

# FCC C2PC REPORT

**Applicant** : Shenzhen Hanwei IoT Co., Ltd.  
Unit 801, University Town Venture Park, No.10

**Address** : Lishan Road, Taoyuan Street, Nanshan District, Shenzhen, Guangdong Province

**Product Name** : Mini Breath Alcohol Smart Sensor

**Brand Mark** : 

**Model** : Mini602-Alco-TB

**Series model** : N/A

**Report Number** : BLA-B-EMC-202407-A4502

**FCC ID** : 2BFDL-MINI602

**Date of Receipt** : 2024.07.09

**Date of Test** : 2024.07.10 to 2024.07.24

**Test Standard** : 47 CFR Part 15, Subpart C 15.247

**Test Result** : Pass

Compiled by:

charlie

Review by:

Sueela

Approved by:

Shiye.Zheng

Issued Date:

2024.07.25



**BlueAsia of Technical Services (Shenzhen) Co., Ltd.**

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## Revise Record

Version No.	Date	Description
01	2024.07.25	Original

BlueAsia

## 1 General information

### 1.1 General information

Applicant	Shenzhen Hanwei IoT Co., Ltd.
Address	Unit 801, University Town Venture Park, No.10 Lishan Road, Taoyuan Street, Nanshan District, Shenzhen, Guangdong Province
Manufacturer	Shenzhen Hanwei IoT Co., Ltd.
Address	Unit 801, University Town Venture Park, No.10 Lishan Road, Taoyuan Street, Nanshan District, Shenzhen, Guangdong Province
Factory	Shenzhen Hanwei IoT Co., Ltd.
Address	Unit 801, University Town Venture Park, No.10 Lishan Road, Taoyuan Street, Nanshan District, Shenzhen, Guangdong Province

### 1.2 General description of EUT

Product name	Mini Breath Alcohol Smart Sensor
Model No.	Mini602-Alco-TB
Series model	N/A
Desc of series model	N/A
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB Antenna
Antenna Gain:	1.5dBi(Provided by the customer)
Power supply or adapter information	DC5V
Hardware Version	V1.0.0
Software Version	V1.0.0
Engineer sample no	BLA-B-EMC-202407-A45

*Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.*

## 2 Test summary

No.	Test item	Result	Remark
1	Radiated Spurious Emissions	Pass	
2	Radiated Emissions which fall in the restricted bands	Pass	
3	Conducted Peak Output Power	Pass	

### Remark:

The above test items are the C2PC report. The above test is based on the power supply port changes, and only Radiated Spurious Emissions and Radiated Emissions which fall in the restricted bands pass all the test standards. For other test items, please refer to the original report number: BLA-EMC-202403-A2902

### 3 Test Configuration

#### 3.1 Test mode

Test Mode <sup>Note 1</sup>	Description
TX	Keep the EUT in continuously transmitting with modulation mode.
RX	Keep the EUT in receiving mode.
TX Low channel	Keep the EUT in continuously transmitting mode in low channel.
TX middle channel	Keep the EUT in continuously transmitting mode in middle channel.
TX high channel	Keep the EUT in continuously transmitting mode in high channel.

*Note 1: The EUT was configured to measure its highest possible emission and/or immunity level. The test modes were adapted according to the operation manual for use.*

#### 3.2 Operation Frequency each of channel

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
...	...	...	...	...	...	...	...
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

#### 3.3 Test channel

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz

### 3.4 Auxiliary equipment

Device Type	Manufacturer	Model Name	Serial No.	Remark
PC	Lenovo	E460C	N/A	From lab (No.BLA-ZC-BS-2022005)

**Note:**  
"--" mean no any auxiliary device during testing.

### 3.5 Test environment

Environment	Temperature	Voltage
Normal	25°C	DC 3.7V

## 4 Laboratory information

### 4.1 Laboratory and accreditations

The test facility is recognized, certified, or accredited by the following organizations:

Company name:	BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Address:	Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China
CNAS accredited No.:	L9788
A2LA Cert. No.:	5071.01
FCC Designation No.:	CN1252
ISED CAB identifier No.:	CN0028
Telephone:	+86-755-28682673
FAX:	+86-755-28682673

### 4.2 Measurement uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=1.96$ .

Parameter	Expanded Uncertainty
Radiated Emission(9kHz-30MHz)	$\pm 4.34\text{dB}$
Radiated Emission(30Mz-1000MHz)	$\pm 4.24\text{dB}$
Radiated Emission(1GHz-18GHz)	$\pm 4.68\text{dB}$
AC Power Line Conducted Emission(150kHz-30MHz)	$\pm 3.45\text{dB}$
Occupied Channel Bandwidth	$\pm 5\%$
RF output power, conducted	$\pm 1.5\text{ dB}$
Power Spectral Density, conducted	$\pm 3.0\text{ dB}$
Unwanted Emissions, conducted	$\pm 3.0\text{ dB}$
Temperature	$\pm 3\text{ }^{\circ}\text{C}$
Supply voltages	$\pm 3\%$
Time	$\pm 5\%$

## 5 Test equipment

Equipment No.	Equipment Name	Model No.	Manufacturer	S/N	Cal. Date	Next Cal. Date
BLA-EMC-008	Spectrum	FSP40	R&S	100817	2023/08/30	2024/08/29
BLA-EMC-009	EMI Receiver	ESR7	R&S	101199	2023/08/30	2024/08/29
BLA-EMC-011	LISN	ENV216	R&S	101372	2023/08/30	2024/08/29
BLA-EMC-012	broad band Antenna	VULB9168	Schwarz beck	00836 P:00227	2022/10/12	2025/10/11
BLA-EMC-013	Horn Antenna	BBHA9120D	Schwarz beck	01892	2022/09/13	2025/09/12
BLA-EMC-014	Amplifier	PA_000318G-45	SKET	PA2018043003	2023/08/30	2024/08/29
BLA-EMC-016	Signal Generator	N5182A	Agilent	MY52420567	2023/11/16	2024/11/15
BLA-EMC-028	Spectrum	N9020A	Agilent	MY53420839	2023/11/16	2024/11/15
BLA-EMC-038	Spectrum	N9020A	Agilent	MY49100060	2023/08/30	2024/08/29
BLA-EMC-041	LISN	AT166-2	ATTEN	AKK1806000003	2023/08/30	2024/08/29
BLA-EMC-042	Power sensor	RPR3006W	DARE	14I00889SN042	2023/09/01	2024/08/31
BLA-EMC-043	Loop antenna	FMZB1519B	SCHNARZBECK	00102	2022/09/14	2025/09/13
BLA-EMC-044	Wideband radio communication tester	CMW500	R&S	132429	2023/08/30	2024/08/29
BLA-EMC-045	Impedance stable network	ISNT8-cat6	TESEQ	53580	2023/08/30	2024/08/29
BLA-EMC-046	Filter bank	2.4G/5G Filter bank	SKET	N/A	2023/07/07	2025/07/06
BLA-EMC-061	Receiver	ESPI7	R&S	101477	2023/07/07	2025/07/06
BLA-EMC-062	Signal Generator	N5181A	Agilent	MY46240904	2023/07/07	2025/07/06
BLA-EMC-064	Signal Generator	N5182B	KEYSIGHT	MY58108892	2023/07/07	2025/07/06
BLA-EMC-065	broadband Antenna	VULB9168	Schwarz beck	01065P	2022/12/12	2025/12/11
BLA-EMC-066	Amplifier	LNPA_30M01G-30	SKET	SK2021060801	2023/07/07	2025/07/06
BLA-EMC-079	Spectrum	N9020A	Agilent	MY54420161	2023/08/30	2024/08/29
BLA-EMC-080	Signal Generator	N5182A	Agilent	MY47420955	2023/08/30	2024/08/29
BLA-EMC-086	Amplifier	LNPA_18G40G-50dB	SKET	SK2022071301	2023/08/14	2024/08/13

