

FCC Test Report

Product Name : meMINI

Trade Name : meMINI

Model No. : MEM001

FCC ID. : 2AC5UMEM001

Applicant : meMINI Inc

Address : 1183 Bordeaux Drive Suite 28, Sunnyvale,

United States

Date of Receipt : Sep. 23, 2015

Issued Date : Oct. 30, 2015

Report No. : 1590623R-RFUSP01V00-A

Report Version : V1.0





The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.



Test Report Certification

Issued Date : Oct. 30, 2015

Report No.: 1590623R-RFUSP01V00-A



Product Name : meMINI

Applicant : meMINI Inc

Address : 1183 Bordeaux Drive Suite 28, Sunnyvale, United States

Manufacturer : SanJet Technology Corp.

Model No. : MEM001

FCC ID. : 2AC5UMEM001

EUT Voltage : AC 100-240V, 50/60Hz

Testing Voltage : AC 120V/60Hz

Trade Name : meMINI

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2014

ANSI C63.10:2013

Test Result : Complied

The test results relate only to the samples tested.

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Documented By :

(Demi Chang / Engineering Adm. Assistant)

Reviewed By :

(Jimmie Liu / Senior Engineer)

Approved By :

(Roy Wang / Director)



Revision History

Report No.	Version	Description	Issued Date
1590623R-RFUSP01V00-A	Rev. 1.0	Initial issue of report	Oct. 30, 2015



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:

HsinChu Testing Laboratory:

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.

LinKou Testing Laboratory:

No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.

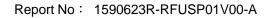


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1. General Information

1.1. EUT Description

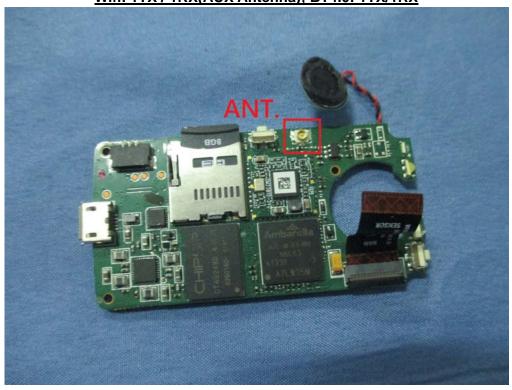
Product Name	meMINI
Product Type	WLAN (1TX, 1RX)
Trade Name	meMINI
Model No.	MEM001
Frequency Range/	2400~2480MHz / 40 channels
Channel Number	
Type of Modulation	BLE 4.0 (GFSK)
Antenna Type	Monopole
Antenna Gain	Peak 0.61 dBi

Component	
Magnatach	1Set
USB Cable	Shielded, 0.7m



ANT-TX / RX & Bandwidth







Working F	Working Frequency of Each Channel						
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00	2402 MHz	Channel 10	2422 MHz	Channel 20	2442 MHz	Channel 30	2462 MHz
Channel 01	2404 MHz	Channel 11	2424 MHz	Channel 21	2444 MHz	Channel 31	2464 MHz
Channel 02	2406 MHz	Channel 12	2426 MHz	Channel 22	2446 MHz	Channel 32	2466 MHz
Channel 03	2408 MHz	Channel 13	2428 MHz	Channel 23	2448 MHz	Channel 33	2468 MHz
Channel 04	2410 MHz	Channel 14	2430 MHz	Channel 24	2450 MHz	Channel 34	2470 MHz
Channel 05	2412 MHz	Channel 15	2432 MHz	Channel 25	2452 MHz	Channel 35	2472 MHz
Channel 06	2414 MHz	Channel 16	2434 MHz	Channel 26	2454 MHz	Channel 36	2474 MHz
Channel 07	2416MHz	Channel 17	2436 MHz	Channel 27	2456 MHz	Channel 37	2476 MHz
Channel 08	2418 MHz	Channel 18	2438 MHz	Channel 28	2458 MHz	Channel 38	2478 MHz
Channel 09	2420 MHz	Channel 19	2440 MHz	Channel 29	2460 MHz	Channel 39	2480 MHz

- 1. This device is a meMINI including 2.4G Wifi > BT4.0 transmitting and receiving function.
- 2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
- 3. Regards to the frequency band operation; the lowest \ middle and highest frequency of channel were selected to perform the test, and then shown on this report.
- 4. This device has USB port, which can be connected to computer. It is a Class B personal computer and peripheral. Its test report number is 1590623R-RFUSP01V00.
- 5. The function of the WIFI transmitting is measured. The test report of the number is 1590623R-RFUSP01V00-B.



1.2. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX Mode 1: Tra	ansmit
----------------	--------

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	GFSK	00/19/39	0	Complies
Peak Power Output	GFSK	00/19/39	0	Complies
Radiated Emission	GFSK	00/19/39	0	Complies
RF antenna conducted test	GFSK	00/19/39	0	Complies
Radiated Emission Band Edge	GFSK	00/19/39	0	Complies
Occupied Bandwidth	GFSK	00/19/39	0	Complies
Power Density	GFSK	00/19/39	0	Complies



1.3. Tested System Details

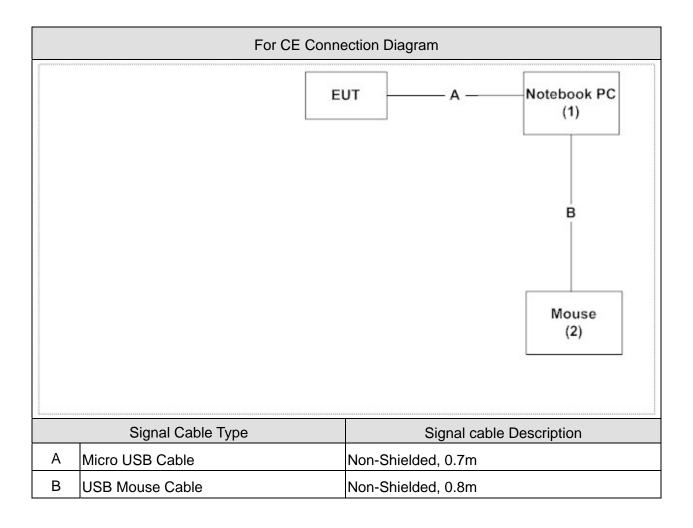
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

For	For CE						
Pro	oduct	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord	
1	Notebook PC	ACER	MS2296	LUSCV021391	DoC	Non-Shielded, 2.5m	
				150332C2000		one ferrite core bonded	
2	USB Mouse	Microsoft	Comfort	1016274-0	DoC		
			Optical				
			Mouse				
			1000				

