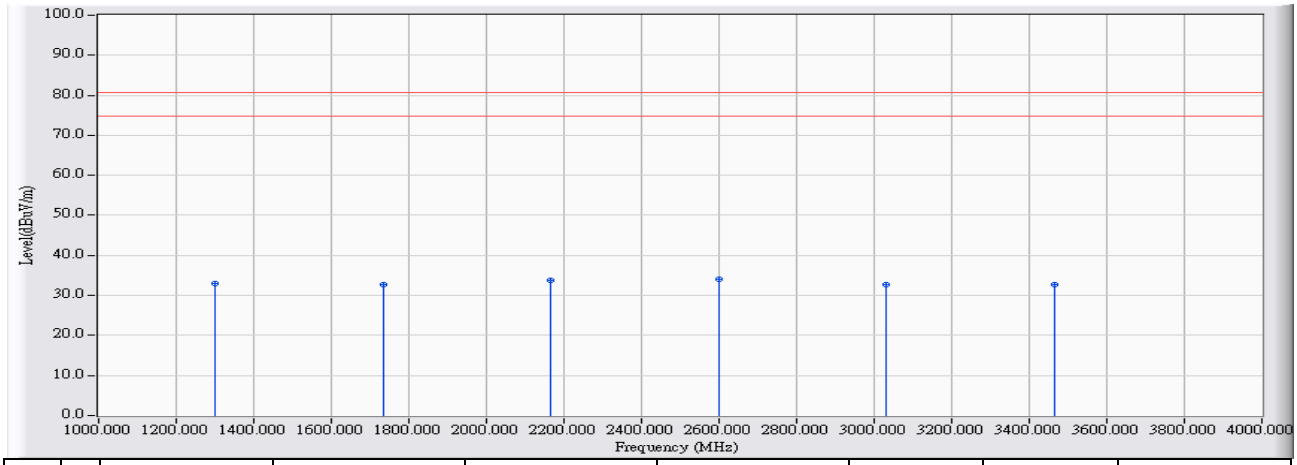


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1299.670	-15.619	50.806	35.187	-45.643	80.830	PEAK
2		1732.800	-14.953	47.781	32.828	-48.002	80.830	PEAK
3		2166.000	-14.109	46.830	32.722	-48.108	80.830	PEAK
4		2599.200	-12.249	45.573	33.324	-47.506	80.830	PEAK
5		3032.400	-10.380	45.943	35.563	-45.267	80.830	PEAK
6	*	3465.600	-9.628	45.898	36.270	-44.560	80.830	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 : 2016/03/11 - 02:11**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 1: 433.2MHz (Power by PC)**

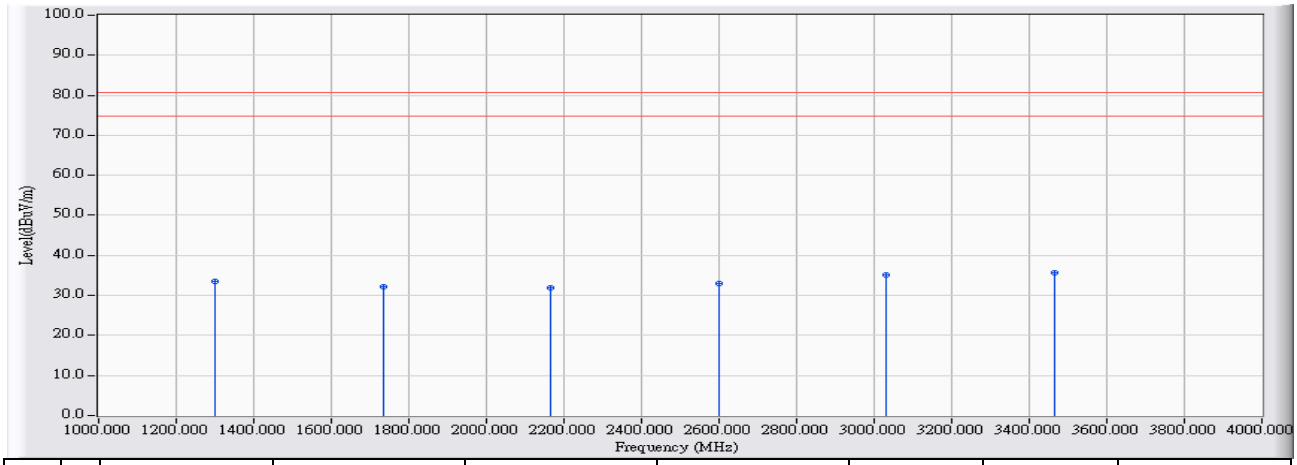


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1299.600	-14.936	47.894	32.958	-47.872	80.830	PEAK
2		1732.800	-13.500	46.304	32.805	-48.025	80.830	PEAK
3		2166.000	-12.572	46.245	33.673	-47.157	80.830	PEAK
4	*	2599.200	-12.821	46.771	33.951	-46.879	80.830	PEAK
5		3032.400	-13.059	45.664	32.604	-48.226	80.830	PEAK
6		3465.600	-13.326	46.091	32.766	-48.064	80.830	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 : 2016/03/10 - 02:58**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 2: 433.2MHz (Power by Battery)**

