FCC TEST REPORT
FCC ID: 2AIT9-PG-A07

Product	:	Smart Security Alarm System
Model Name	:	PG-A07
Brand	:	N/A
Report No.	:	SZNTT26038364E1-1

Prepared for

PGST CO.,LTD

1st Floor, 9th Block, Huafu Industrial Park, Langkou Community, Dalang,Longhua District, Shenzhen City

Prepared by

Shenzhen NTT Testing Technology Co.,Ltd.

1B, Building 2, Factory Building & 103, Building 3, Factory Building, Dayang Industrial Park, No.4, Industrial Avenue, Tangwei Community, Fuhai Sub-district, Bao 'an District, Shenzhen City, China

TEL: 0755-27889935

FAX: /

1 TEST RESULT CERTIFICATION

Applicant's name	:	PGST CO.,LTD
Address	:	1st Floor, 9th Block, Huafu Industrial Park, Langkou Community, Dalang,Longhua District, Shenzhen City
Manufacture's name	:	PGST CO.,LTD
Address	:	1st Floor, 9th Block, Huafu Industrial Park, Langkou Community, Dalang,Longhua District, Shenzhen City
Product name	:	Smart Security Alarm System
Model name	:	PG-A07
Series Model name	:	N/A
Standards	:	FCC PART 15C 15.231
Test procedure	:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Date of test	:	Sept. 15, 2026 - Oct. 20, 2026
Date of Issue	:	Oct. 20, 2026

This device described above has been tested by NTT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Prepared by(Test Engineer):
Gary Lu

Reviewer(Supervisor):
Cindy Qin

Approved(Manager):
Abel Yu

Table of Contents Page

1 TEST RESULT CERTIFICATION 2
2. SUMMARY OF TEST RESULTS 5
2.1 TEST FACILITY 6
2.2 MEASUREMENT UNCERTAINTY 6
3 GENERAL INFORMATION 7
3.1 GENERAL DESCRIPTION OF EUT 7
3.2 DESCRIPTION OF TEST MODES 8
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 8
3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE) 8
3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS 9
4. EMC EMISSION TEST 11
4.1 CONDUCTED EMISSION MEASUREMENT 11
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS 11
4.1.2 TEST PROCEDURE 12
4.1.3 DEVIATION FROM TEST STANDARD 12
4.1.4 TEST SETUP 12
4.1.5 EUT OPERATING CONDITIONS 12
4.1.6 TEST RESULTS 13
4.2 RADIATED EMISSION MEASUREMENT 15
4.2.1 RADIATED EMISSION LIMITS 15
4.2.2 TEST PROCEDURE 16
4.2.3 TEST SETUP 17
4.2.4 EUT OPERATING CONDITIONS 18
4.2.5 TEST RESULTS 18
5. BANDWIDTH TEST 23
5.1 APPLIED PROCEDURES / LIMIT 23
5.2 TEST PROCEDURE 23
5.3 DEVIATION FROM STANDARD 23
5.4 TEST SETUP 23
5.5 EUT OPERATION CONDITIONS 23
5.6 TEST RESULTS 24
6. CALCULATION OF AVERAGE FACTOR 25
7. DWELL TIME 27
7.1 APPLICABLE STANDARD 27
7.2 TEST PROCEDURE 27

Table of Contents Page

7.5 EUT OPERATION CONDITIONS 27
7.6 TEST RESULTS 28
8. ANTENNA REQUIREMENT 29
9. TEST SETUP PHOTO 30
10. EUT CONSTRUCTIONAL DETAILS 30

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.231) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.209,15.231b	Fundamental &Radiated Spurious Emission Measurement	PASS	
15.231c	Occupy Bandwidth	PASS	
15.231a	Dwell time	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Site Description

EMC Lab. :

Designation Number: CN3446

Test Firm Registration Number: 129414

Accredited by ANAB, Dec. 19, 2025

The Certificate Registration Number is AT-3446

Name of Firm : Shenzhen NTT Testing Technology Co.,Ltd.

Site Location : 1B, Building 2, Factory Building & 103, Building 3, Factory Building, Dayang Industrial Park, No.4, Industrial Avenue, Tangwei Community, Fuhai Sub-district, Bao 'an District, Shenzhen City, China

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U · where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2 · providing a level of confidence of approximately 95 %。

Parameter	**Uncertainty**
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(9KHz~30MHz)	±4.51dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Radiated Emission(25GHz~40GHz)	±3.38dB
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%	

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name	:	Smart Security Alarm System
Model Name	:	PG-A07
Sample ID	:	SZNTT26038364E-1
Sample(s) Status	:	Engineer sample
Series Model	:	N/A
Model Different	:	N/A
Operating frequency	:	433.92 MHz
Number of Channels	:	1 channels
Type of Modulation	:	FSK
Antenna installation	:	Spring Antenna
Antenna Gain	:	0dBi
Power supply	:	Adapter information: Input:100-240V~, 50/60Hz Output: DC 5V/2A
Hardware Version	:	V1.0
Software Version	:	V1.0
Remark：the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.		