## 6 Test result

### 6.1 Radiated spurious emissions

<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 6.4,6.5,6.6
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX

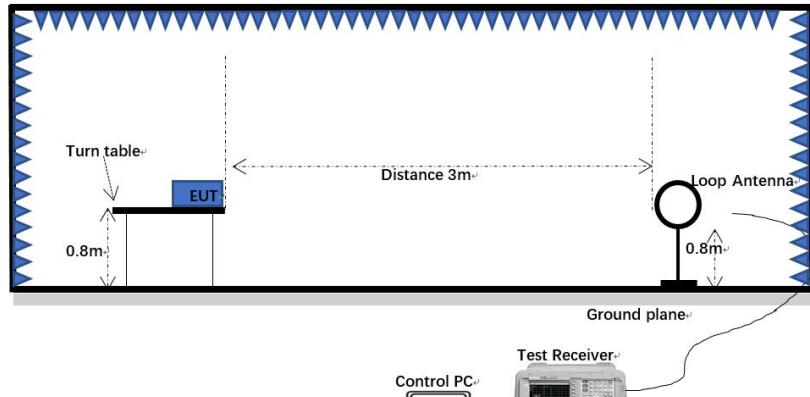
#### 6.1.1 Limit

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

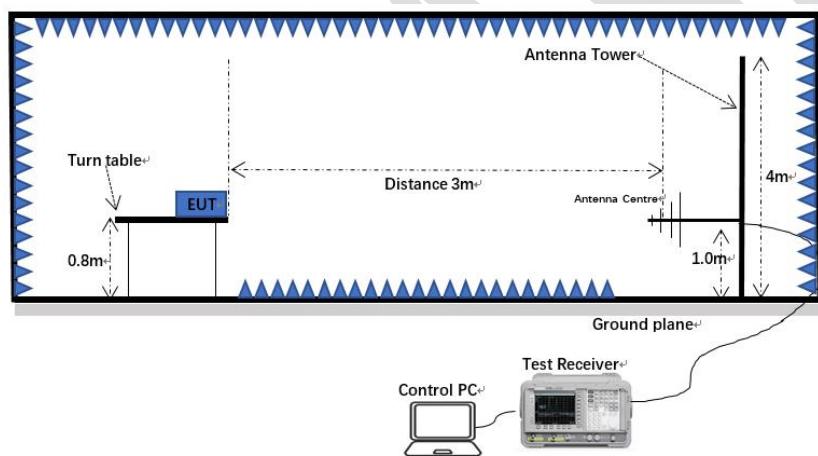
*Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.*

### 6.1.2 Test setup

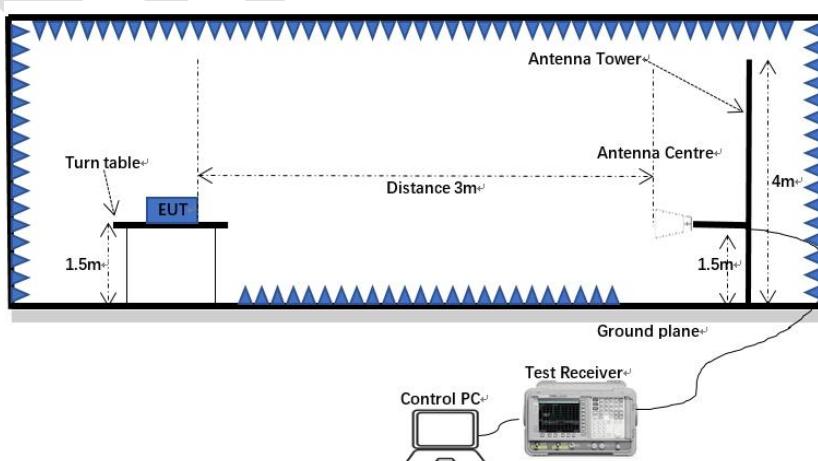
Below 1GHz:



30MHz-1GHz:



Above 1GHz:



### 6.1.3 Procedure

- a) For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b) For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c) The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d) The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g) If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h) Test the EUT in the lowest channel, the middle channel, the highest channel.
- i) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j) Repeat above procedures until all frequencies measured was complete.

*Note 1: Scan from 9 kHz to 25GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. Fundamental frequency is blocked by filter, and only spurious emission is shown.*

*Note 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.*

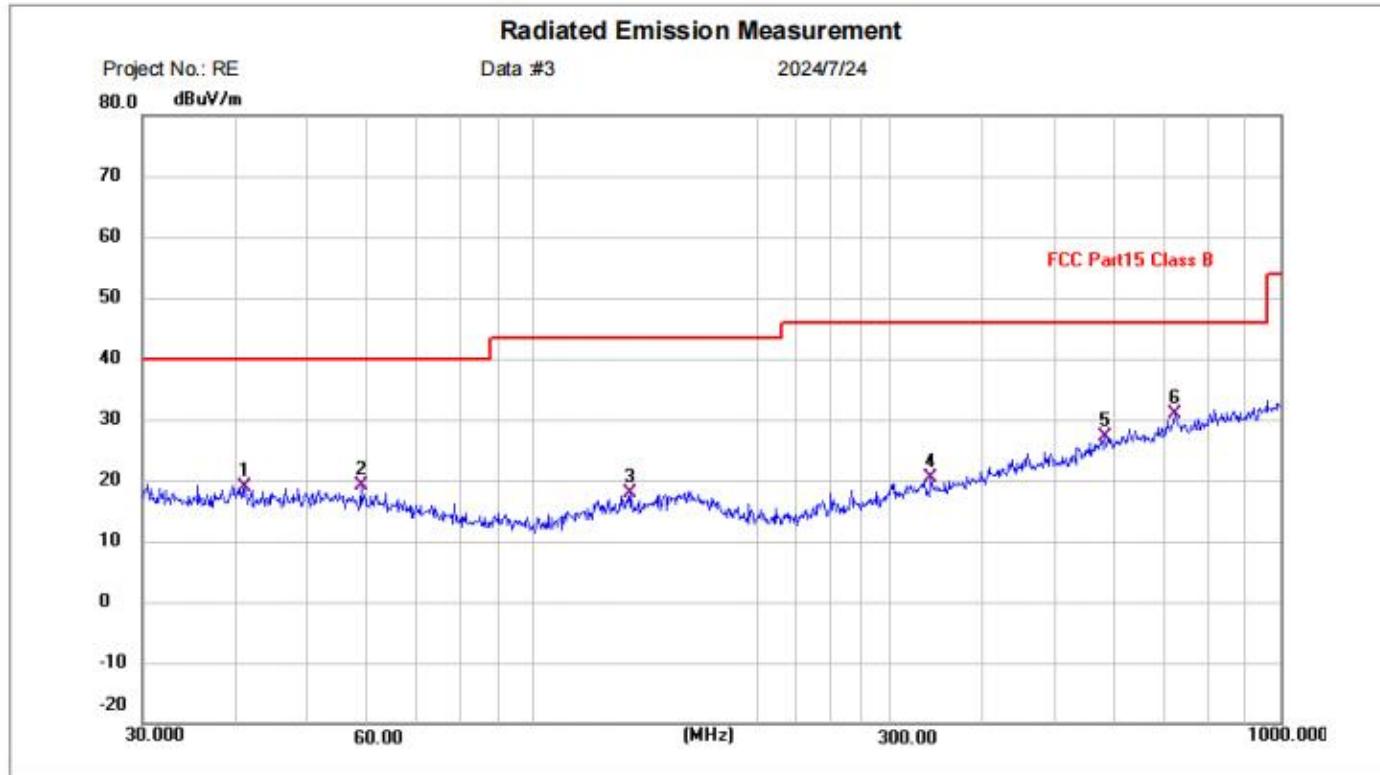
*Note 3: The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:*

$$\text{Level (dBuV)} = \text{Reading (dBuV)} + \text{Factor (dB/m)}$$

### 6.1.4 Test data

Below 1GHz

[Test mode: TX]; [Polarity: Horizontal]