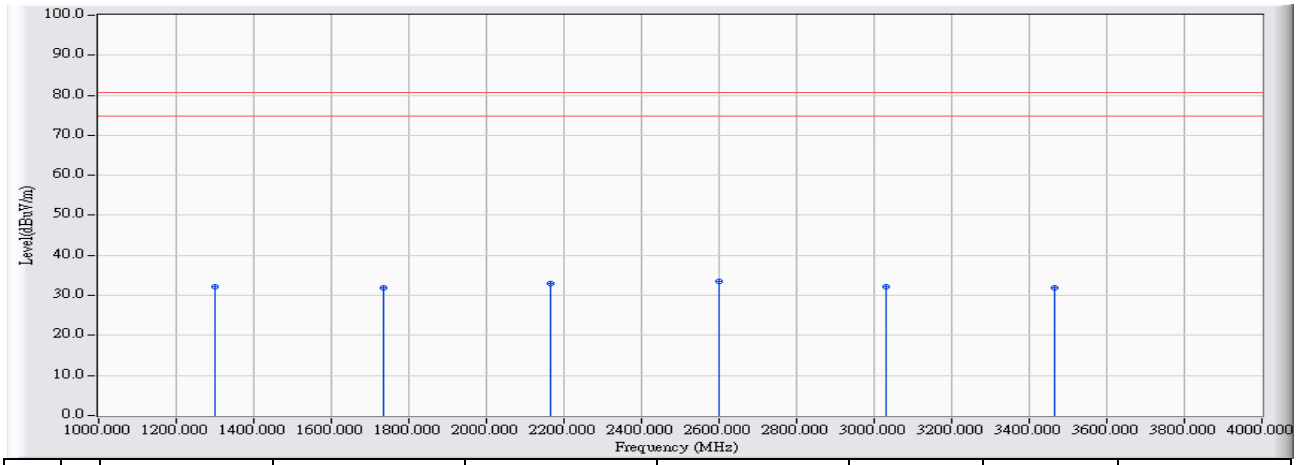


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1299.670	-15.619	49.206	33.587	-47.243	80.830	PEAK
2		1732.800	-14.953	47.081	32.128	-48.702	80.830	PEAK
3		2166.000	-14.109	46.030	31.922	-48.908	80.830	PEAK
4		2599.200	-12.249	45.273	33.024	-47.806	80.830	PEAK
5		3032.400	-10.380	45.543	35.163	-45.667	80.830	PEAK
6	*	3465.600	-9.628	45.198	35.570	-45.260	80.830	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 : 2016/03/10 - 02:55**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 2: 433.2MHz (Power by Battery)**

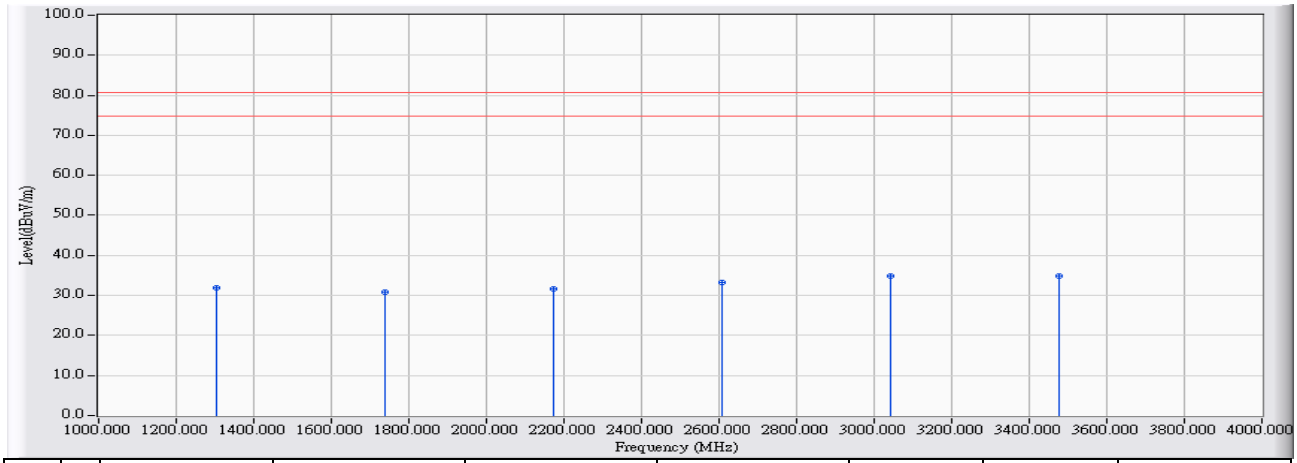


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1299.600	-14.936	47.194	32.258	-48.572	80.830	PEAK
2		1732.800	-13.500	45.504	32.005	-48.825	80.830	PEAK
3		2166.000	-12.572	45.545	32.973	-47.857	80.830	PEAK
4	*	2599.200	-12.821	46.271	33.451	-47.379	80.830	PEAK
5		3032.400	-13.059	45.264	32.204	-48.626	80.830	PEAK
6		3465.600	-13.326	45.191	31.866	-48.964	80.830	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 : 2016/03/11 - 02:15**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC)**

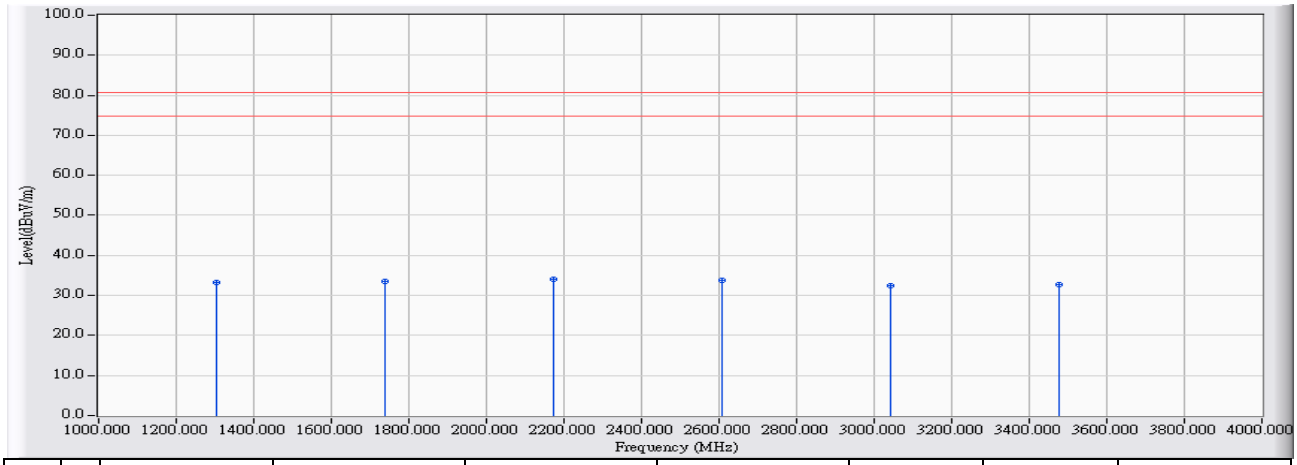


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1303.920	-15.610	47.431	31.822	-49.008	80.830	PEAK
2		1738.560	-14.947	45.909	30.961	-49.869	80.830	PEAK
3		2173.200	-14.075	45.597	31.521	-49.309	80.830	PEAK
4		2607.840	-12.211	45.559	33.348	-47.482	80.830	PEAK
5		3042.480	-10.354	45.174	34.820	-46.010	80.830	PEAK
6	*	3477.120	-9.610	44.470	34.860	-45.970	80.830	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 : 2016/03/11 - 02:17**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	**Power : DC 5V (Power by PC)**
EUT : ID GEBER Display	**Note : Mode 3: 434.64MHz (Power by PC)**