3.2 DESCRIPTION OF TEST MODES

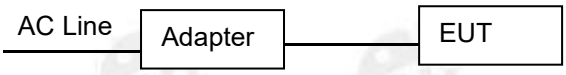
For All Emission	
Final Test Mode	Description
Transmitting mode	Keep the EUT in continuously transmitting mode

Note:

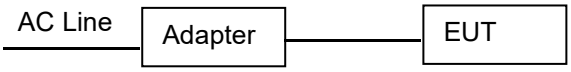
(1) Fully-charged battery is used during the test

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Spurious emissions



Conducted Spurious



3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Description	Manufacturer	Model No.	Hardware Version	Software Version
Adapter	/	/	/	/
Wired Siren	PGST CO.,LTD	/	/	/

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

(3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiated Test Site(Below 1G and Above 1G)&RF Test Site

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
966 Shielded Room	966 Room	/	EMToni	2025/07/24	2028/07/23
EMI Test Receiver	ESPI	101018	ROHDE&SCHWARZ	2026/09/04	2027/09/03
Amplifi（30MHz-1GHz）	BBV 9745	00431	SCHWARZBECK	2026/09/05	2027/09/04
Bilog Antenna（30MHz-1GHz）	VULB9168	1858	SCHWARZBECK	2026/09/05	2027/09/04
Horn antenna（1GHz-18GHz）	BBHA 9120 D	02622	SCHWARZBECK	2026/09/05	2027/09/04
Pream plifier（1GHz-18GHz）	BBV 9718D	0024	SCHWARZBECK	2026/09/04	2027/09/03
Spectrum Analyze（10Hz-40GHz）	FSV 40	100952	ROHDE&SCHWARZ	2026/09/04	2027/09/03
Pream plifier（18GHz-40GHz）	BBV 9721	0056	SCHWARZBECK	2026/09/04	2027/09/03
Double Ridge Guide Horn Antenna（18GHz-40GHz）	SAS-574	588	A.H.System	2026/09/05	2027/09/04
Loop Antenna (9KHz-30MHz)	FMZB 1513-60	00115	SCHWARZBECK	2026/09/04	2027/09/03
MXG Signal Analyzer	N9020A	MY49100730	Agilent	2026/09/04	2027/09/03
MXG Vector Signal Generator	N5182A	MY50144920	Agilent	2026/09/04	2027/09/03
WIDEBAND RADIO COMMUNICATION TESTER	CMW500	/	ROHDE&SCHWARZ	2026/09/07	2027/09/06
Power Sensor	MW100-RFCB-2	MW260105NTT-64	MWRFtest	2026/09/04	2027/09/03
RF Swith	MW100-RFCB-1	MW260105NTT-64	MWRFtest	2026/09/04	2027/09/03
Cable	RG223-3M	/	DA	2026/09/04	2027/09/03
Cable	RG223-12M	/	DA	2026/09/04	2027/09/03
Cable	SFT205-NMNMSW-2.5M	/	DA	2026/09/04	2027/09/03
Cable	SFT205-NMNM-12M	/	DA	2026/09/04	2027/09/03
Cable	UCA500-NJWSM-1.5M	017	MWRFtest	2026/09/04	2027/09/03

Conducted Test Site

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
944 Shielded Room	HSRCE944	/	HTEC	2025/04/30	2028/04/29
EMI Test Receiver	ESCI	100881/003	ROHDE&SCHWARZ	2026/09/04	2027/09/03
LISN	AMN6500	101185	ROHDE&SCHWARZ	2026/09/04	2027/09/03
LISN	NNLK 8129	00603	SCHWARZBECK	2026/09/04	2027/09/03
Pulse Limiters	VTSD 9561 F	00343	SCHWARZBECK	2026/09/04	2027/09/03
Cable	RG223-2M	/	RG	2026/09/04	2027/09/03

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ-EMC	Ver.EMC-CON 3A1.1+
2	EMC radiation test system	FALA	EZ-EMC	Ver.FA-03A2 RE+
3	RF test system	TACHOY	RFTest	V1.0.0
4	RF communication test system	TACHOY	RFTest	V1.0.0

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

(Frequency Range 150KHz-30MHz)

FREQUNCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

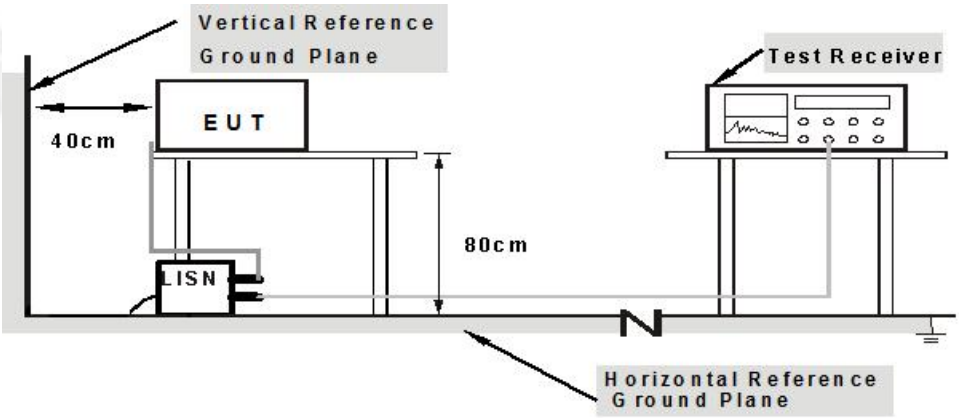
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