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 Class B	Power:	Humidity: %RH
EUT: Mini Breath Alcohol Smart Sensor		
M/N: Mini602-Alco-TB		
Mode: BLE TX Mode		
Note:		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	41.1320	-0.80	19.67	18.87	40.00	-21.13	QP	P	
2	58.8185	0.40	18.77	19.17	40.00	-20.83	QP	P	
3	135.0319	-0.77	18.70	17.93	43.50	-25.57	QP	P	
4	340.7817	0.11	20.27	20.38	46.00	-25.62	QP	P	
5	582.7425	0.62	26.45	27.07	46.00	-18.93	QP	P	
6 *	721.7259	2.25	28.56	30.81	46.00	-15.19	QP	P	

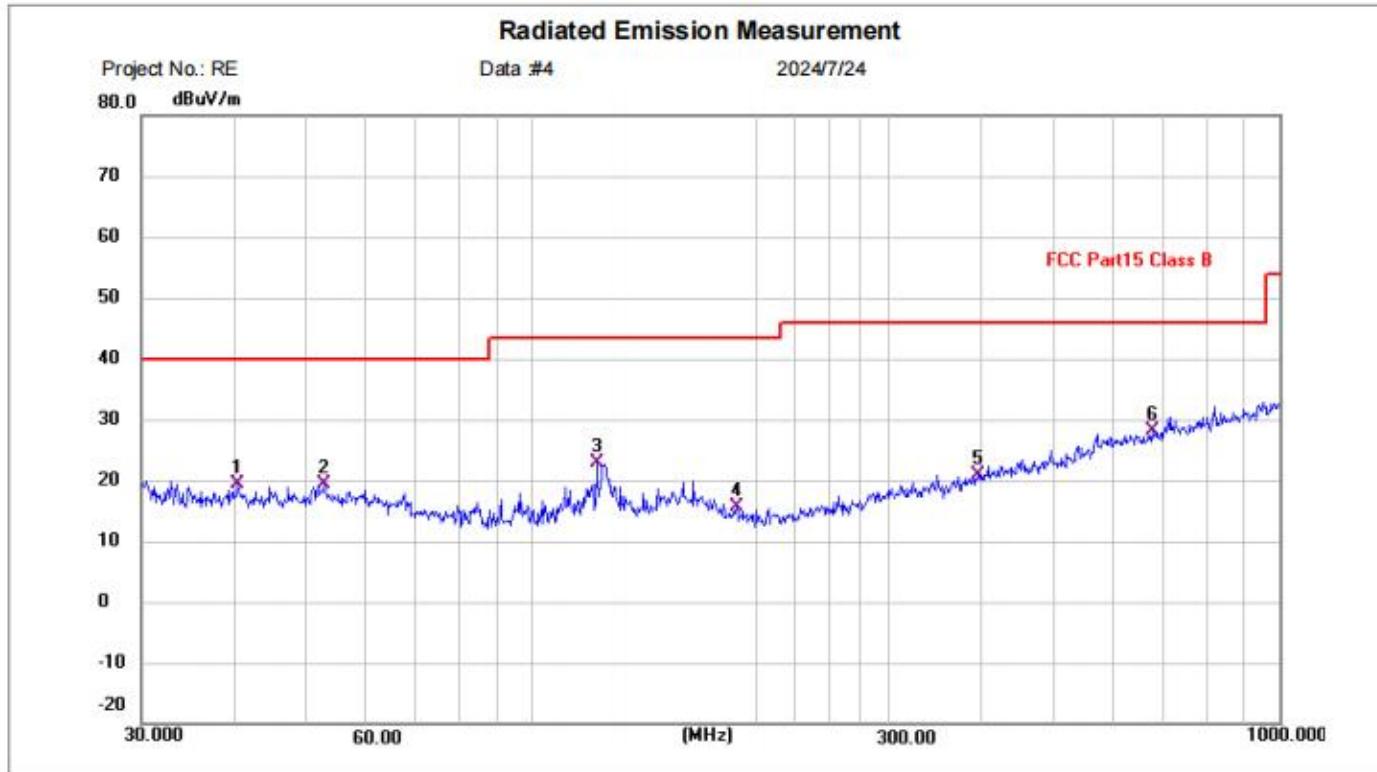
**Test Result: Pass**

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[Test mode: TX]; [Polarity: Vertical]



Site  
Limit: FCC Part15 Class B  
EUT: Mini Breath Alcohol Smart Sensor  
M/N: Mini602-Alco-TB  
Mode: BLE TX Mode  
Note:

Polarization: *Vertical*

Power:

Temperature: (C)

Humidity: 0%RH

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	40.4172	-0.53	19.80	19.27	40.00	-20.73	QP	P	
2	52.5753	0.25	19.24	19.49	40.00	-20.51	QP	P	
3	121.9755	4.99	17.86	22.85	43.50	-20.65	QP	P	
4	187.7530	-0.94	16.61	15.67	43.50	-27.83	QP	P	
5	394.8545	-1.02	21.97	20.95	46.00	-25.05	QP	P	
6 *	675.2080	0.72	27.32	28.04	46.00	-17.96	QP	P	

## Test Result: Pass

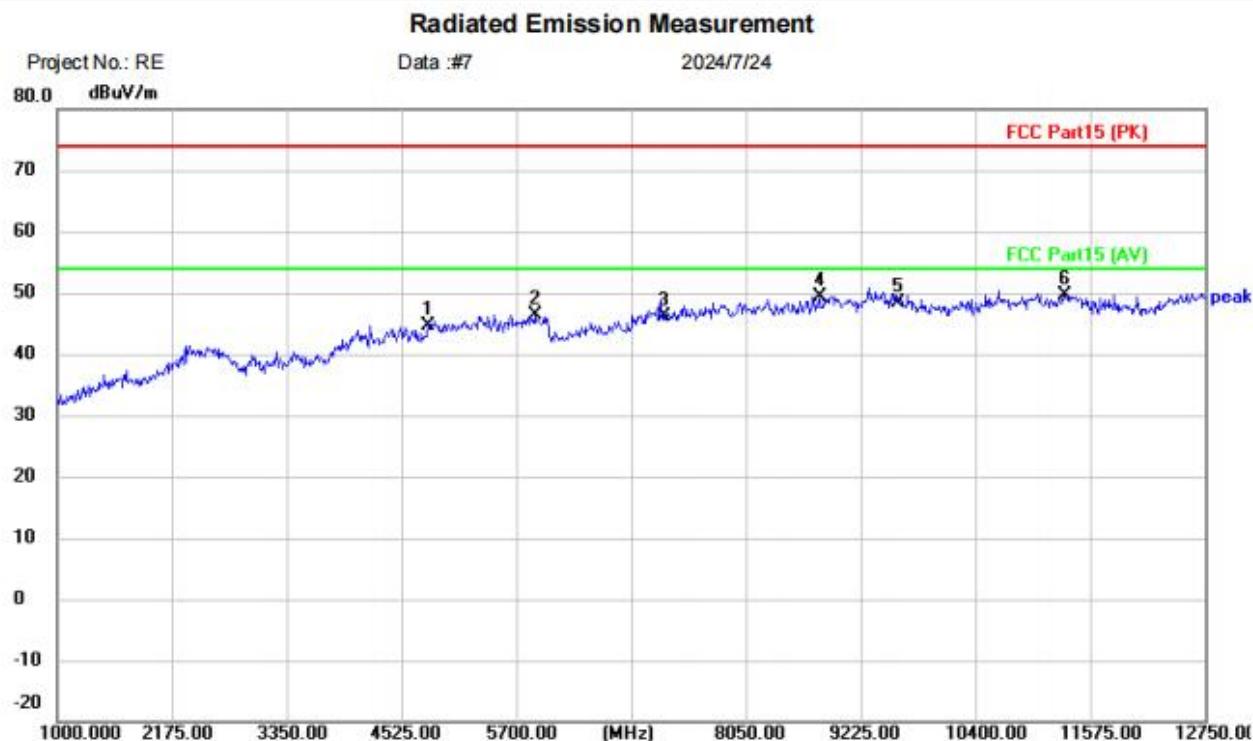
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### Above 1GHz:

[Test mode: TX low channel]; [Polarity: Horizontal]

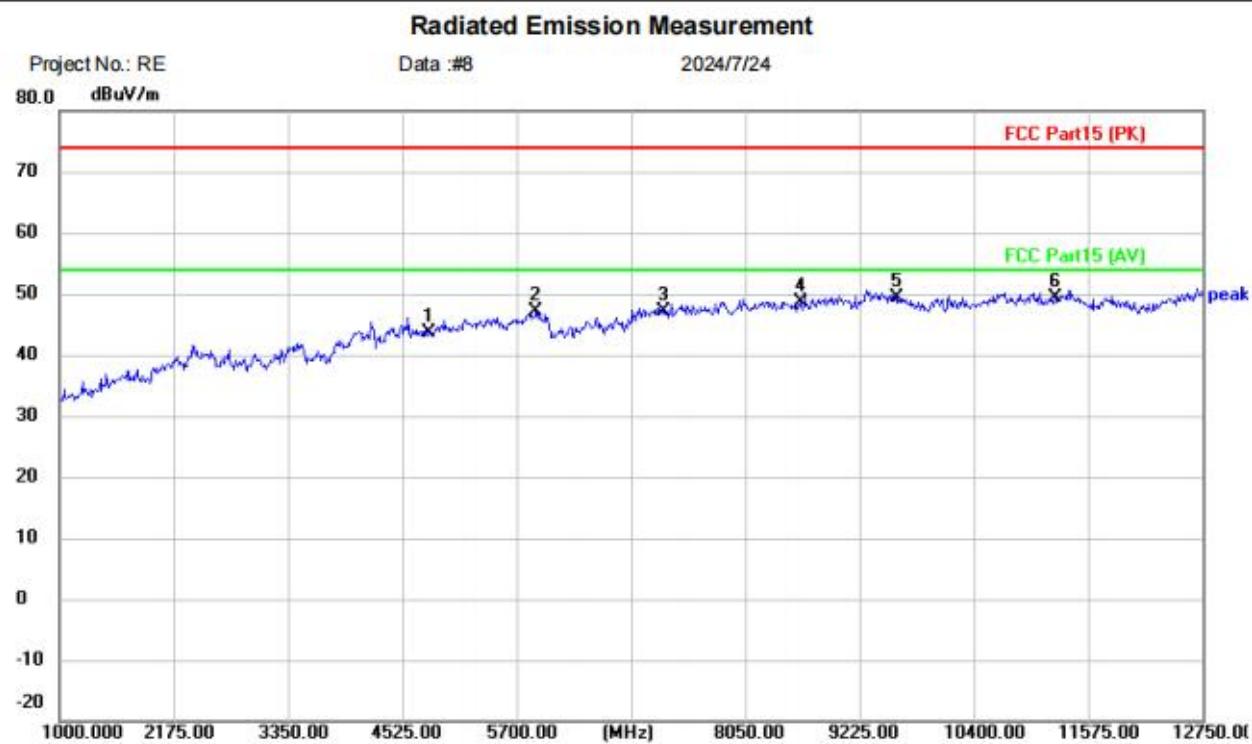


Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: Mini Breath Alcohol Smart Sensor		
M/N: Mini602-Alco-TB		
Mode: BLE1M TX 2402		
Note:		

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4804.000	39.11	5.64	44.75	74.00	-29.25	peak	
2		5888.000	37.87	8.60	46.47	74.00	-27.53	peak	
3		7206.000	36.89	9.24	46.13	74.00	-27.87	peak	
4		8802.000	37.80	11.68	49.48	74.00	-24.52	peak	
5		9608.000	36.05	12.31	48.36	74.00	-25.64	peak	
6	*	11316.50	36.95	12.69	49.64	74.00	-24.36	peak	

## Test Result: Pass

[Test mode: TX low channel]; [Polarity: Vertical]



Site: Limit: FCC Part15 (PK) Polarization: **Vertical** Temperature: (C)  
EUT: Mini Breath Alcohol Smart Sensor Power: Humidity: %RH  
M/N: Mini602-Alco-TB  
Mode: BLE1M TX 2402  
Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4804.000	37.88	5.64	43.52	74.00	-30.48	peak	
2		5899.750	38.41	8.66	47.07	74.00	-26.93	peak	
3		7206.000	37.79	9.24	47.03	74.00	-26.97	peak	
4		8614.000	37.54	11.16	48.70	74.00	-25.30	peak	
5		9608.000	37.00	12.31	49.31	74.00	-24.69	peak	
6	*	11234.25	36.63	12.69	49.32	74.00	-24.68	peak	

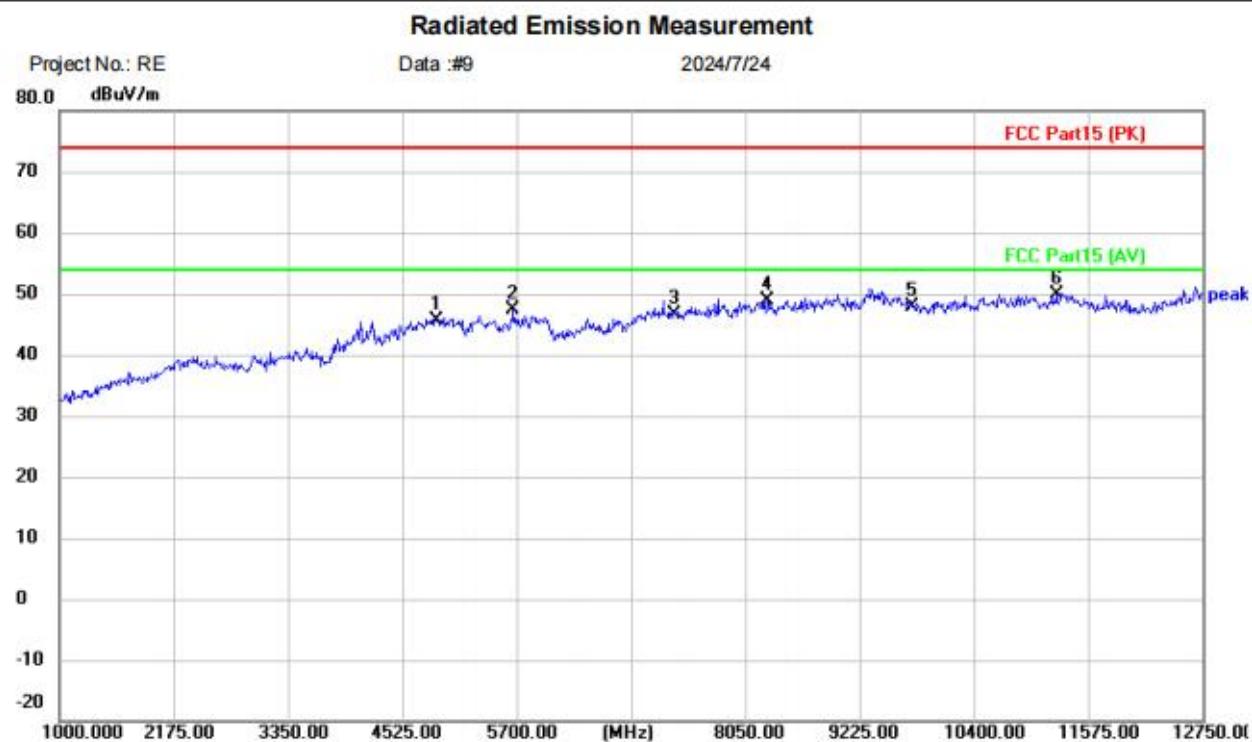
## Test Result: Pass

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[Test mode: TX middle channel]; [Polarity: Horizontal]