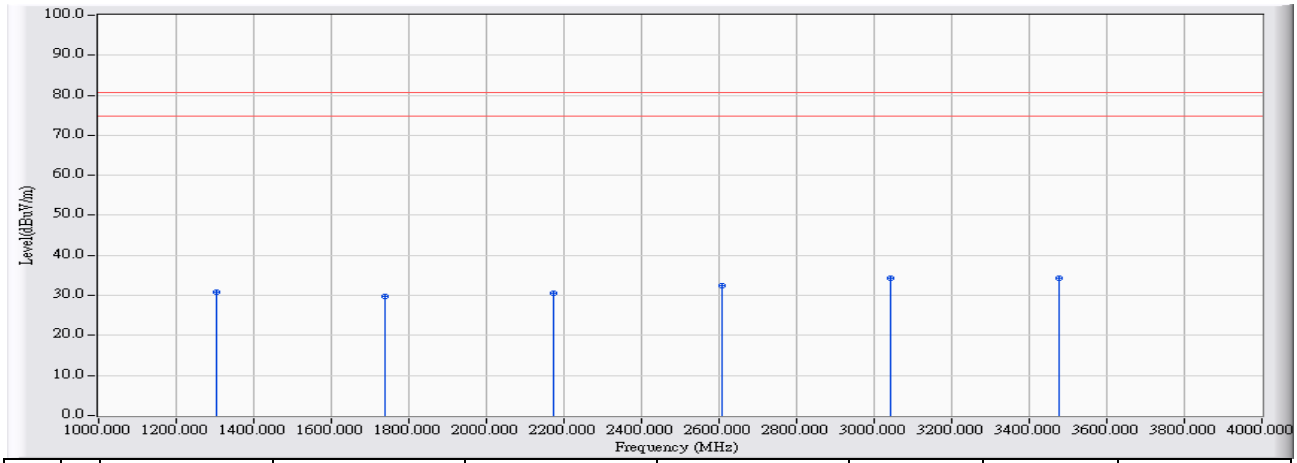


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1303.920	-14.919	48.273	33.354	-47.476	80.830	PEAK
2		1738.560	-13.484	47.111	33.627	-47.203	80.830	PEAK
3	*	2173.200	-12.574	46.671	34.096	-46.734	80.830	PEAK
4		2607.840	-12.824	46.522	33.698	-47.132	80.830	PEAK
5		3042.480	-13.083	45.492	32.409	-48.421	80.830	PEAK
6		3477.120	-13.327	45.978	32.652	-48.178	80.830	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 : 2016/03/10 - 03:06**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 4: 434.64MHz (Power by Battery)**

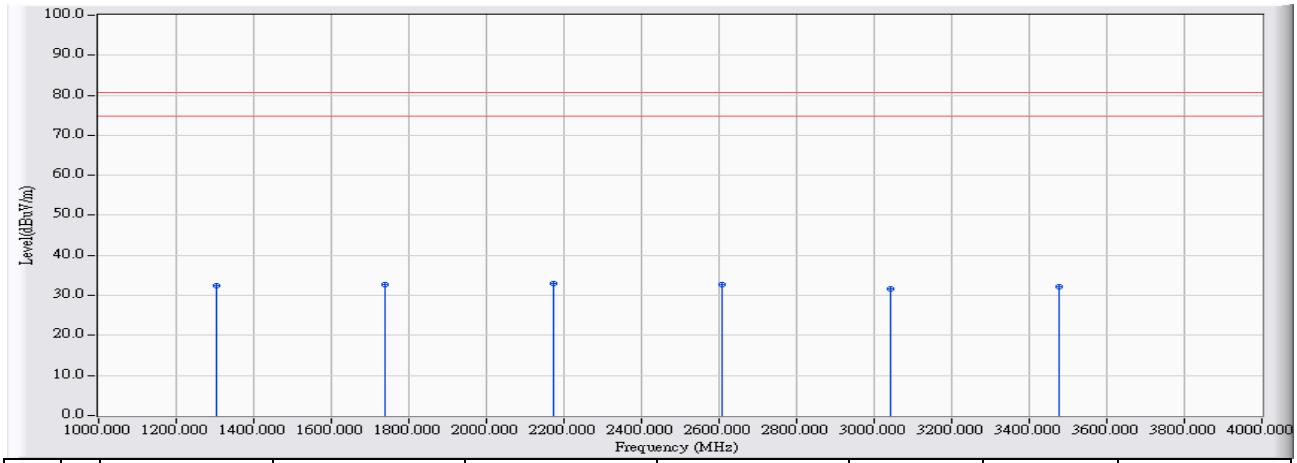


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1303.920	-15.610	46.331	30.722	-50.108	80.830	PEAK
2		1738.560	-14.947	44.609	29.661	-51.169	80.830	PEAK
3		2173.200	-14.075	44.697	30.621	-50.209	80.830	PEAK
4		2607.840	-12.211	44.759	32.548	-48.282	80.830	PEAK
5	*	3042.480	-10.354	44.674	34.320	-46.510	80.830	PEAK
6		3477.120	-9.610	43.870	34.260	-46.570	80.830	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 : 2016/03/10 - 03:07**
Limit : FCC_SPARTC_15.231(b)_H_433.92MHz_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	**Power : DC 3.7V (Power by Battery)**
EUT : ID GEBER Display	**Note : Mode 4: 434.64MHz (Power by Battery)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1303.920	-14.919	47.473	32.554	-48.276	80.830	PEAK
2		1738.560	-13.484	46.111	32.627	-48.203	80.830	PEAK
3	*	2173.200	-12.574	45.571	32.996	-47.834	80.830	PEAK
4		2607.840	-12.824	45.422	32.598	-48.232	80.830	PEAK
5		3042.480	-13.083	44.792	31.709	-49.121	80.830	PEAK
6		3477.120	-13.327	45.478	32.152	-48.678	80.830	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