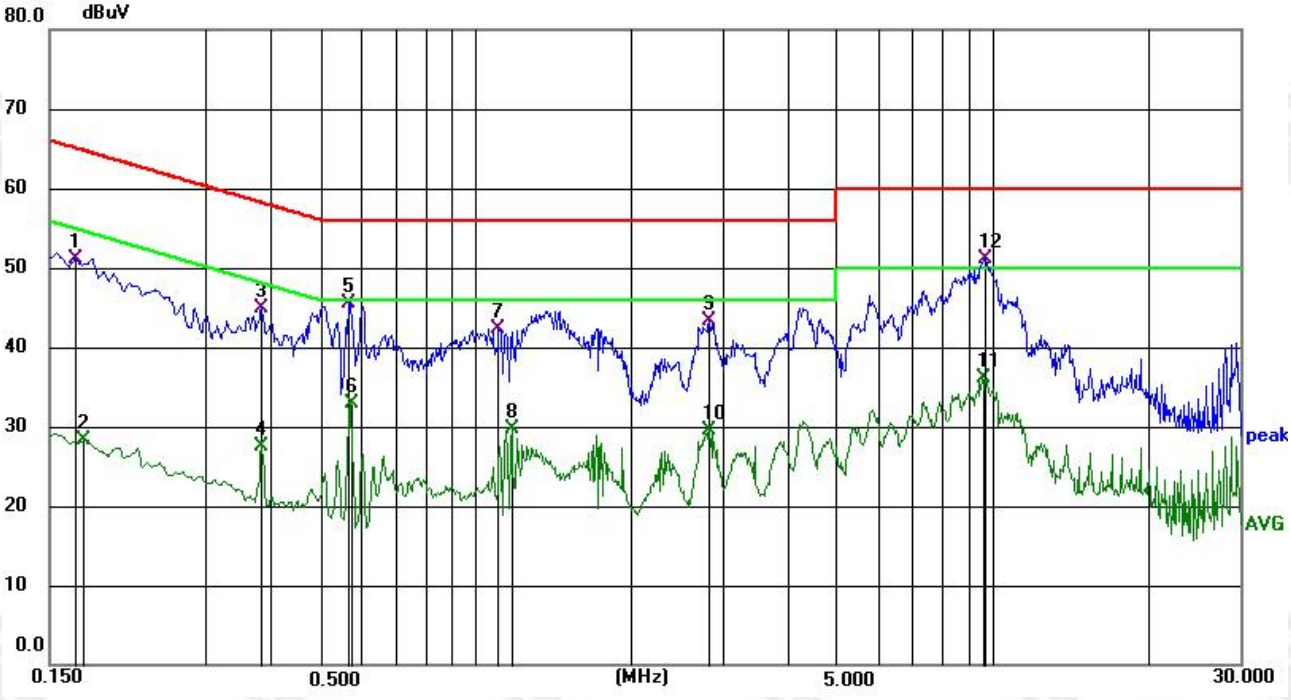
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 TEST RESULTS

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1˚C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Line
Test Voltage :	DC 5V from Adapter Input AC 120V/60Hz	Test Mode:	TX Mode



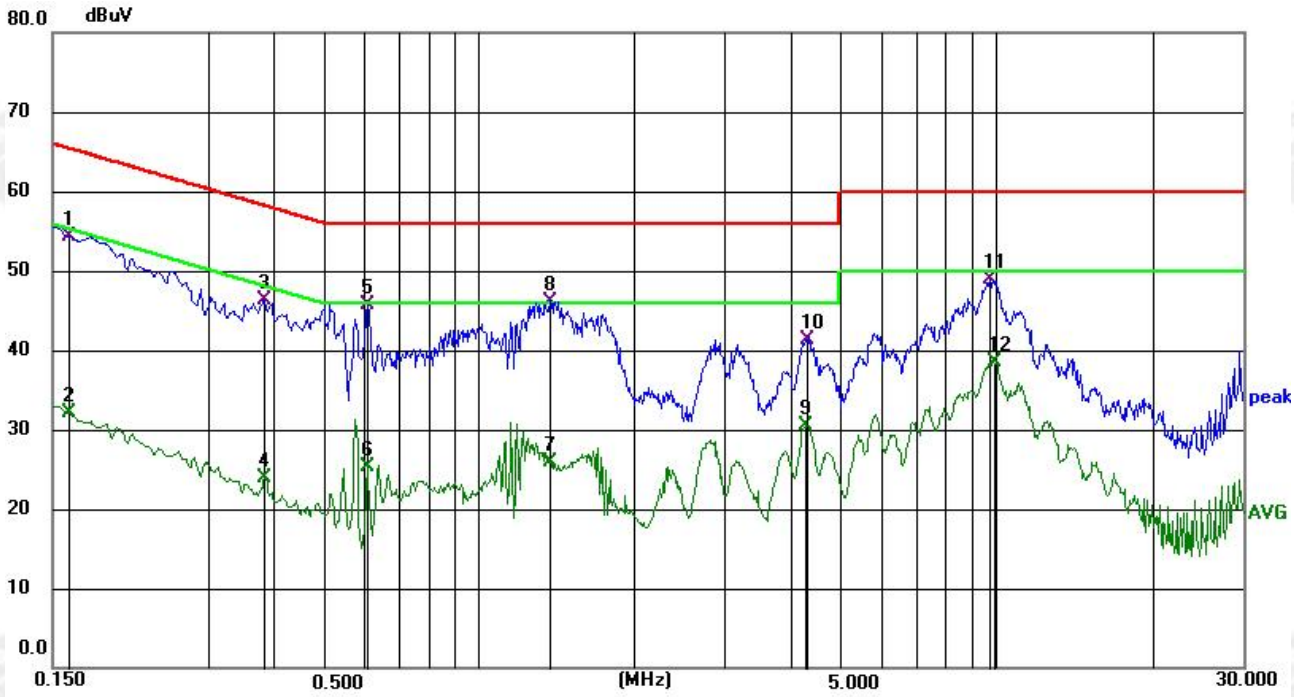
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1680	40.90	10.27	51.17	65.06	-13.89	QP
2	0.1740	17.95	10.27	28.22	54.77	-26.55	AVG
3	0.3840	34.71	10.29	45.00	58.19	-13.19	QP
4	0.3840	17.12	10.29	27.41	48.19	-20.78	AVG
5	0.5685	35.28	10.31	45.59	56.00	-10.41	QP
6	0.5730	22.55	10.31	32.86	46.00	-13.14	AVG
7	1.1085	31.99	10.35	42.34	56.00	-13.66	QP
8	1.1760	19.33	10.35	29.68	46.00	-16.32	AVG
9	2.8275	32.90	10.41	43.31	56.00	-12.69	QP
10	2.8275	19.09	10.41	29.50	46.00	-16.50	AVG
11	9.5360	25.44	10.57	36.01	50.00	-13.99	AVG
12 *	9.6935	40.63	10.57	51.20	60.00	-8.80	QP