Site Polarization: **Horizontal** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

## EUT: Mini Breath Alcohol Smart Sensor

M/N: Mini602-Alco-TB

Mode: BLE1M TX 2442

**Note:**

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment		dB	Detector
1		4884.000	39.89	5.75	45.64	74.00	-28.36	peak
2		5664.750	39.57	7.83	47.40	74.00	-26.60	peak
3		7326.000	37.13	9.43	46.56	74.00	-27.44	peak
4		8273.250	38.93	10.05	48.98	74.00	-25.02	peak
5		9768.000	35.55	12.22	47.77	74.00	-26.23	peak
6	*	11246.00	37.14	12.71	49.85	74.00	-24.15	peak

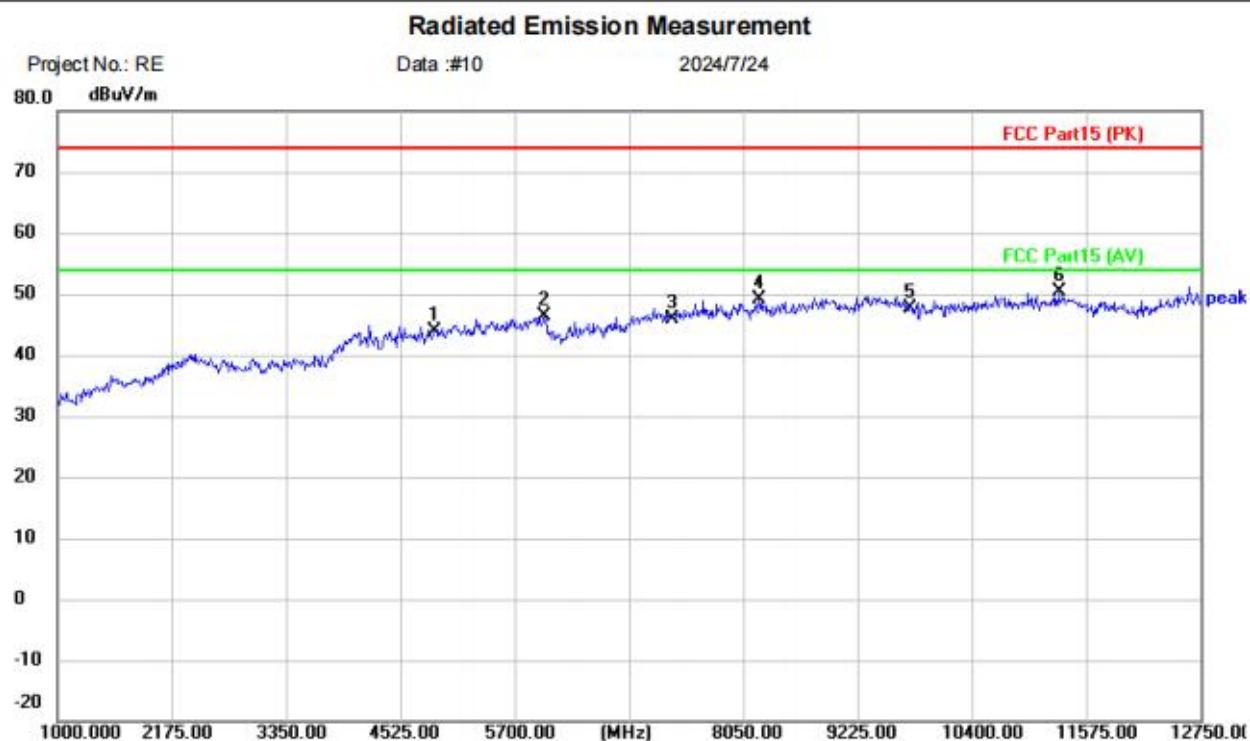
## Test Result: Pass

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[Test mode: TX middle channel]; [Polarity: Vertical]

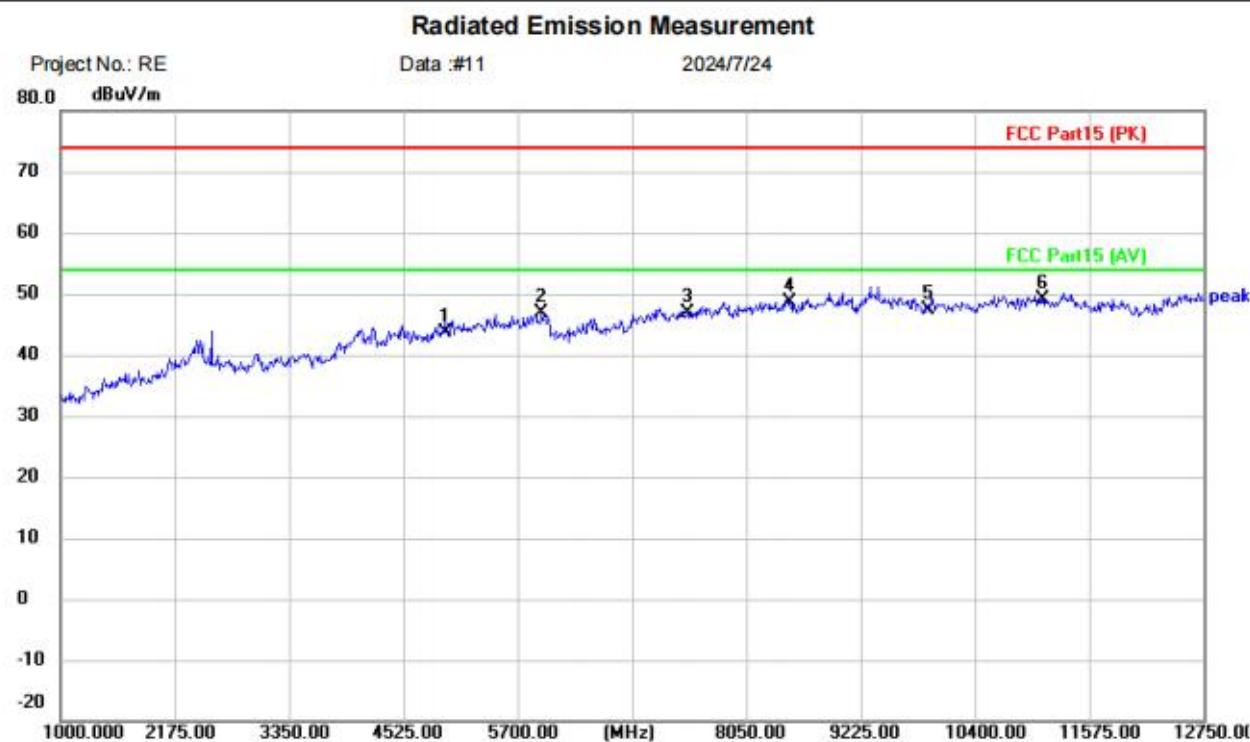


Site: Limit: FCC Part15 (PK) Polarization: **Vertical** Temperature: (C)  
EUT: Mini Breath Alcohol Smart Sensor Power: Humidity: %RH  
M/N: Mini602-Alco-TB  
Mode: BLE1M TX 2442  
Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4884.000	38.15	5.75	43.90	74.00	-30.10	peak	
2		6005.500	40.66	5.61	46.27	74.00	-27.73	peak	
3		7326.000	36.44	9.43	45.87	74.00	-28.13	peak	
4		8214.500	39.24	9.87	49.11	74.00	-24.89	peak	
5		9768.000	35.41	12.22	47.63	74.00	-26.37	peak	
6	*	11293.00	37.74	12.70	50.44	74.00	-23.56	peak	

## Test Result: Pass

[Test mode: TX High channel]; [Polarity: Horizontal]