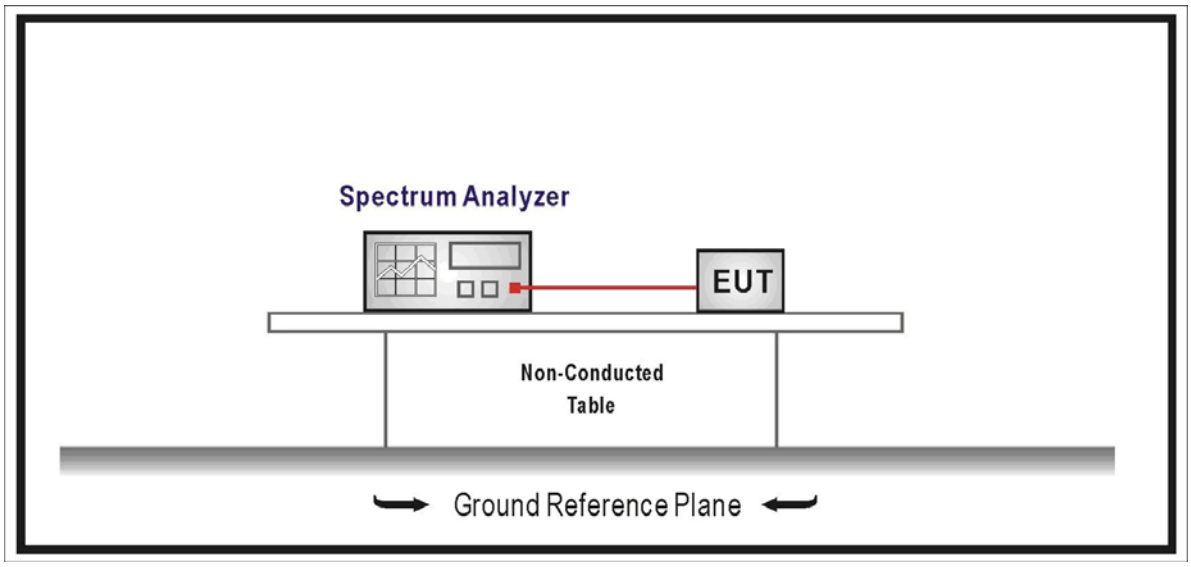
The following test equipments are used during the radiated emission tests:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/05
Signal Analyzer	R&S	FSV7	101650	2016/11/30