Note:

1. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

2. Margin = Reading level + Correct Factor - Limit

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Neutral
Test Voltage :	DC 5V from Adapter Input AC 120V/60Hz	Test Mode:	TX Mode



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1615	44.11	10.22	54.33	65.39	-11.06	QP
2	0.1615	21.83	10.22	32.05	55.39	-23.34	AVG
3	0.3840	36.03	10.27	46.30	58.19	-11.89	QP
4	0.3840	13.64	10.27	23.91	48.19	-24.28	AVG
5	0.6090	35.43	10.30	45.73	56.00	-10.27	QP
6	0.6090	15.04	10.30	25.34	46.00	-20.66	AVG
7	1.3695	15.65	10.35	26.00	46.00	-20.00	AVG
8 *	1.3785	35.85	10.35	46.20	56.00	-9.80	QP
9	4.2900	19.98	10.43	30.41	46.00	-15.59	AVG
10	4.3034	30.94	10.43	41.37	56.00	-14.63	QP
11	9.7430	38.36	10.56	48.92	60.00	-11.08	QP
12	9.8690	27.88	10.57	38.45	50.00	-11.55	AVG

Note:

1. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
2. Margin = Reading level + Correct Factor - Limit

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.231(b) limit in the table below has to be followed.

Frequencies(MHz)	Field Strength(micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

FUNDAMENTAL AND HARMONICS EMISSION LIMITS

Fundamental Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	1,250 to 3,750 **	125 to 375 **
174 - 260	3,750	375
260 - 470	3,750 to 12,500 **	375 to 1,250 **
Above 470	12,500	1,250

** linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, μV/m at 3 meters = 56.81818(F) - 6136.3636; for the band 260-470 MHz, μV/m at 3 meters = 41.6667(F) - 7083.3333. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW setting	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

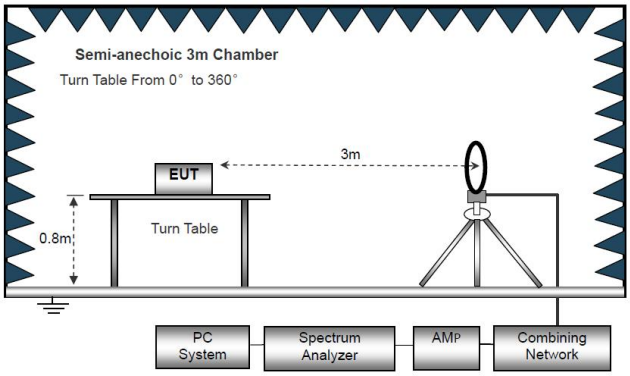
c. The height of the equipment or of the substitution antenna shall be 0.8 m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

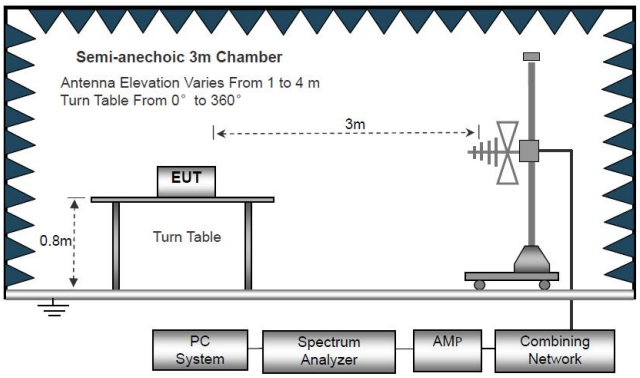
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case was X axis and the emissions were reported

4.2.3 TEST SETUP

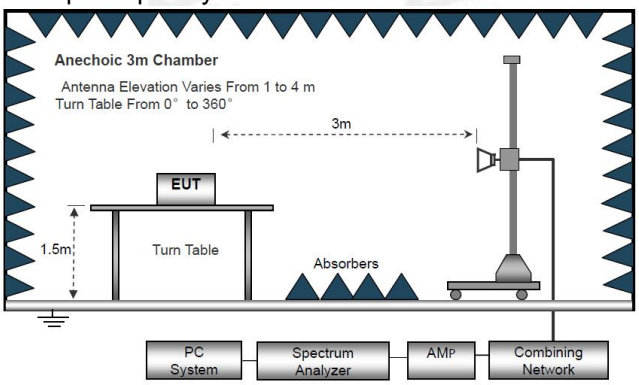
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



4.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.5 TEST RESULTS

Radiated Spurious Emission (Below 9KHz – 30MHz)