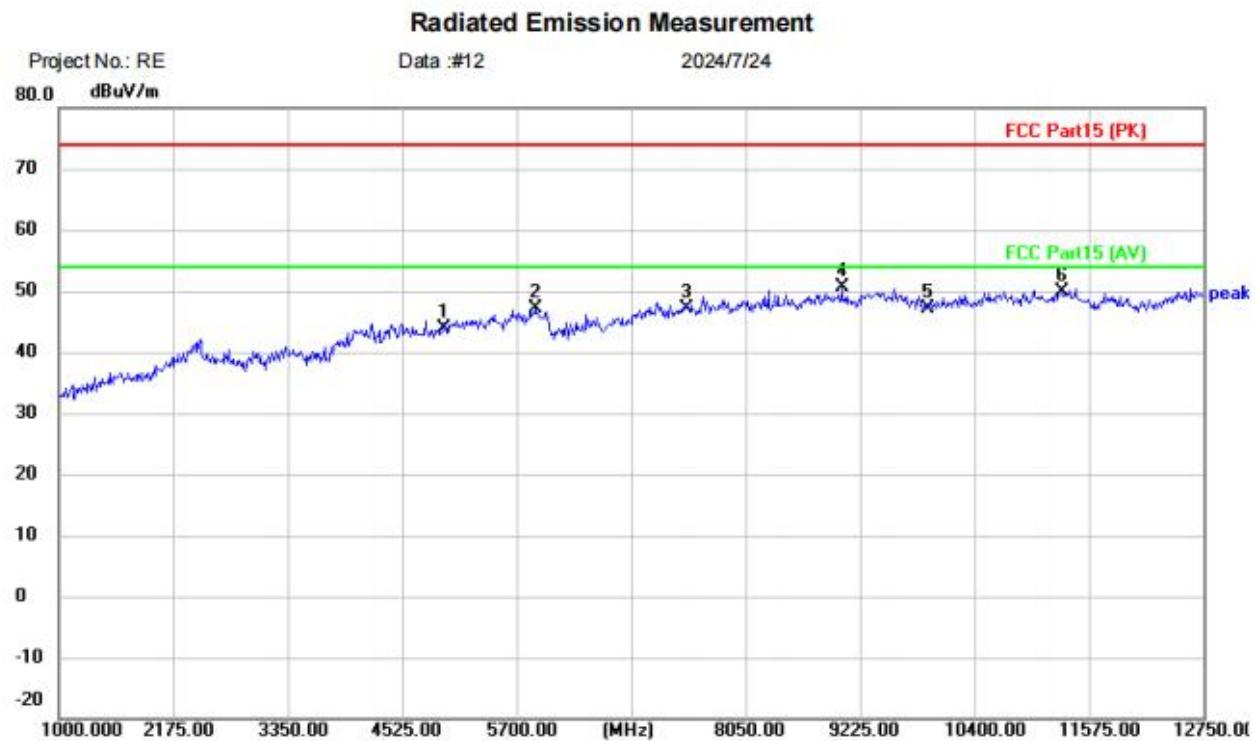


Site: Limit: FCC Part15 (PK) EUT: Mini Breath Alcohol Smart Sensor M/N: Mini602-Alco-TB Mode: BLE1M TX 2480 Note: Polarization: **Horizontal** Power: Temperature: (C) Humidity: %RH

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	37.02	6.60	43.62	74.00	-30.38	peak	
2		5946.750	38.22	8.71	46.93	74.00	-27.07	peak	
3		7440.000	37.32	9.64	46.96	74.00	-27.04	peak	
4		8496.500	37.68	10.90	48.58	74.00	-25.42	peak	
5		9920.000	35.36	12.14	47.50	74.00	-26.50	peak	
6	*	11093.25	36.34	12.83	49.17	74.00	-24.83	peak	

## Test Result: Pass

[Test mode: TX High channel]; [Polarity: Vertical]



Site: Limit: FCC Part15 (PK) EUT: Mini Breath Alcohol Smart Sensor M/N: Mini602-Alco-TB Mode: BLE1M TX 2480 Note: Polarization: **Vertical** Power: Temperature: (C) Humidity: %RH

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over			
			Level	Factor	ment		Detector	Comment		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	37.35	6.60	43.95	74.00	-30.05	peak		
2		5888.000	38.43	8.60	47.03	74.00	-26.97	peak		
3		7440.000	37.42	9.64	47.06	74.00	-26.94	peak		
4	*	9037.000	38.44	12.19	50.63	74.00	-23.37	peak		
5		9920.000	35.07	12.14	47.21	74.00	-26.79	peak		
6		11304.75	37.06	12.70	49.76	74.00	-24.24	peak		

## Test Result: Pass

## 6.2 Radiated emissions which fall in the restricted bands

<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 6.10.5
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX

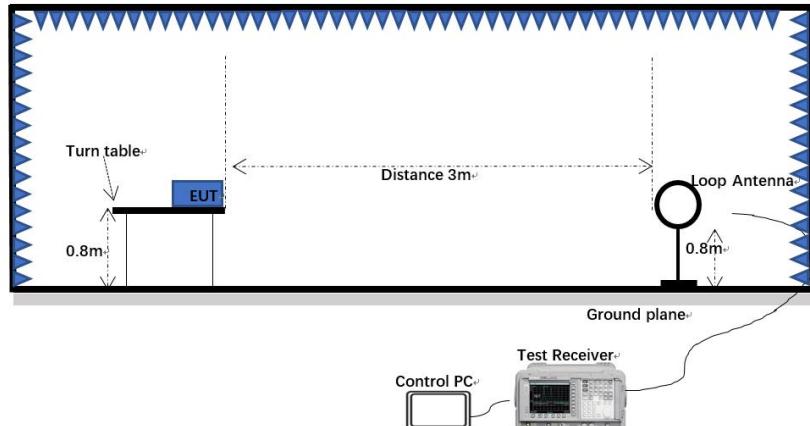
### 6.2.1 Limit

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

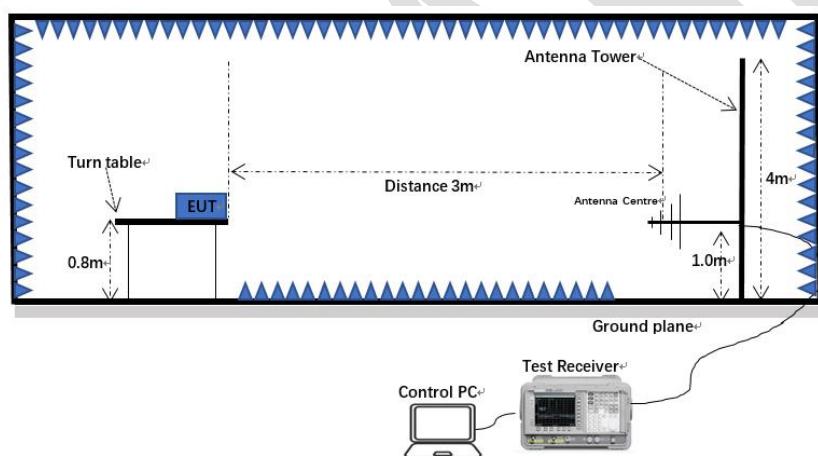
*Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.*

### 6.2.2 Test setup

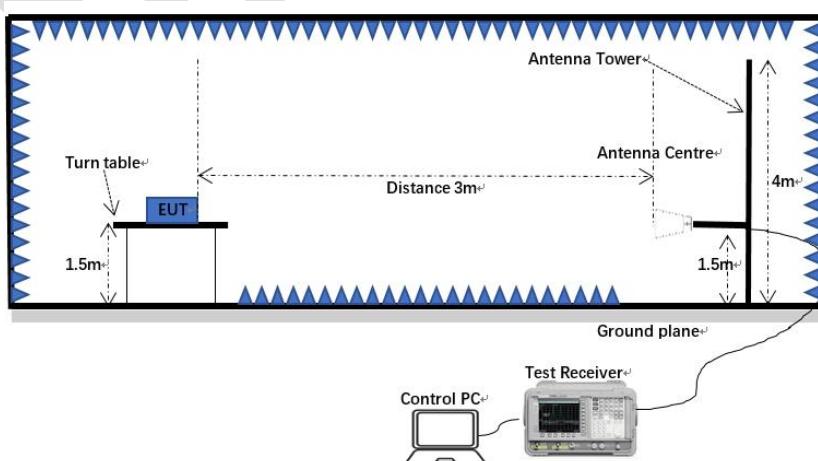
Below 1GHz:



30MHz-1GHz:



Above 1GHz:



### 6.2.3 Procedure

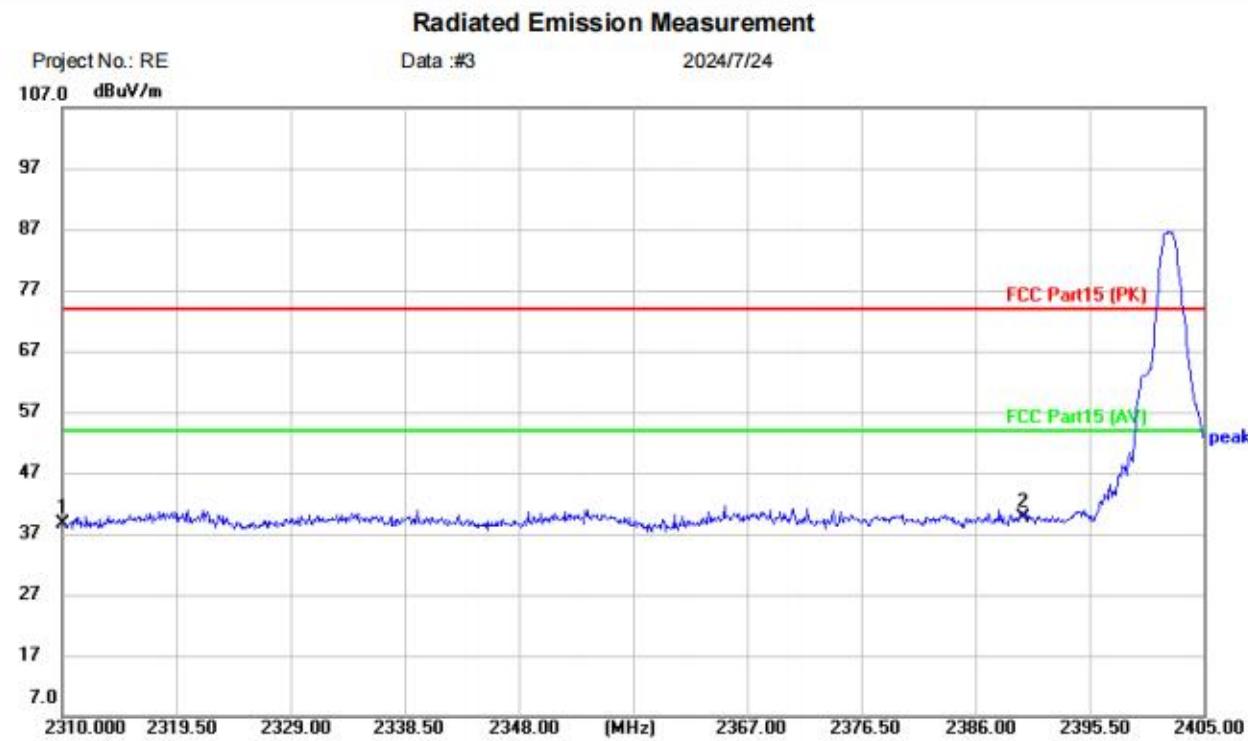
- a) For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b) For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c) The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d) The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g) If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h) Test the EUT in the lowest channel, the middle channel, the highest channel.
- i) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j) Repeat above procedures until all frequencies measured was complete.

Note 1: Level (dBuV) = Reading (dBuV) + Factor (dB/m)

Note 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

### 6.2.4 Test data

[Test mode: TX low channel]; [Polarity: Horizontal]



Site: Polarization: **Horizontal**      Temperature: (C)

Limit: FCC Part15 (PK)      Power:      Humidity: %RH

EUT: Mini Breath Alcohol Smart Sensor

M/N: Mini602-Alco-TB

Mode: BLE1M TX 2402

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB	Detector	Comment
1		2310.000	41.48	-2.89	38.59	74.00	-35.41	peak
2	*	2390.000	42.34	-2.70	39.64	74.00	-34.36	peak

**Test Result: Pass**

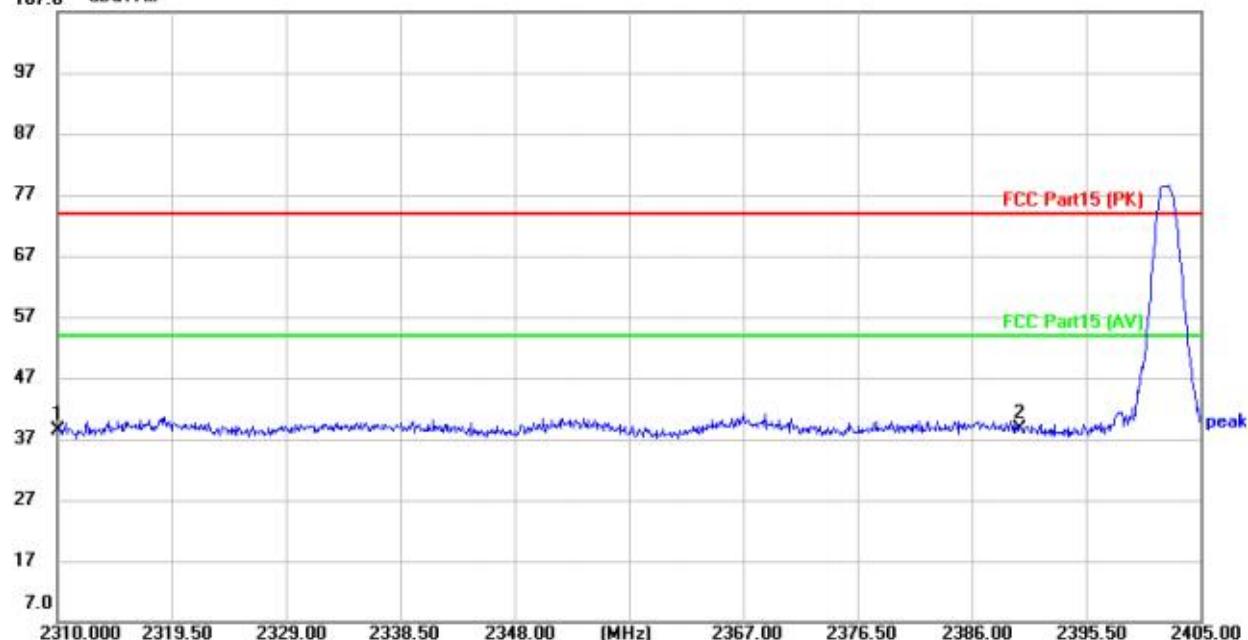
[**Test mode:TX low channel**]; [**Polarity: Vertical**]

**Radiated Emission Measurement**

Project No.: RE  
107.0 dBuV/m

Data #: 4

2024/7/24


Site: Polarization: **Vertical** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Mini Breath Alcohol Smart Sensor

M/N: Mini602-Alco-TB

Mode: BLE1M TX 2402

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB	Detector	Comment
1		2310.000	41.34	-2.89	38.45	74.00	-35.55	peak
2	*	2390.000	41.42	-2.70	38.72	74.00	-35.28	peak

**Test Result: Pass**

[**Test mode: TX High channel**]; [**Polarity: Horizontal**]

**Radiated Emission Measurement**

Project No.: RE

Data :#5

2024/7/24

107.0 dBuV/m


Site Polarization: **Horizontal** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Mini Breath Alcohol Smart Sensor