Note: 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

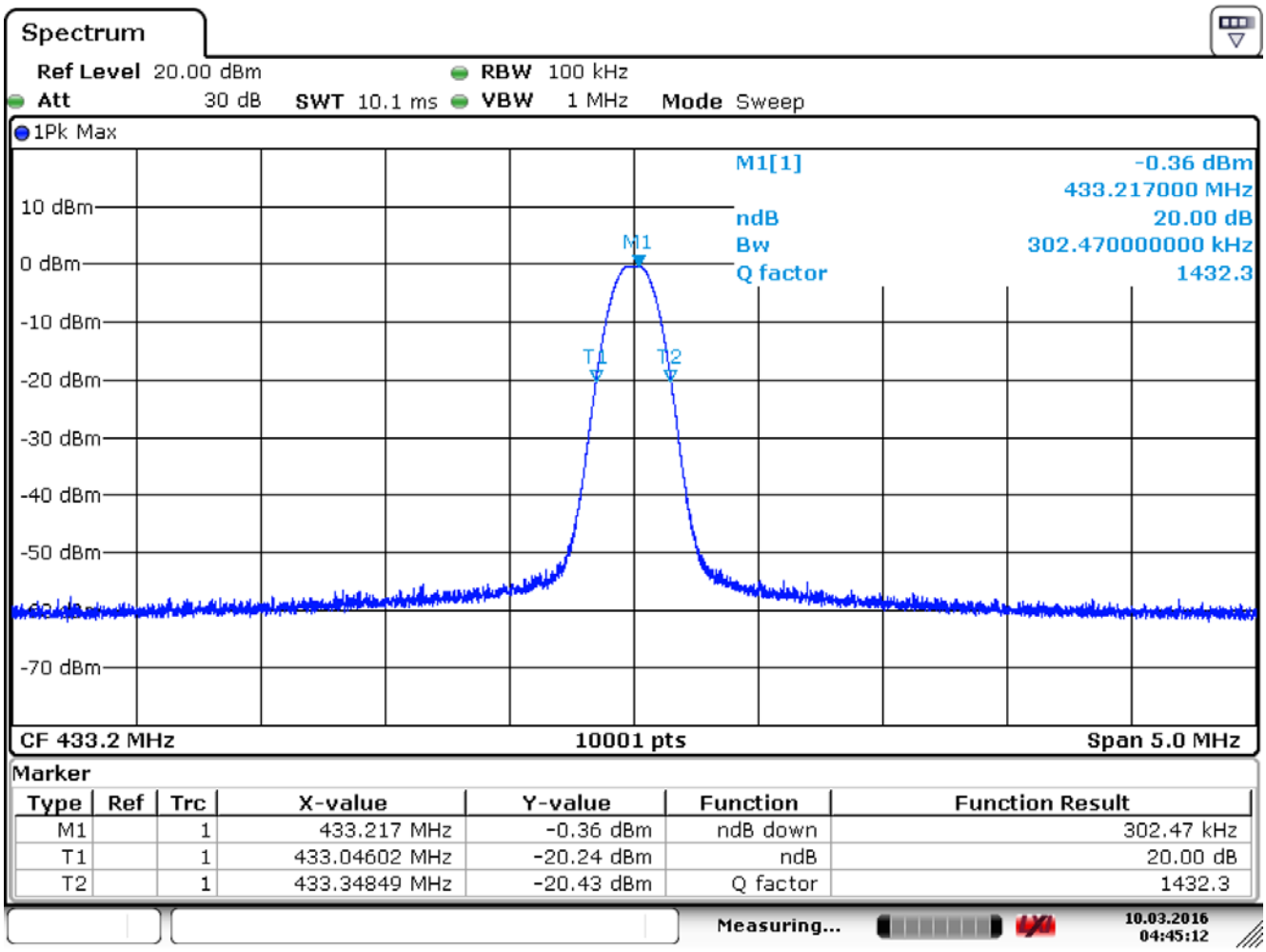
4.5. Uncertainty

± 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	2016/03/10	Test Site	SR7

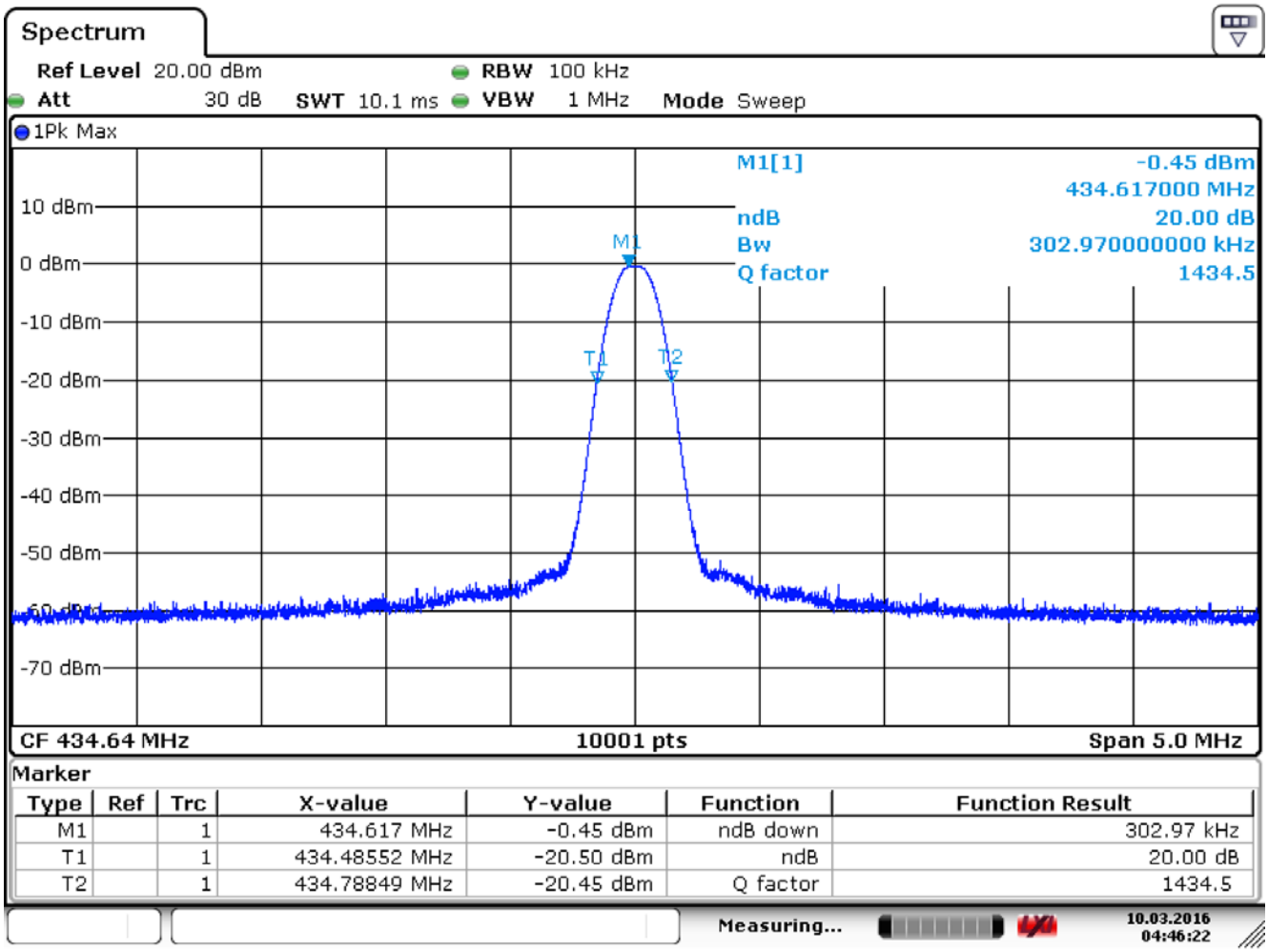
Center Frequency	433.2 MHz
Allowable Bandwidth (433.2 MHz: 0.25%)	1.083 MHz
Bandwidth at 20dB down (Max)	302.47 kHz
Result	PASS



Date: 10.MAR.2016 04:45:12

Product	ID GEBER Display		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: 434.64MHz (Power by PC)		
Date of Test	2016/03/10	Test Site	SR7

Center Frequency	434.64 MHz
Allowable Bandwidth (434.64 MHz: 0.25%)	1.0866 MHz
Bandwidth at 20dB down (Max)	302.97 kHz
Result	PASS



Date: 10.MAR.2016 04:46:22

5. Duty cycle

5.1. Test Equipment

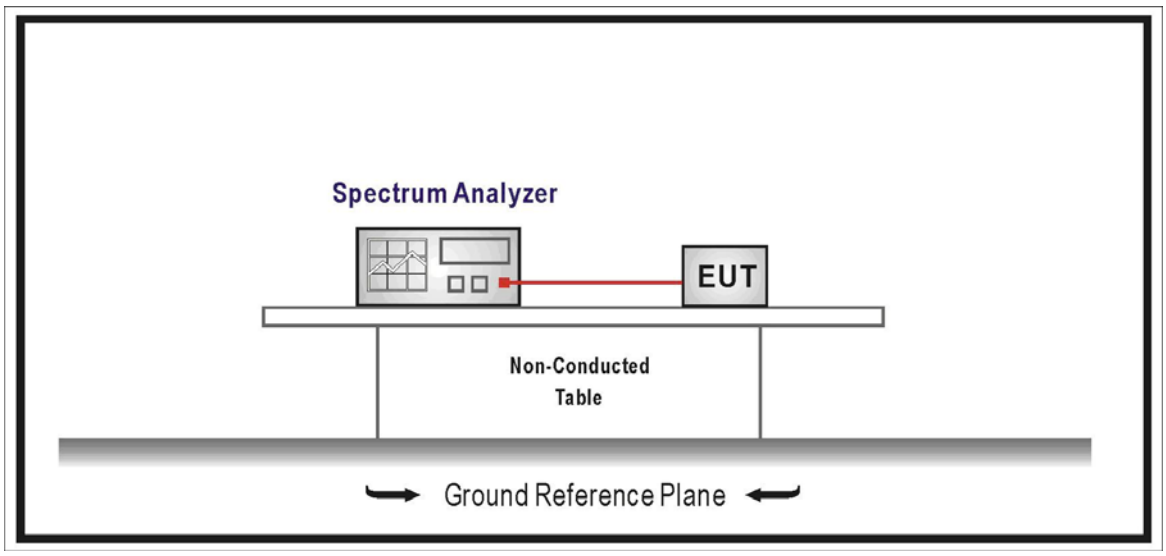
The following test equipments are used during the radiated emission tests:

Duty cycle / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/05
Signal Analyzer	R&S	FSV7	101650	2016/11/30