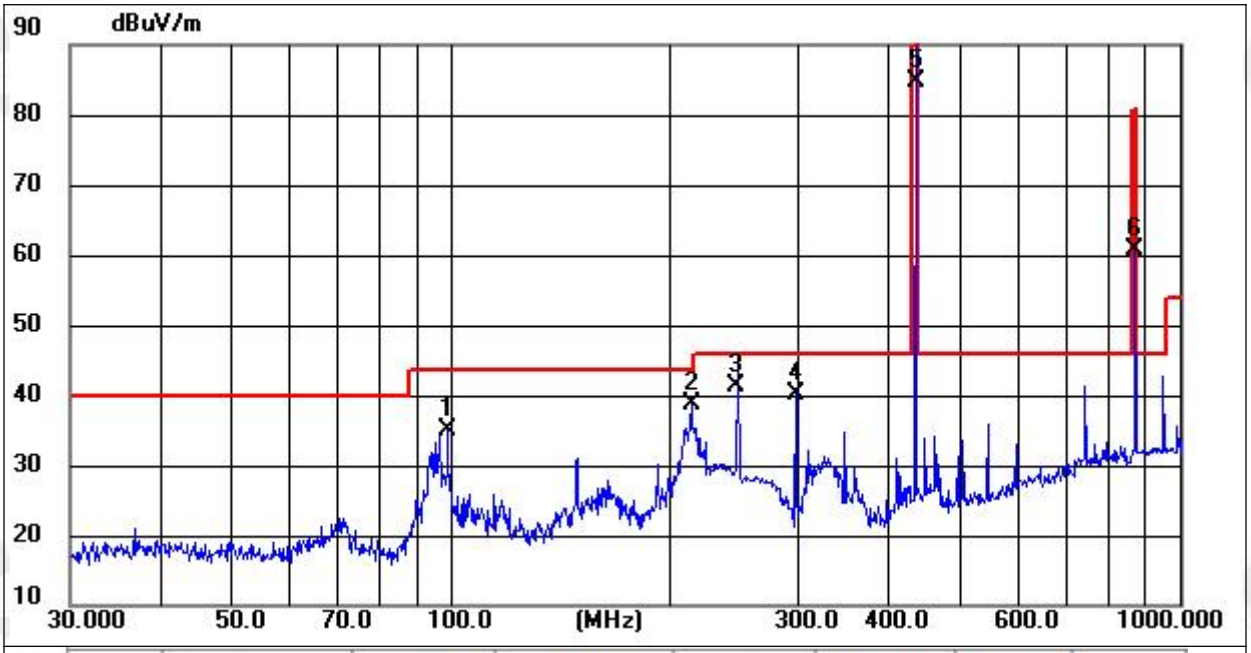
Temperature :	25.3℃	Relative Humidity :	55%
Pressure :	101 kPa	Polarization :	---
Test Voltage :	DC 5V from Adapter		
Test Mode :	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Radiated Spurious Emission (Between 30MHz – 1GHz)

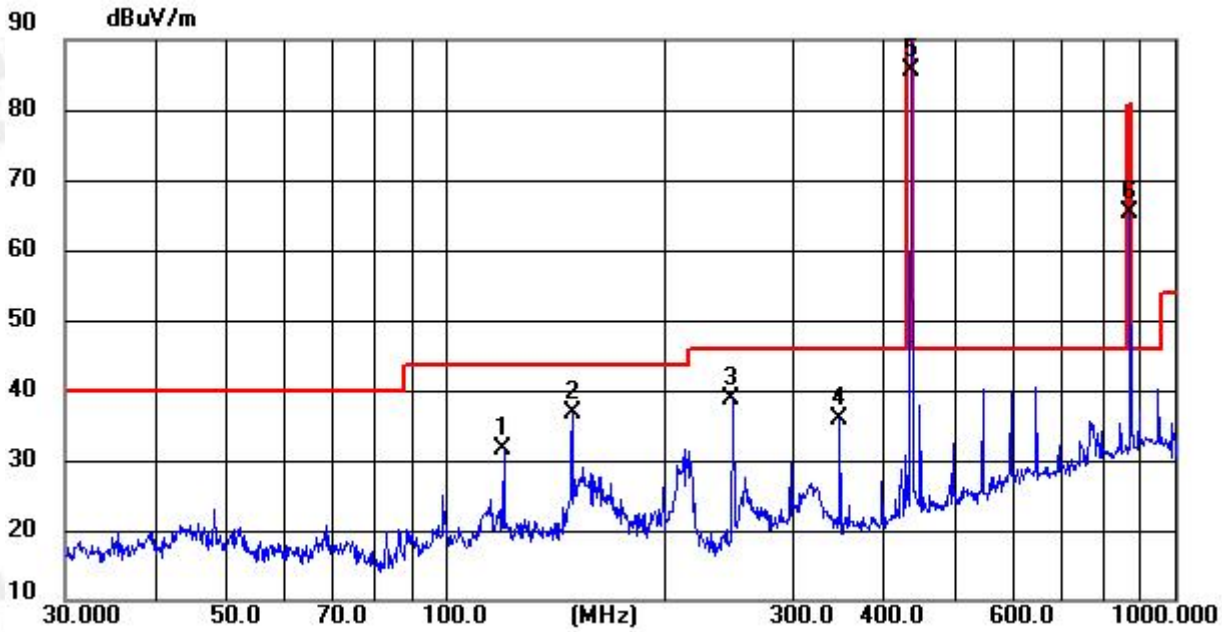
Temperature :	25.1℃	Relative Humidity :	56%
Pressure :	101 kPa	Polarization :	Horizontal
Test Voltage :	DC 5V from Adapter		
Test Mode :	TX Mode		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	98.9712	52.86	-17.74	35.12	43.50	-8.38	QP
2 *	213.5760	55.87	-17.05	38.82	43.50	-4.68	QP
3	247.5082	56.95	-15.65	41.30	46.00	-4.70	QP
4	297.0156	54.18	-14.03	40.15	46.00	-5.85	QP
5	433.9890	95.42	-10.62	84.80	100.80	-16.00	peak
6	867.9120	63.59	-2.86	60.73	80.80	-20.07	peak