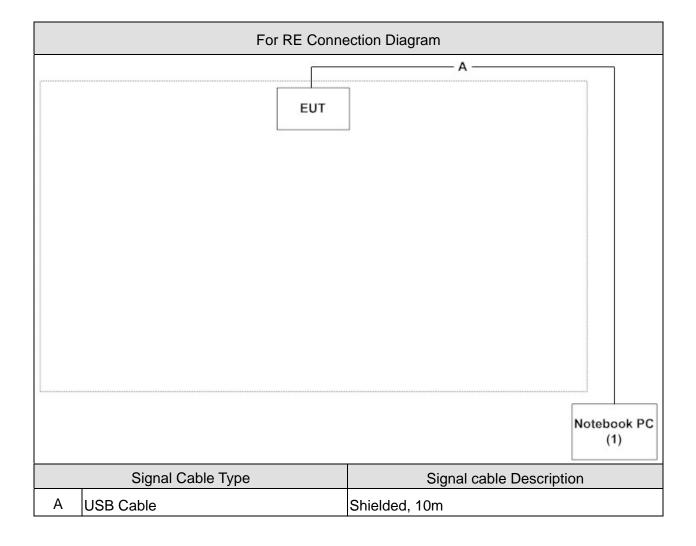
For	For RE					
Product Manufa		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	ACER	MS2296	LUSCV021391	DoC	Non-Shielded, 2.5m
				150332C2000		one ferrite core bonded



1.4. Configuration of tested System







1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Open the Terminal and Execute the command on the EUT.
3	Configure the test mode, the test channel, and the data rate.
4	Start the continuous transmitting.
5	Verify that the EUT works properly.



1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	F00 BART 45 0 45 007	15 - 35	23 °C
Humidity (%RH)	FCC PART 15 C 15.207	25 - 75	50 %RH
Barometric pressure (mbar)	Conducted Emission	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 O 47	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247 Peak Power Output	25 - 75	45
Barometric pressure (mbar)	Peak Power Output	860 - 1060	950-1000
Temperature (°C)	FCC DADT 45 C 45 247	15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247 Radiated Emission	25 - 75	50
Barometric pressure (mbar)	Radiated Emission	860 - 1060	950-1000
Temperature (°C)	FCC DADT 45 C 45 247	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247 RF antenna conducted test	25 - 75	45
Barometric pressure (mbar)	RF antenna conducted test	860 - 1060	950-1000
Temperature (°C)	FCC DADT 45 C 45 247	15 - 35	20
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Band Edge	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 O 47	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45
Barometric pressure (mbar)	DTS Occupied Bandwidth	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 O 47	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45
Barometric pressure (mbar)	Occupied Bandwidth	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 O 47	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45
Barometric pressure (mbar)	Power Density	860 - 1060	950-1000

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2. Conducted Emission

2.1. Test Equipment

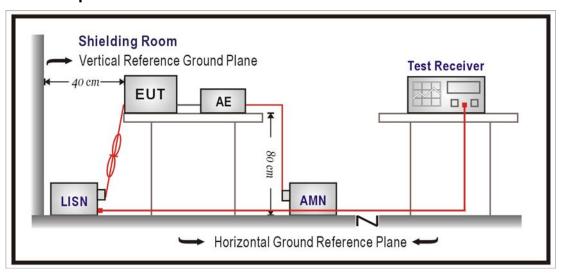
The following test equipments are used during the test:

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	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

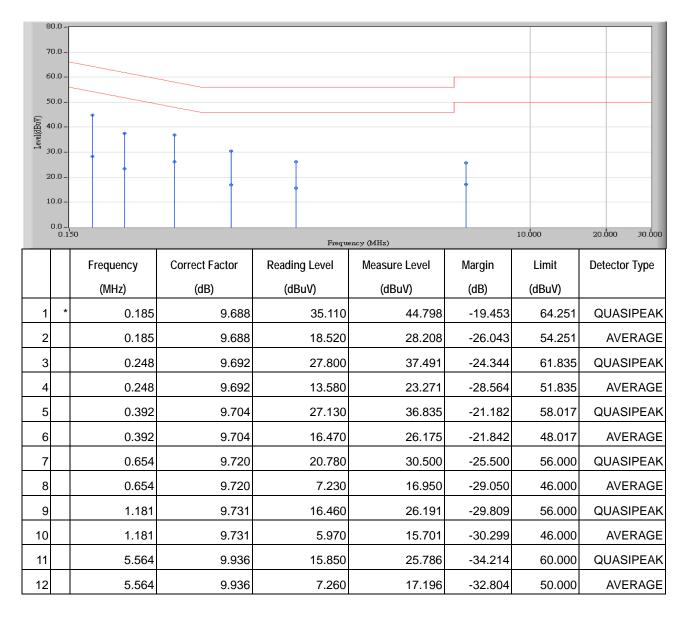
2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.



2.7. Test Result

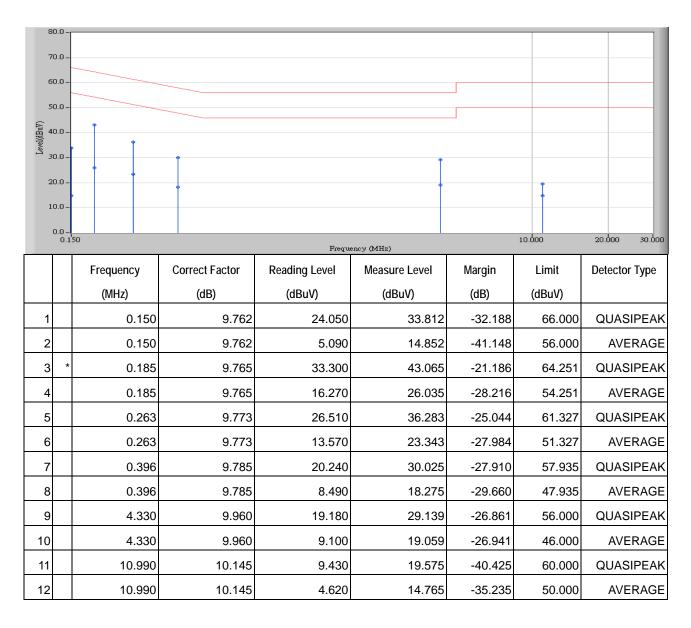
Site : SR2	Time : 2015/11/01 - 14:26
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-5_0818 - Line1	Power : AC 120V/60Hz
EUT : meMINI	Note : Mode 1: Transmit_2440MHz



- 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 : 2015/11/01 - 14:40
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2_LISN(16A)-5_0818 - Line2	Power : AC 120V/60Hz
EUT : meMINI	Note : Mode 1: Transmit_2440MHz