Note: 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

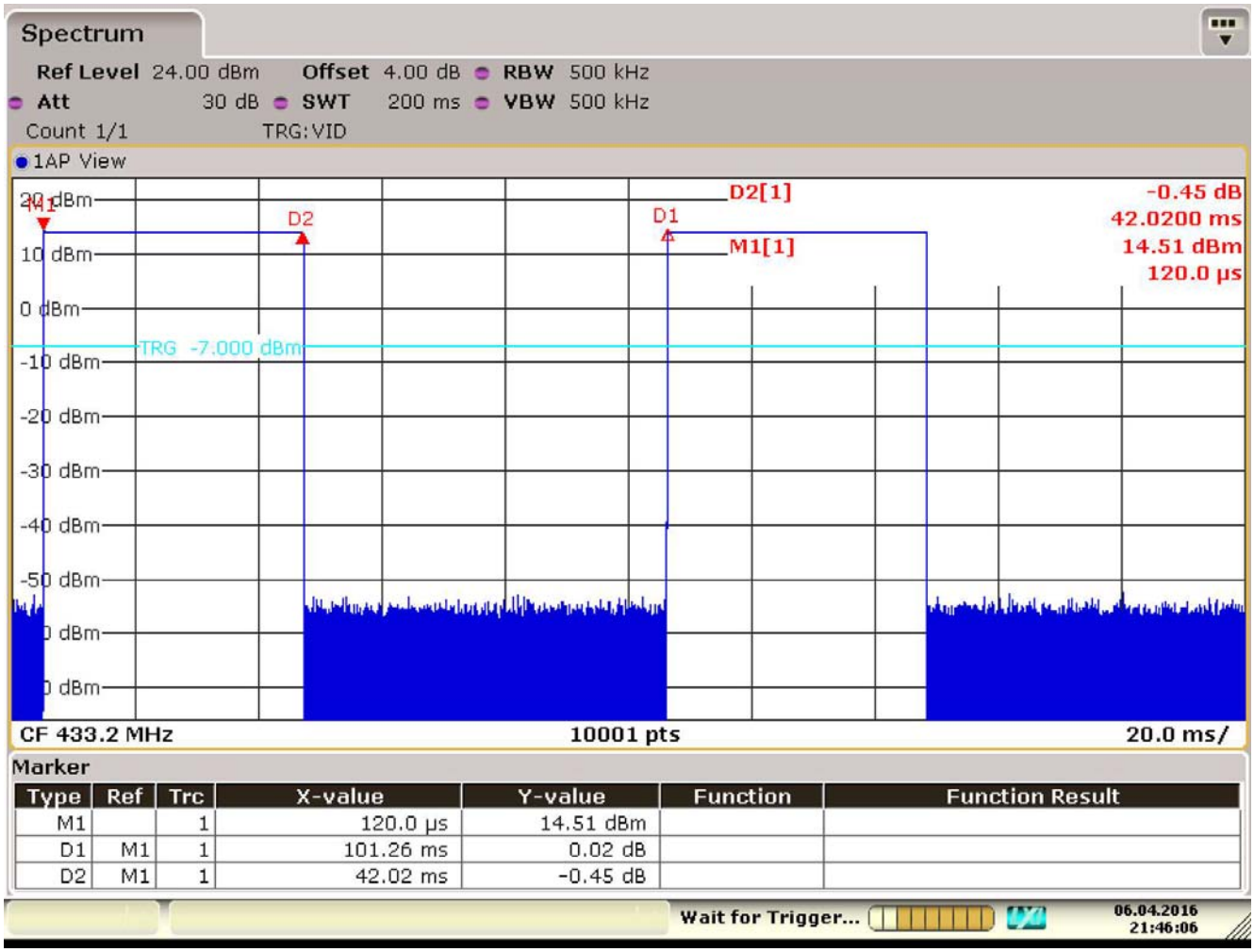
5.5. Uncertainty

± 25msec

5.6. Test Result

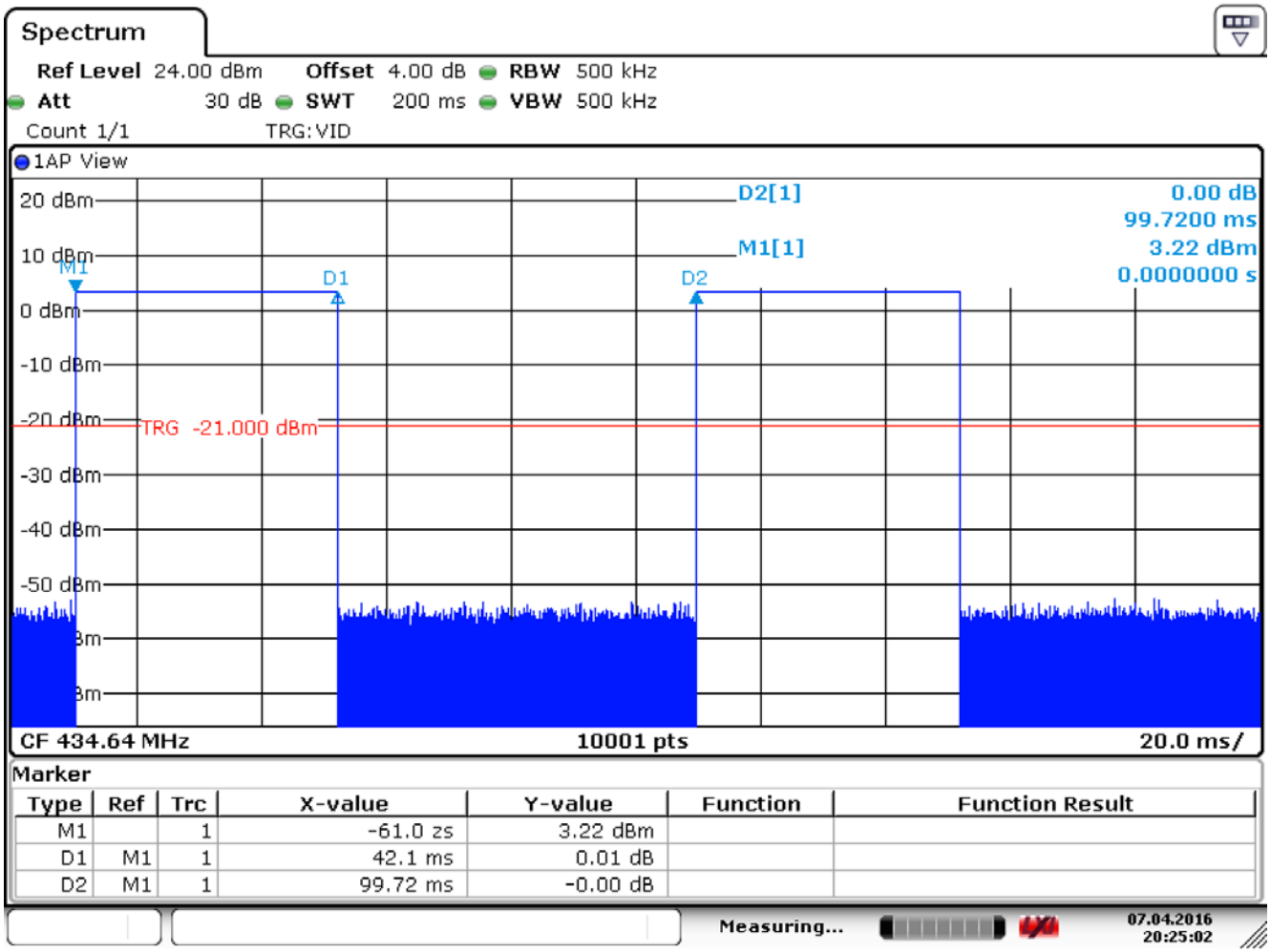
Product	ID GEBER Display		
Test Item	Duty Cycle		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2016/04/07	Test Site	SR7