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

Temperature :	25.1℃	Relative Humidity :	56%
Pressure :	101 kPa	Polarization :	Vertical
Test Voltage :	DC 5V from Adapter		
Test Mode :	TX Mode		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	120.0238	46.94	-15.44	31.50	43.50	-12.00	QP
2 *	148.4929	50.43	-13.58	36.85	43.50	-6.65	QP
3	247.5082	54.50	-15.65	38.85	46.00	-7.15	QP
4	346.5053	48.71	-12.79	35.92	46.00	-10.08	QP
5	433.9130	96.22	-10.62	85.60	100.80	-15.20	peak
6	867.9120	68.03	-2.86	65.17	80.80	-15.63	peak

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

For average Emission

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
433.9890	84.80	-7.51	79.94	80.8	-3.51	Horizontal

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
433.9130	85.60	-7.51	78.87	80.8	-2.71	Vertical

Notes: 1. Average emission Level = Peak Level + Duty cycle factor
2. Duty cycle level please see clause 6.

For average Emission

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
867.9120	60.73	-7.51	57.63	60.8	-7.58	Horizontal

Frequency MHz	Peak Level dBuV/m	Duty cycle factor	Average Level dBuV/m	Limit AV	Margin	Polarization
867.9120	65.17	-7.51	56.39	60.8	-3.14	Vertical

Notes: 1. Average emission Level = Peak Level + Duty cycle factor
2. Duty cycle level please see clause 6.

Radiated Spurious Emission (1GHz to 10th harmonics)

Frequency	Read Level	Factor	Emission Level	Limits	Margin	Remark	Comment
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		
1301.73	66.33	-6.12	60.21	80.80	-20.59	Pk	Vertical
1301.73	52.16	-6.12	46.04	60.80	-14.76	AV	Vertical
1735.68	62.33	-3.53	58.80	80.80	-22.00	Pk	Vertical
1735.68	51.12	-3.53	47.59	60.80	-13.21	AV	Vertical
2169.56	66.98	-2.29	64.69	80.80	-16.11	Pk	Vertical
2169.56	50.21	-2.29	47.92	60.80	-12.88	AV	Vertical
1301.73	66.45	-6.12	60.33	80.80	-20.47	Pk	Horizontal
1301.73	52.45	-6.12	46.33	60.80	-14.47	AV	Horizontal
1735.68	63.55	-3.53	60.02	80.80	-20.78	Pk	Horizontal
1735.68	50.02	-3.53	46.49	60.80	-14.31	AV	Horizontal
2169.56	63.58	-2.29	61.29	80.80	-19.51	Pk	Horizontal
2169.56	54.49	-2.29	52.20	60.80	-8.60	AV	Horizontal

Notes: 1. Emission Level = Reading Level + Factor

2. Average emission Level = Read Level + Factor

3. Duty cycle level please see clause 6.

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

According to FCC 15.231(c) requirement:

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

B.W (20dBc) Limit = 0.25% * f(MHz) = 0.25% * 433.92MHz = 1.085MHz

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	2 to 5 times the OBW
RB	1% to 5% of the OBW
VB	≥ 3 × RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 1 kHz, VBW = 3 kHz (≥ 3 × RBW), Sweep time = Auto.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS

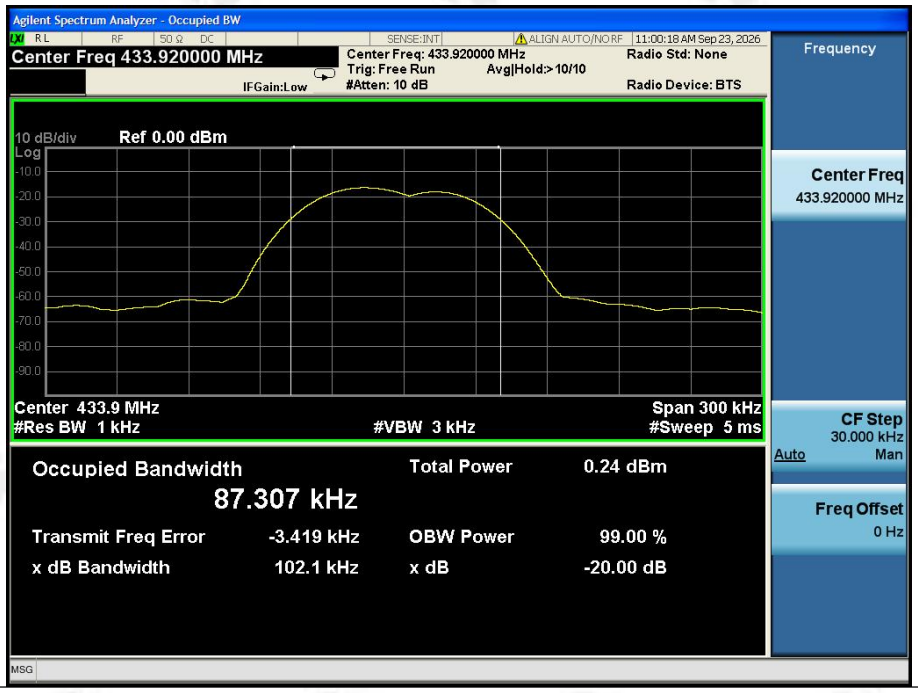
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