- 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. Peak Power Output

3.1. Test Equipment

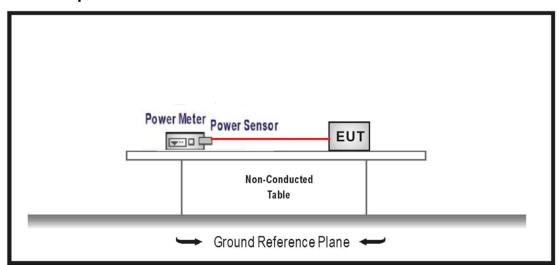
The following test equipments are used during the test:

Peak Power Output/ SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Power Meter	Agilent	N1911A	MY45101353	2016/10/11
Power Sensor	Agilent	N1921A	MY45241670	2016/10/11
	Keysight	U2021XA	MY54070005	2016/09/30
Temperature & Humidity	\\/IT	TH-1S-B	1082101	2016/01/22
Chamber	VVII	111-13-6	1002101	2010/01/22

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

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure section 9.1.2 of KDB558074 v03r02 measurement to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

3.6. Uncertainty

The measurement uncertainty is defined as \pm 1.27 dB.



3.7. Test Result

Product	meMINI		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit		
Date of Test	2015/10/14	Test Site	SR7

BLE 4.0 (GFSK)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	0.170	30	Pass
19	2440	-0.635	30	Pass
40	2480	-1.292	30	Pass



4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

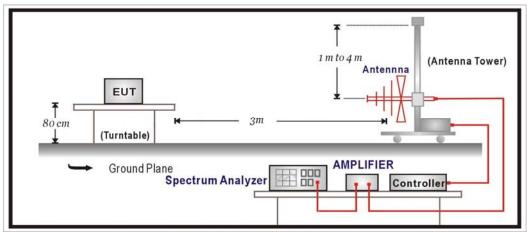
Radiated Emission / CB1

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	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	SF 102	25623/2	2016/01/26

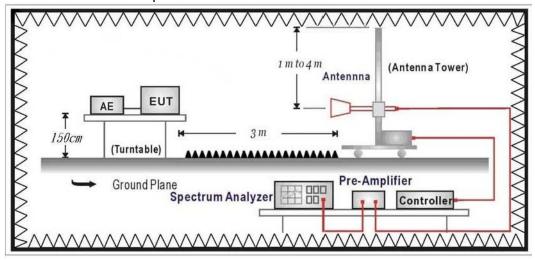
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:





4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits				
Frequency MHz	dBuV/m	dBuV/m		
30-88	100	40		
88-216	150	43.5		
216-960	200	46		
Above 960	500	54		

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 213 and tested according to DTS test procedure of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 and 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

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

Both horizontal and vertical polarization 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: 213 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

4.6. Uncertainty

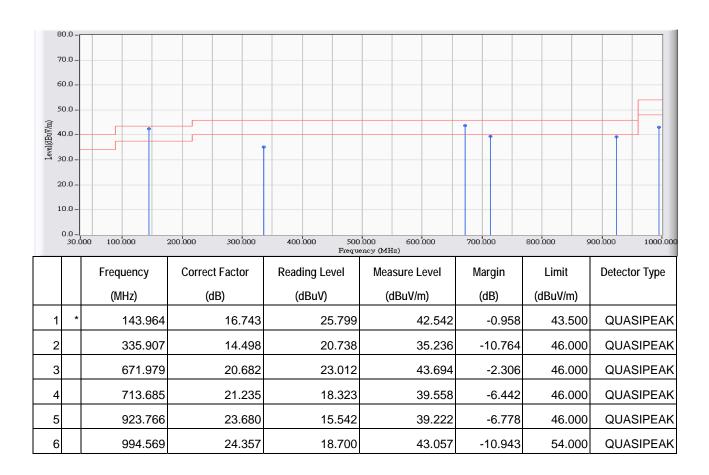
The measurement uncertainty 30MHz~1GHz as ±3.43dB 1GHz~26.5Ghz as ±3.65dB



4.7. Test Result

30MHz-1GHz Spurious

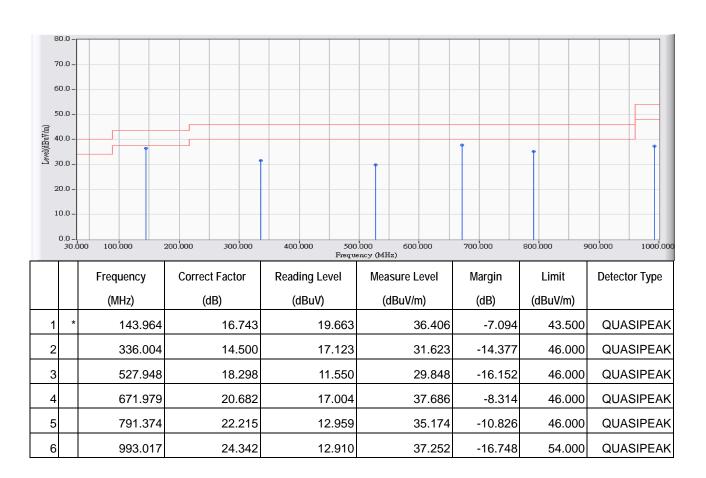
Site : CB1	Time : 2015/10/29 - 13:32
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_30M-1G-4_9161 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK _2440MHz



- 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 : 2015/10/29 - 13:35
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_30M-1G-4_9161 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK _2440MHz

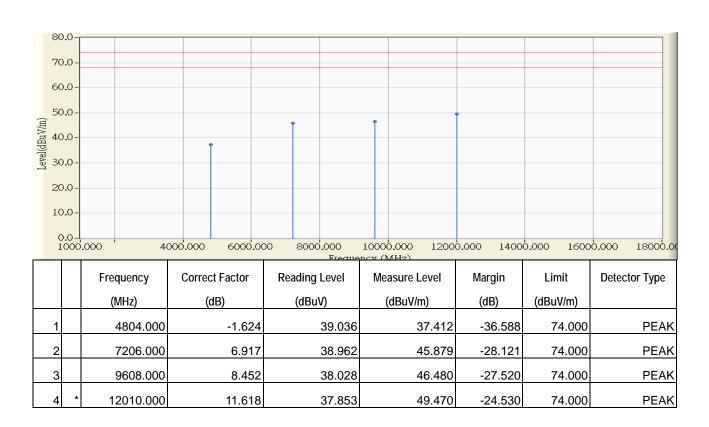


- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Above 1GHz Spurious

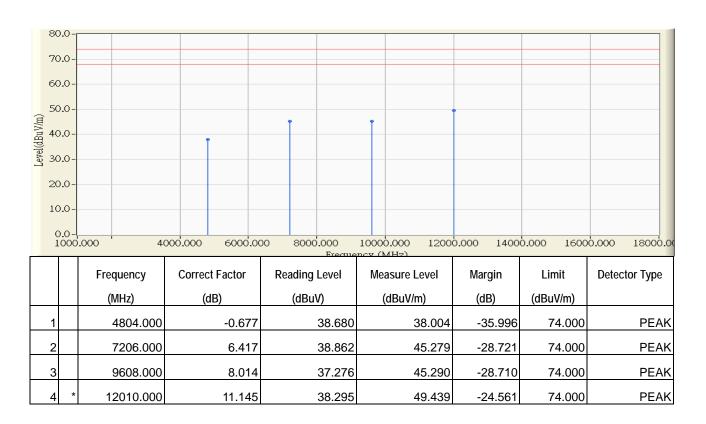
Site : CB1	Time : 2015/10/28 - 15:51
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2402MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