Center Frequency	433.2 MHz
T_{ON} = 42.02ms T_{ON} +T_{Off} =101.26ms	
Duty Cycle=42.02/101.26	0.415%



Product	ID GEBER Display		
Test Item	Duty Cycle		
Test Mode	Mode 3: 434.64MHz (Power by PC)		
Date of Test	2016/04/07	Test Site	SR7

Center Frequency	434.64MHz
T_{ON} = 42.1ms T_{ON} +T_{Off} =99.72ms	
Duty Cycle=42.12/100	0.4212%



6. Transmitter time

6.1. Test Equipment

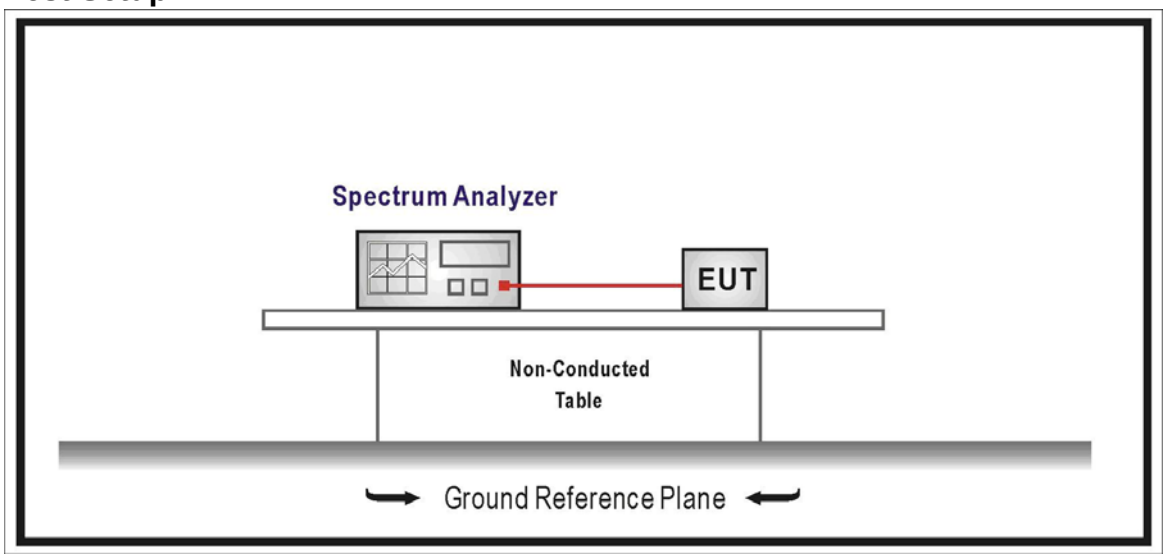
The following test equipments are used during the radiated emission tests:

Transmitter time / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23
Signal & Spectrum Analyzer	R&S	FSV40	101049	2017/01/05
Signal Analyzer	R&S	FSV7	101650	2016/11/30