Temperature：	24.6℃	Relative Humidity：	56%
Pressure：	101kPa	Test Voltage ：	DC 5V from Adapter
Test Mode ：	TX Mode		

Frequency	20dB Bandwidth (kHz)	Limit (MHz)	Result
433.92MHz	102.1	≤1.085	PASS

Note: Limit= Fundamental frequency×0.25%
433.92×0.25%=1.085MHz



6. CALCULATION OF AVERAGE FACTOR

The output field strengths of specification in accordance with the FCC rules specify measurements with an average detector. During the test, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement instrumentation incorporating an average detector.

The duty cycle is measured in 100 ms or the repetition cycle period, whichever is a shorter time frame. The duty cycle is measured by placing the spectrum analyzer to set zero span at 1MHz resolution bandwidth.

Averaging factor in dB =20log (duty cycle)

The duration of one cycle =51.6ms

The duty cycle is simply the on-time divided the duration of one cycle

Duty Cycle = (9*0.38ms+16*1.14ms)/ 51.6

=21.70ms / 51.6 ms

=0.421

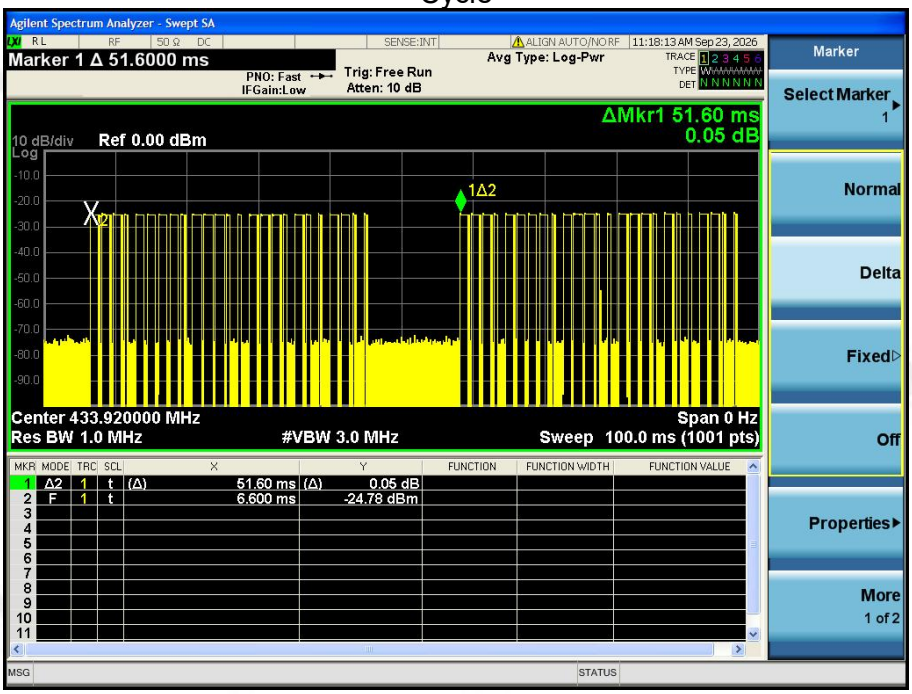
Therefore, the averaging factor is found by 20log(0.421)= -7.51 dB

Test plot as follows:

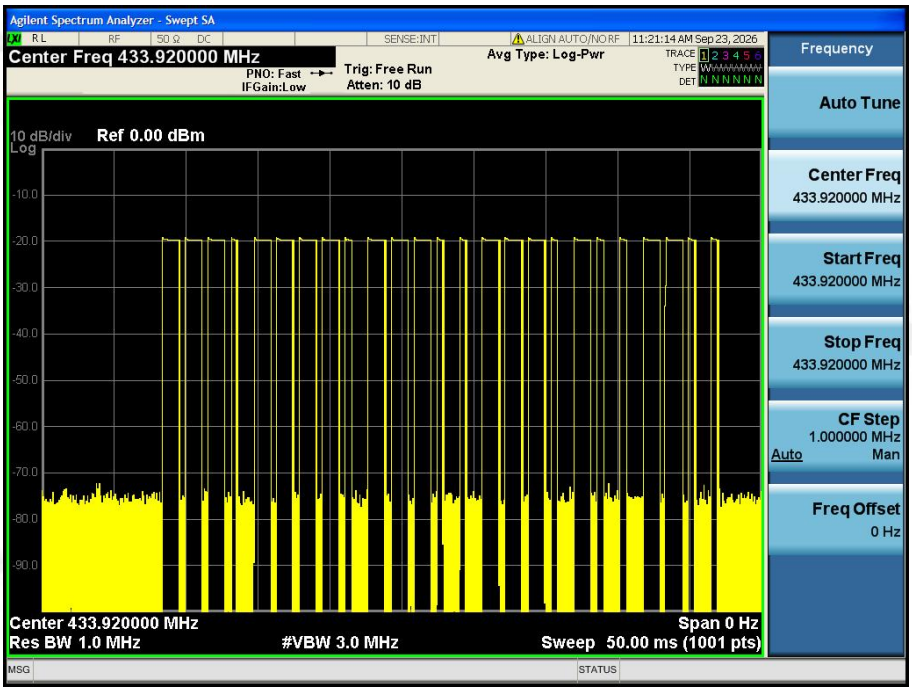
Note: During the 100ms, the amount of pulse and on-time of pulse are the same for every pulse train.