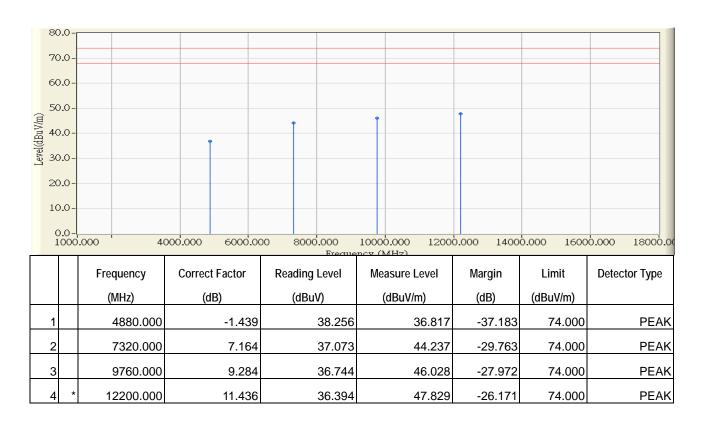
Site : CB1	Time : 2015/10/28 - 15:49
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2402MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



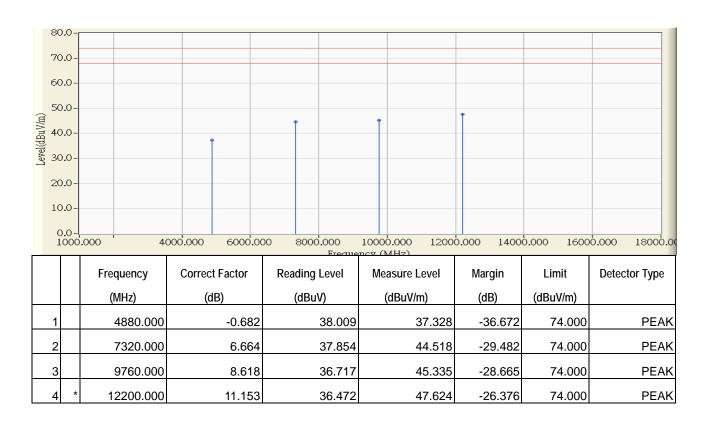
Site : CB1	Time : 2015/10/28 - 15:55
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2440MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



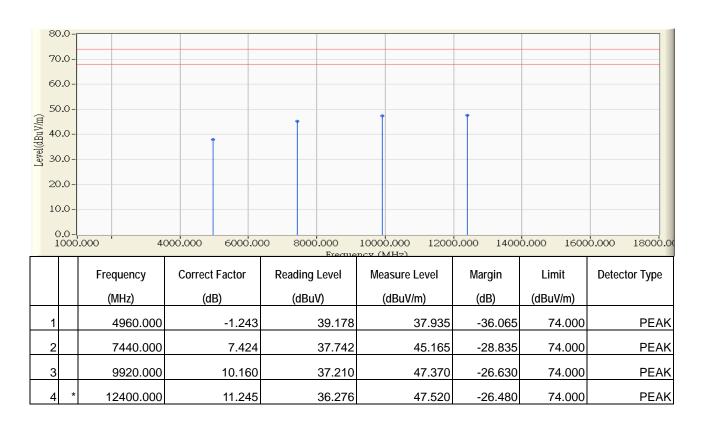
Site : CB1	Time : 2015/10/28 - 15:59
Limit : FCC_SpartC_15.247_H_03M_PK	Margin: 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2440MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



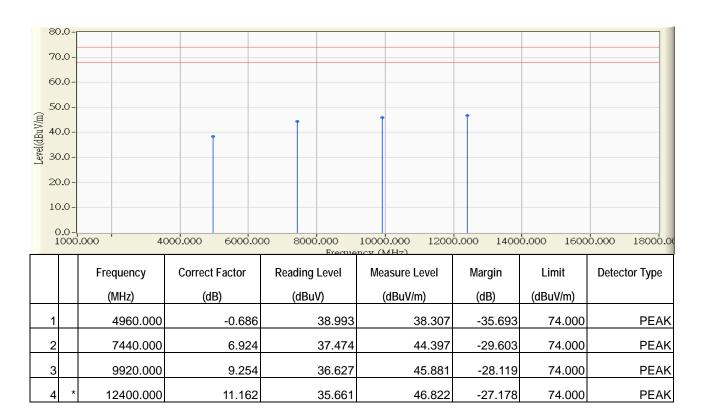
Site : CB1	Time : 2015/10/28 - 16:03
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2480MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



Site : CB1	Time : 2015/10/28 - 16:01
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power :DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit _GFSK_2480MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 18GHz were not included is because their levels are too low.



5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

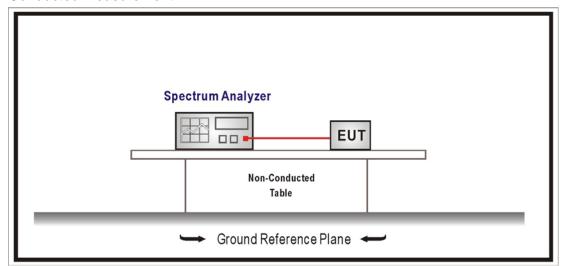
RF antenna conducted test / SR7

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	2016/01/19

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

5.2. Test Setup

Conducted Measurement:





5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power(RMS), based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to DTS test procedure section 11.0 of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW≧3xRBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