M/N: Mini602-Alco-TB

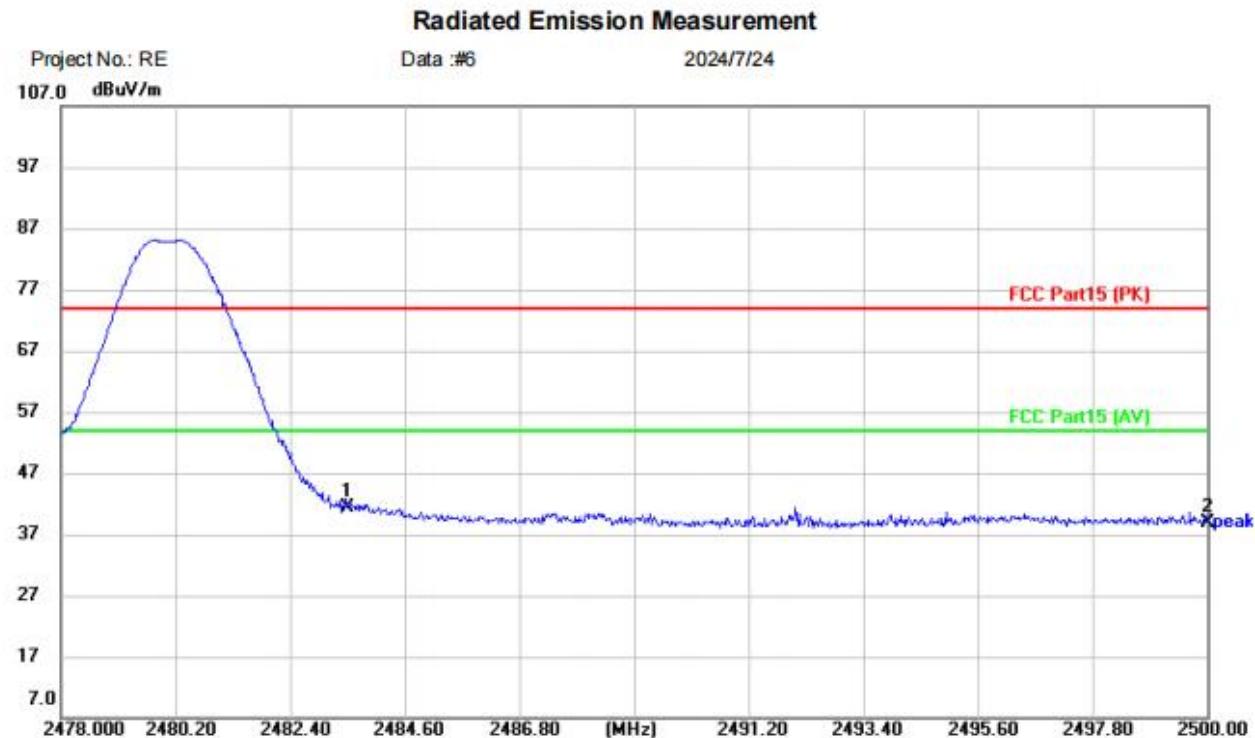
Mode: BLE1M TX 2480

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
			MHz	dBuV	dB	dBuV/m	dB		
1	*	2483.500	49.23	-2.91	46.32	74.00	-27.68	peak	
2		2500.000	42.83	-3.00	39.83	74.00	-34.17	peak	

**Test Result: Pass**

[Test mode:TX High channel]; [Polarity: Vertical]



Site Polarization: **Vertical** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT: Mini Breath Alcohol Smart Sensor

M/N: Mini602-Alco-TB

Mode: BLE1M TX 2480

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	2483.500	44.40	-2.91	41.49	74.00	-32.51	peak
2		2500.000	41.90	-3.00	38.90	74.00	-35.10	peak

## Test Result: Pass

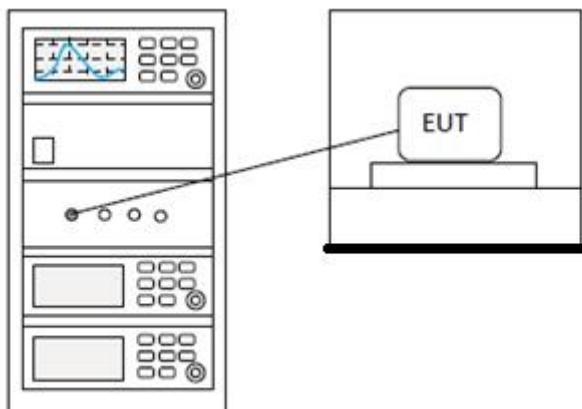
## 6.3 Conducted peak output Power

<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 7.8.5
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX

### 6.3.1 Limit

<b>Frequency range(MHz)</b>	<b>Output power of the intentional radiator(watt)</b>
902-928	1 for $\geq 50$ hopping channels
	0.25 for $25 \leq$ hopping channels $< 50$
	1 for digital modulation
2400-2483.5	1 for $\geq 75$ non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

### 6.3.2 Test setup



### 6.3.3 Test data

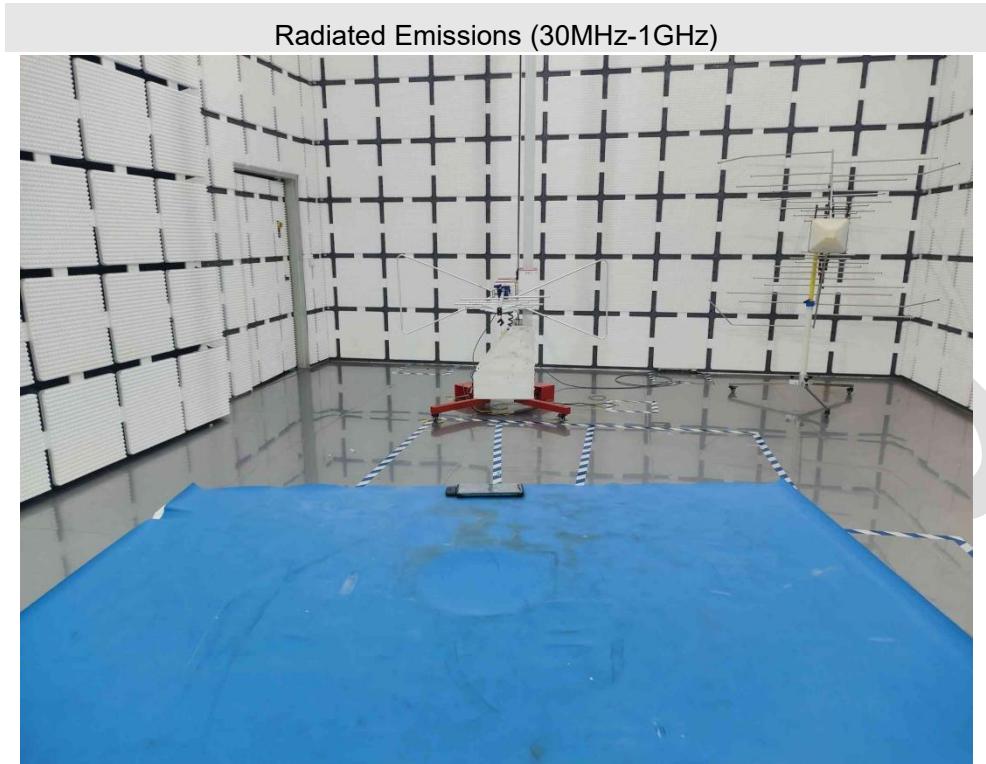
Pass: Please refer to appendix A for details

## 7 Appendix A

### 7.1 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.849	30	Pass
NVNT	BLE 1M	2442	Ant1	0.613	30	Pass
NVNT	BLE 1M	2480	Ant1	0.028	30	Pass

## Appendix B: photographs of test setup



## Appendix C: photographs of EUT

Reference to the test report No. BLA-B-EMC-202407-A4501

----END OF REPORT----

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