Note: 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

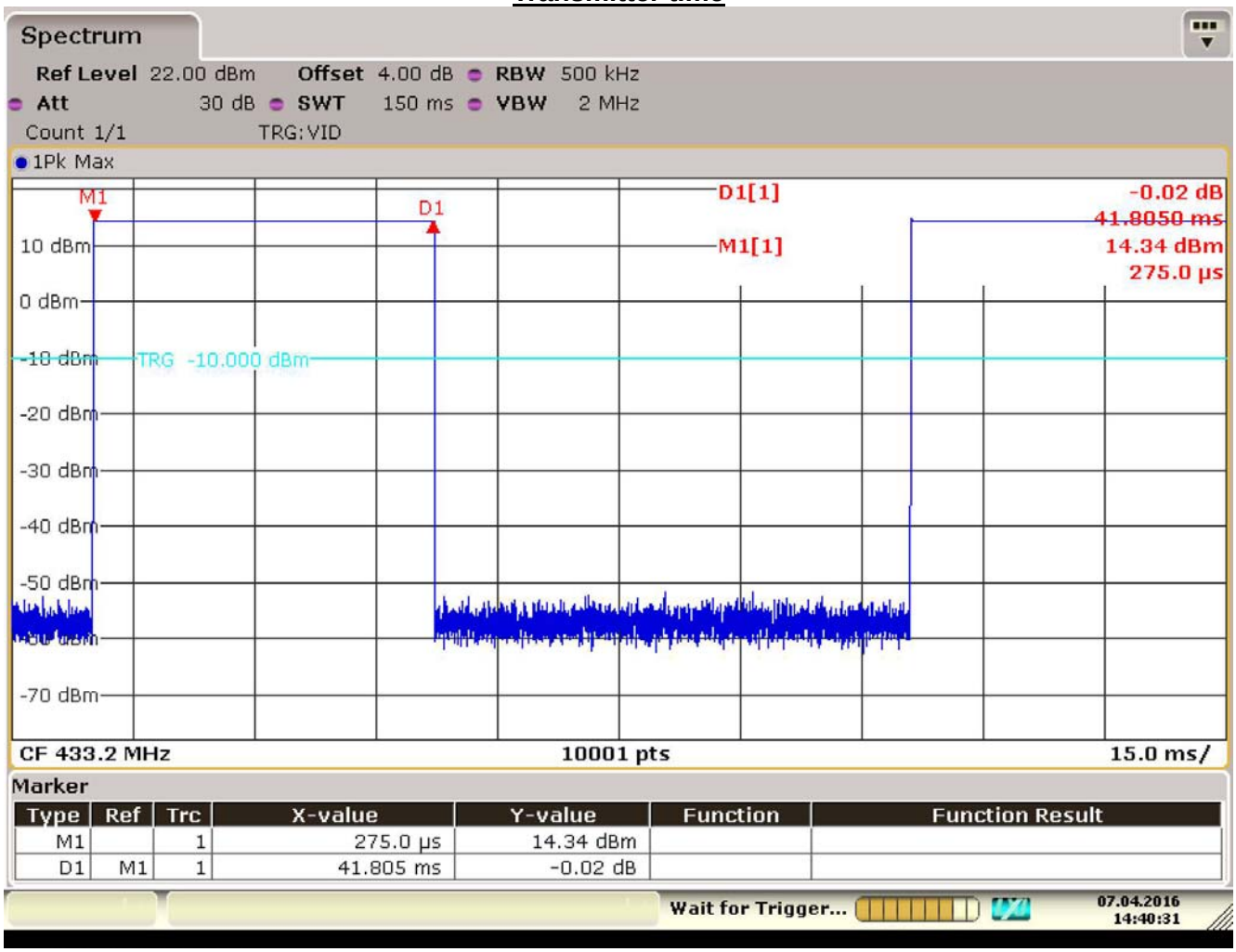
± 25msec

6.6. Test Result

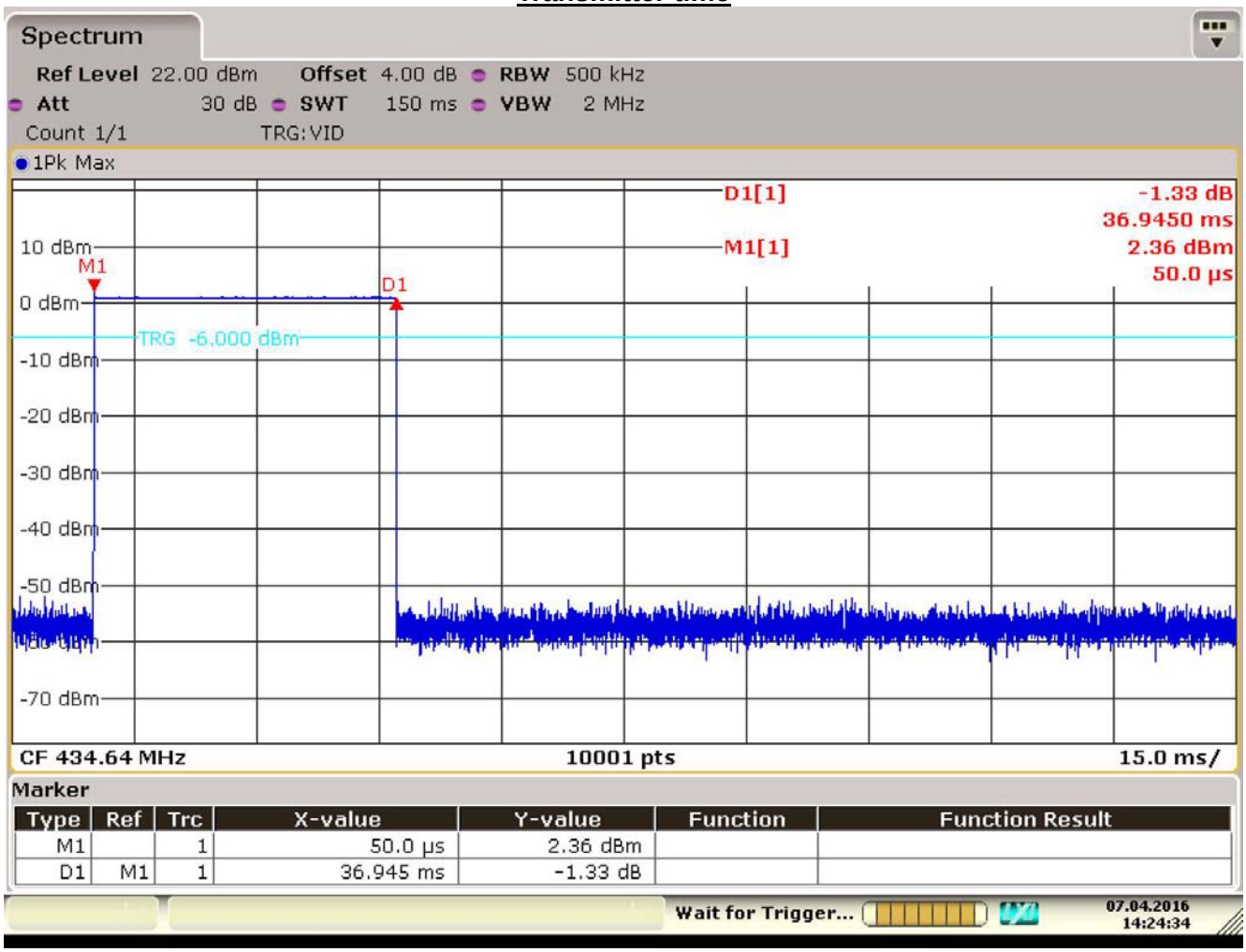
Product	ID GEBER Display		
Test Item	Transmitter time		
Test Mode	Mode 1: 433.2MHz (Power by PC)		
Date of Test	2016/04/07	Test Site	SR7

Center Frequency	433.2 MHz
Transmitter time = 41.805ms < 5 sec.	Below 5 sec.
Result	PASS

Transmitter time



Product	ID GEBER Display		
Test Item	Transmitter time		
Test Mode	Mode 3: 433.64MHz (Power by PC)		
Date of Test	2016/04/07	Test Site	SR7

Center Frequency	434.64 MHz
Transmitter time = 36.945ms < 5 sec.	Below 5 sec.
Result	PASS

Transmitter time