5.6. Uncertainty

Conducted is defined as ± 1.27dB

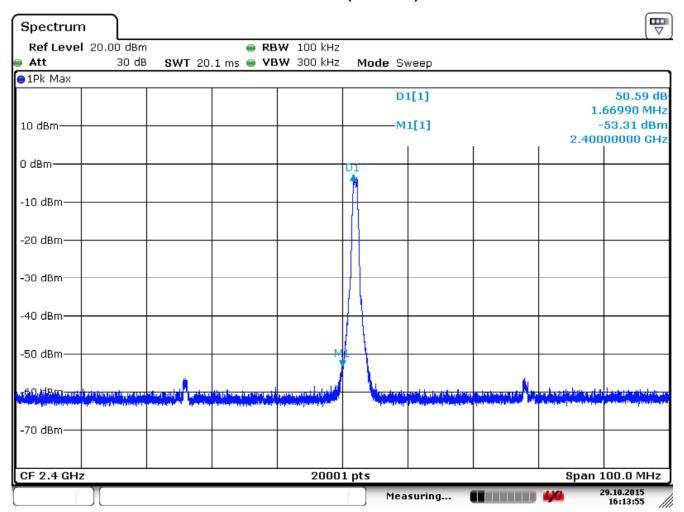


5.7. Test Result

Product	meMINI		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2015/10/14	Test Site	SR7

BLE 4.0 (GFSK)				
Channal Na	Frequency	Measure Level	Limit	Dooult
Channel No.	(MHz)	(dBc)	(dBc)	Result
00	2402	50.59	≧20	Pass
39	2480	53.45	≥20	Pass

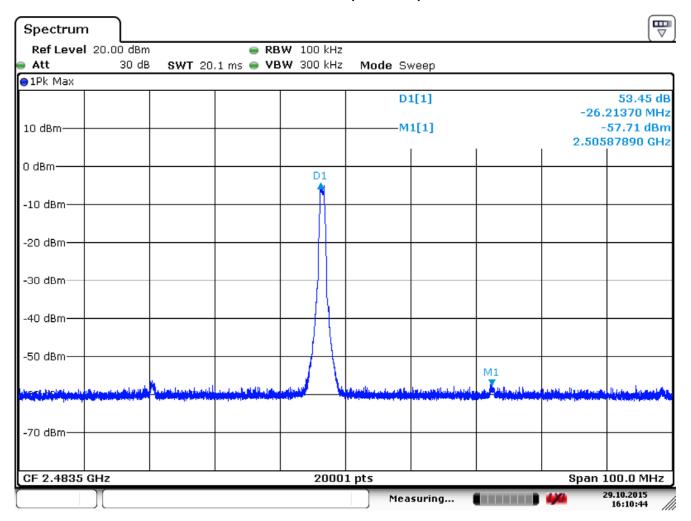
Channel 00 (2402MHz)



Date: 29.OCT.2015 16:13:55



Channel 39 (2480MHz)

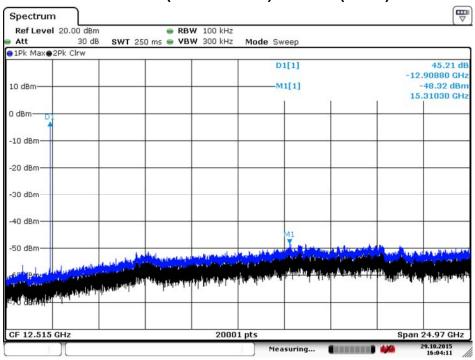


Date: 29.OCT.2015 16:10:44



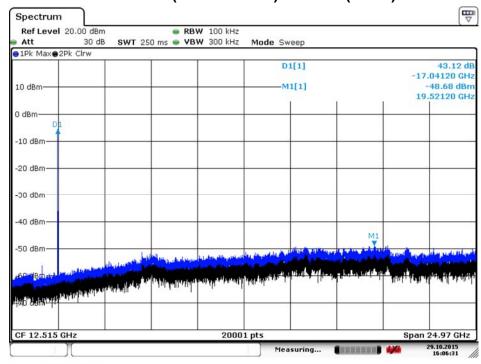
Product	meMINI		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit		
Date of Test	2015/10/29	Test Site	SR7

Channel 00 (30MHz-25GHz)- BLE 4.0 (GFSK)



Date: 29.OCT.2015 16:04:11

Channel 39 (30MHz-25GHz)- BLE 4.0 (GFSK)



Date: 29.OCT.2015 16:06:31



6. Band Edge

6.1. Test Equipment

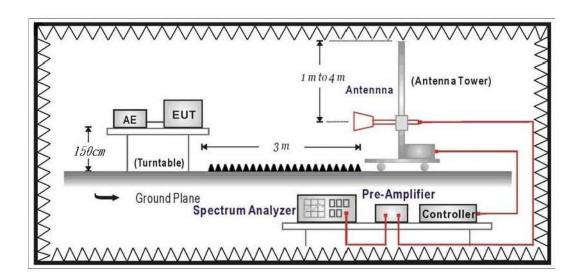
The following test equipments are used during the test:

Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide	Schwarzbeck	BBHA 9120	D743	2016/01/26
Horn Antenna				
Spectrum Analyzer	Agilent	E4440A	MY46187335	2016/01/07
k Type Cable	Huber+Suhner	SF 102	25623/2	2016/01/26

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

6.2. Test Setup





6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10: 213 and tested according to DTS test procedure of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements. The EUT and its simulators are placed on a turn table which is 1.5 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 polarization 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: 213 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

6.6. Uncertainty

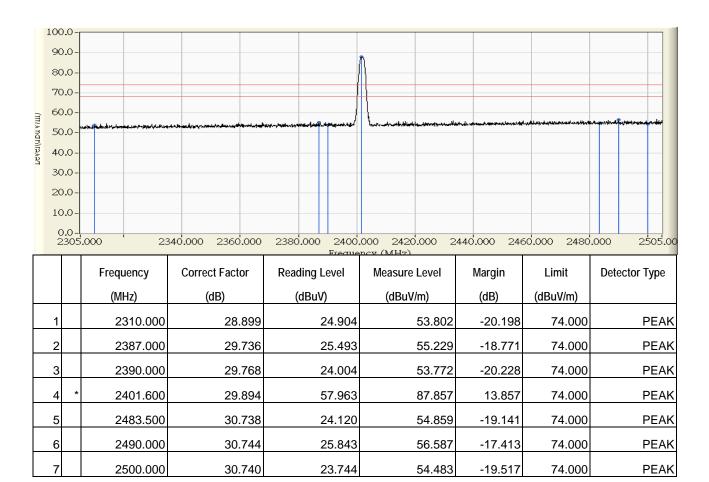
The measurement uncertainty ± 3.9 dB above 1GHz