Temperature：	24.6℃	Relative Humidity：	56%
Pressure：	101kPa	Test Voltage ：	DC 5V from Adapter
Test Mode ：	TX Mode		

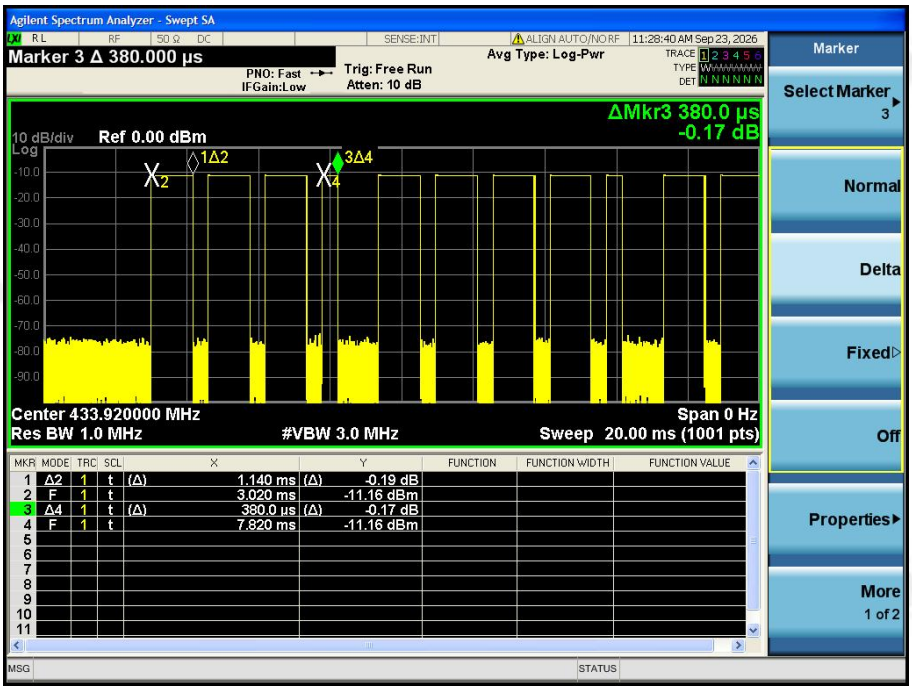
Cycle



Pulse



On-Time



7. DWELL TIME

7.1 APPLICABLE STANDARD

According to FCC 15.231(a) requirement:

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

7.2 TEST PROCEDURE

Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

1.Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.

2. Set the spectrum analyzer to Zero Span mode (Span = 0 Hz) with center frequency set to the measured frequency. Set RBW to 1MHz and VBW to 3MHz, and adjust the sweep time to display the signal in time domain.

3.Measure the highest amplitude appearing on time domain display and set it as a reference level. Plot the graph with marking the highest point and relevant time parameters..

4.Repeat above procedures until all measured frequencies were complete.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

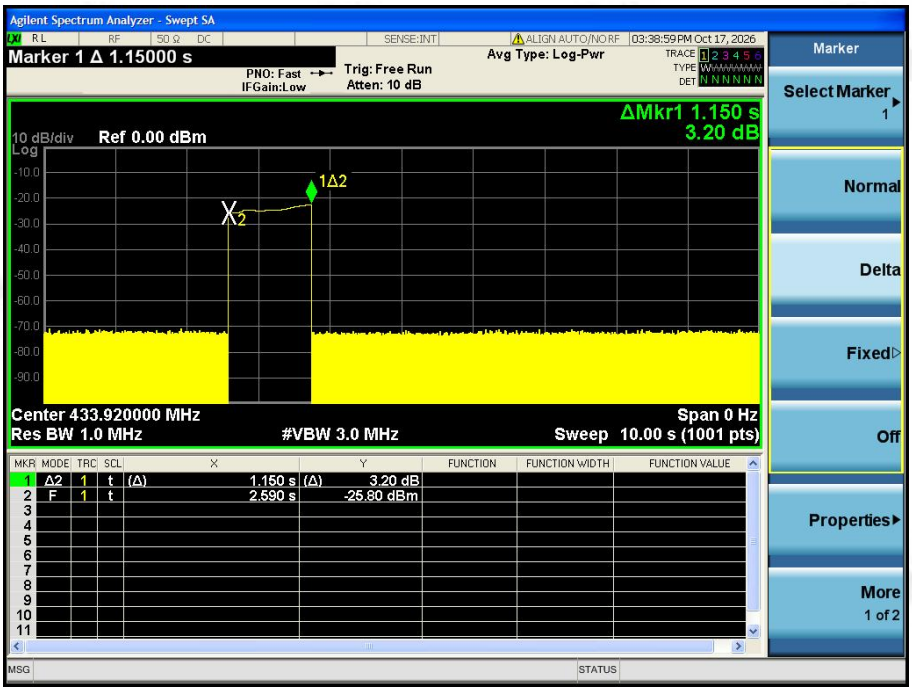
7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Dwell time (second)	Limit (second)	Result
1.15s	<5s	Pass

Test plot as follows:



8. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antennas are Spring Antenna , the best case gain of the antennas are 0 dBi, reference to the attachment for details	

9. TEST SETUP PHOTO

Reference to the Test photo attachment for details.

10. EUT CONSTRUCTIONAL DETAILS

Reference to EUT photo attachment for details.

※※※※※ **END OF REPORT** ※※※※※