6.7. Test Result

Radiated is defined as

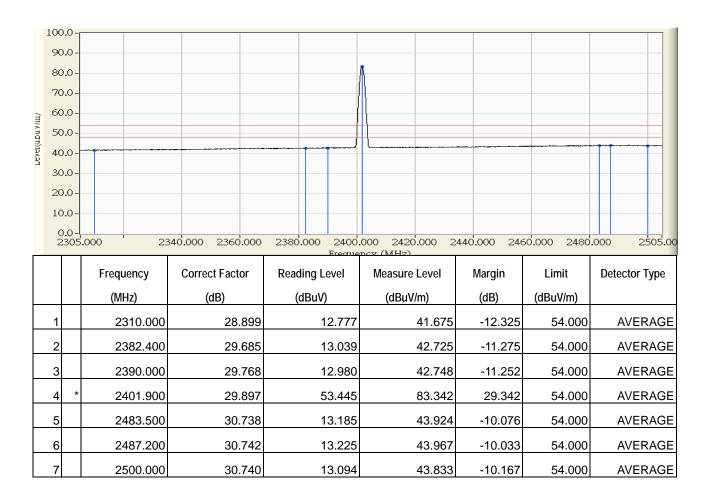
Site : CB1	Time : 2015/10/28 - 14:58
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2402MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection.



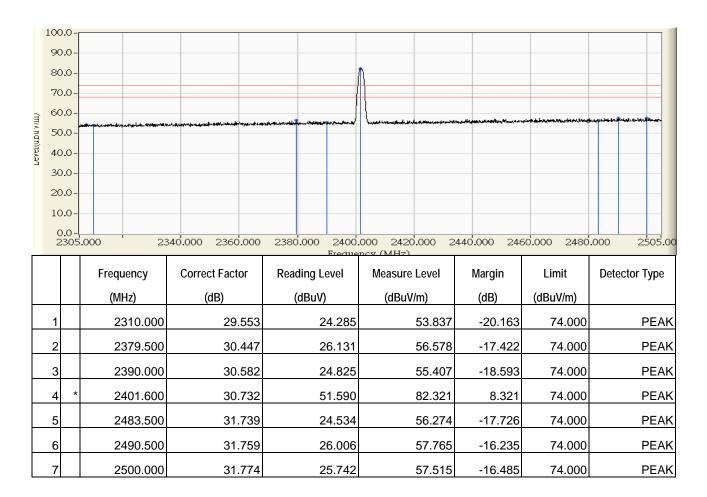
Site : CB1	Time : 2015/10/28 - 14:56
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2402MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



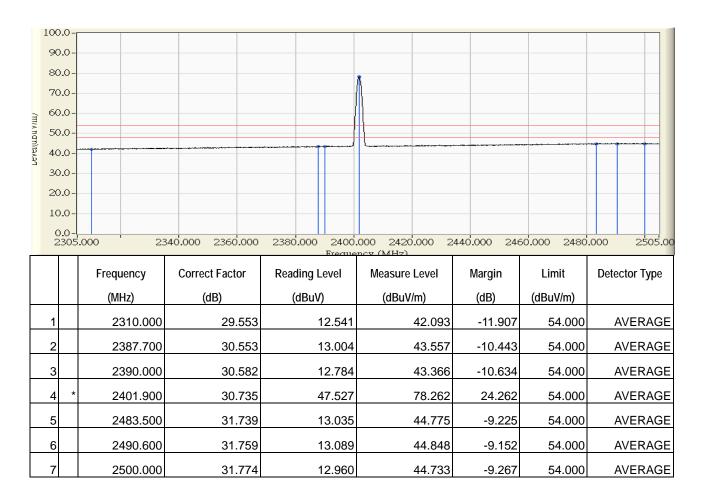
Site : CB1	Time : 2015/10/28 - 14:53
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2402MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



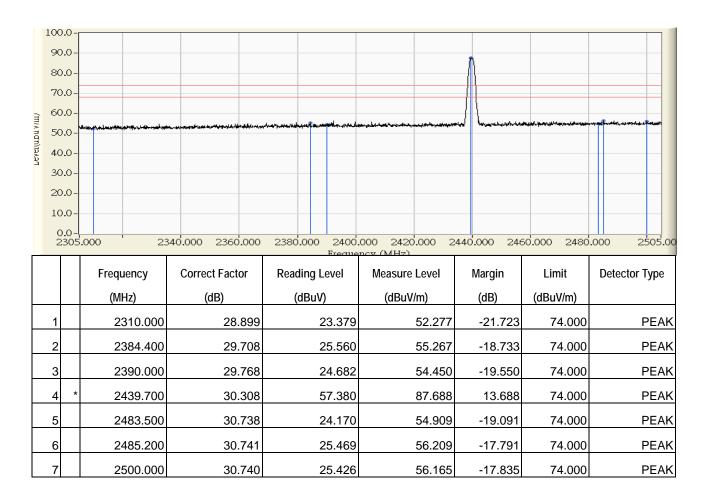
Site : CB1	Time : 2015/10/28 - 14:55
Limit : FCC_SpartC_15.247_H_03M_AV	Margin: 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2402MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



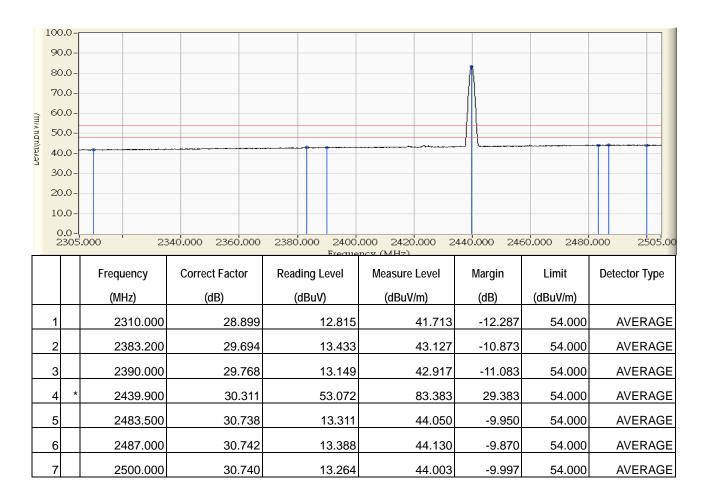
Site : CB1	Time : 2015/10/28 - 15:12
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2440MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



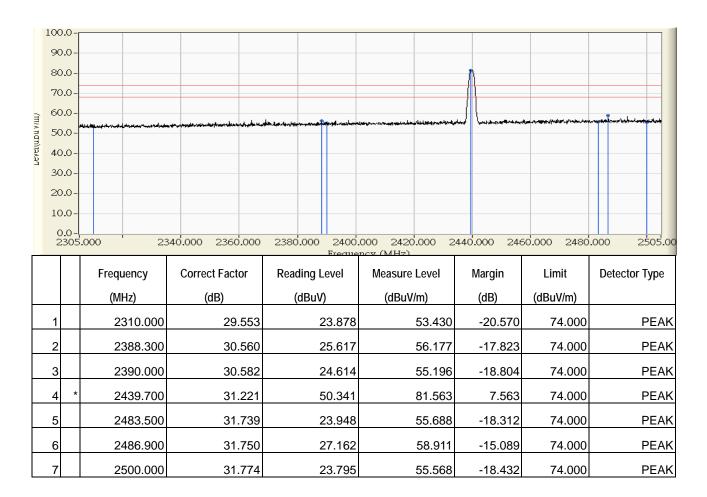
Site : CB1	Time : 2015/10/28 - 15:11
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2440MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



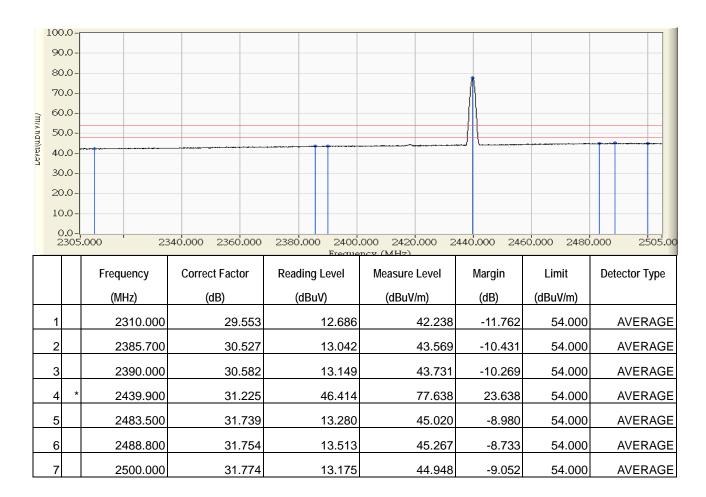
Site : CB1	Time : 2015/10/28 - 15:08
Limit : FCC_SpartC_15.247_H_03M_PK	Margin: 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2440MHz



- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



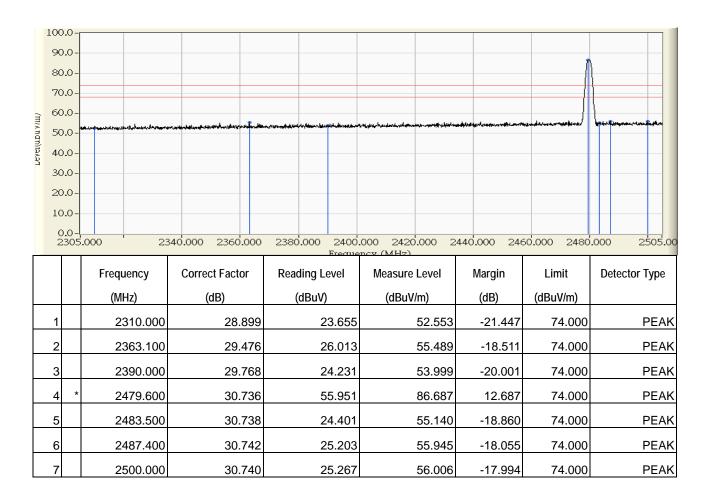
Site : CB1	Time : 2015/10/28 - 15:09
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2440MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



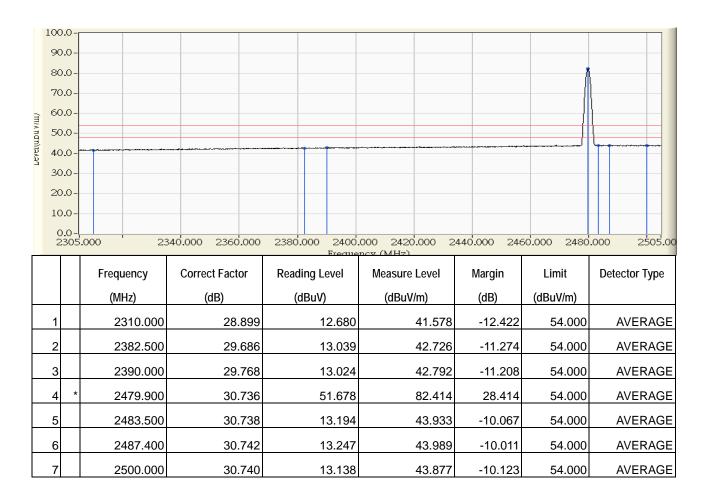
Site : CB1	Time : 2015/10/28 - 15:00
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2480MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



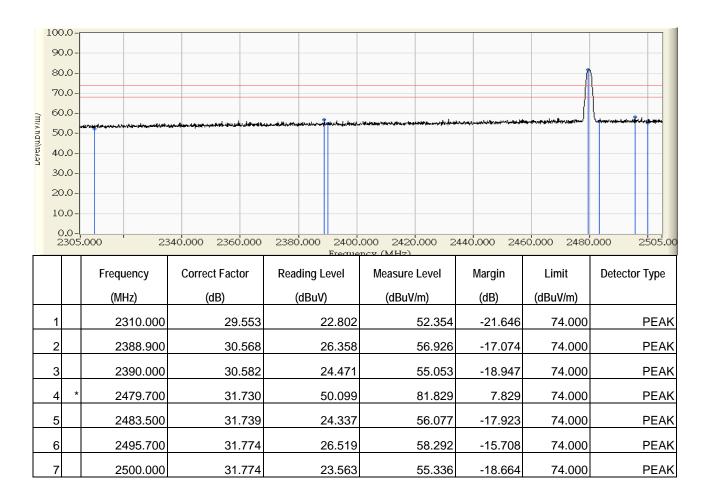
Site : CB1	Time : 2015/10/28 - 15:01
Limit: FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - HORIZONTAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2480MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



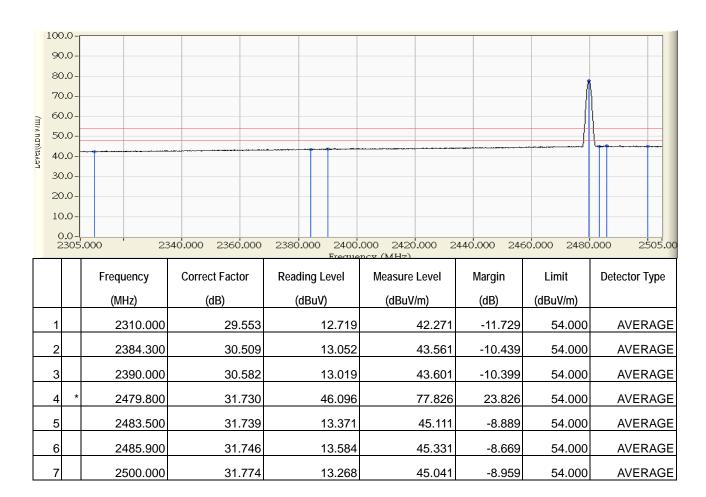
Site : CB1	Time : 2015/10/28 - 15:05
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2480MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Site : CB1	Time : 2015/10/28 - 15:03
Limit: FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G_H2 - VERTICAL	Power : DC 3.7V
EUT : meMINI	Note : Mode 1: Transmit_GFSK_2480MHz



- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.



7. DTS Occupied Bandwidth

7.1. Test Equipment

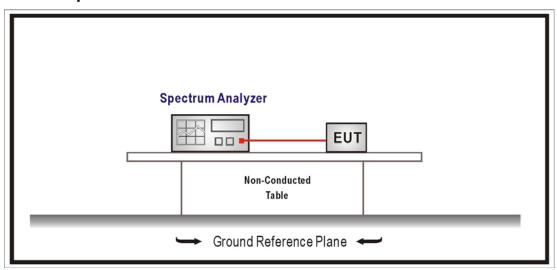
The following test equipments are used during the test:

DTS Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23

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

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.10:2013; tested according to DTS test procedure of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1-5% of the OBW, Set the VBW≧3xRBW, Sweep Time=Auto.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

7.6. Uncertainty

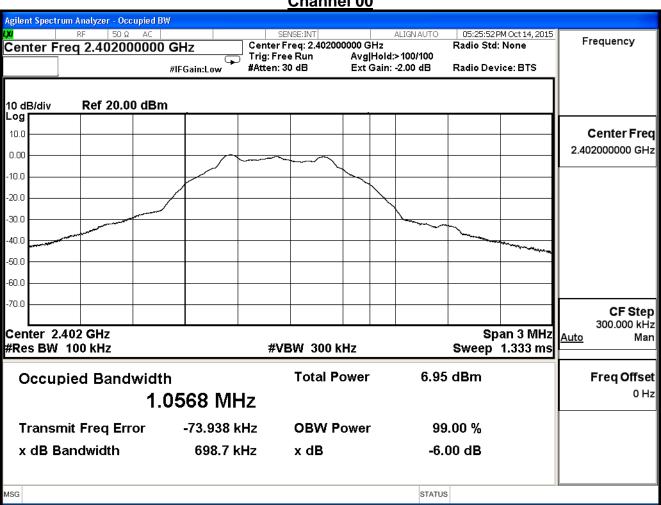
The measurement uncertainty is defined as ±150Hz



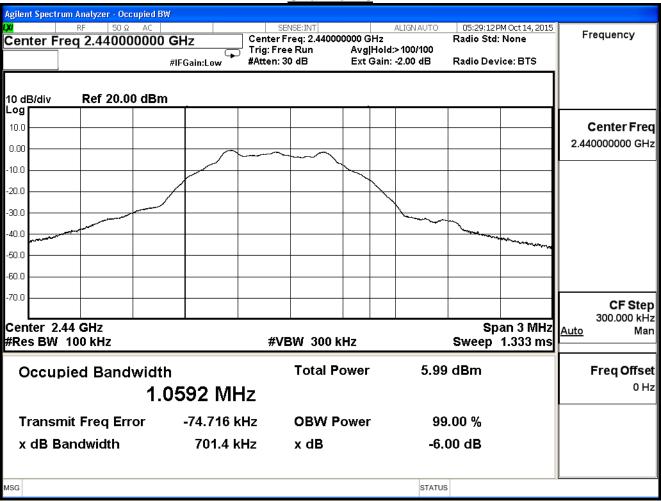
7.7. **Test Result**

Product	meMINI		
Test Item	DTS Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2015/10/14	Test Site	SR7

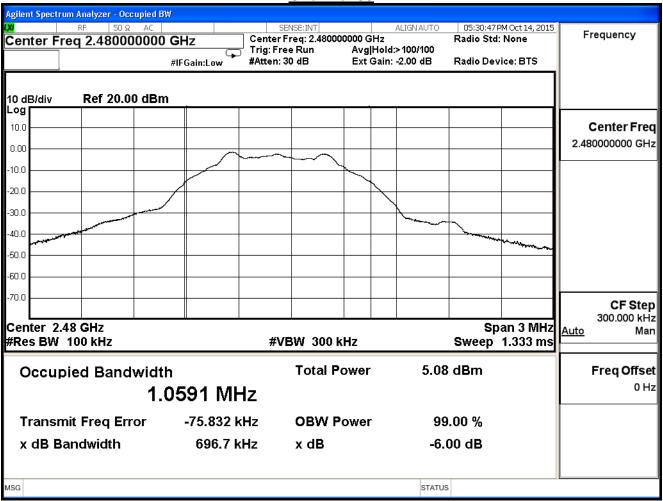
BLE 4.0 (GFSK)				
Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
00	2402	0.699	≧0.5	Pass
19	2440	0.701	≧0.5	Pass
39	2480	0.697	≥0.5	Pass













8. Power Density

8.1. Test Equipment

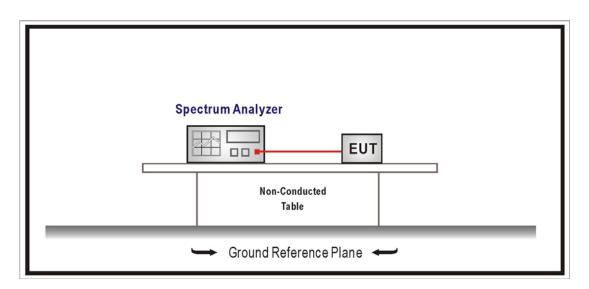
The following test equipment is used during the test:

Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2016/08/23

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

8.2. Test Setup



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure section 10.2 of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements. Set $3KHz \le RBW \le 100 \text{ kHz}$, Set $VBW \ge 3xRBW$, Sweep time=Auto, Set Peak detector; The tested according to section E)c) of KDB662911 v02v01.

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

8.6. Uncertainty

The measurement uncertainty is defined as ±1.27dB.



8.7. Test Result

Product	meMINI		
Test Item	Power Density		
Test Mode	Mode 1: Transmit		
Date of Test	2015/10/14	Test Site	SR7

BLE 4.0 (GFSK)					
Channal Na	Frequency	Measurement	Limit	Result	
Channel No.	(MHz)	(dBm)	(dBm)		
0	2402	-9.310	≦8	Pass	
19	2440	-10.081	≦8	Pass	
39	2480	-10.905	≦8	Pass	

