FCC&IC RADIO TEST REPORT

For

FCC ID: 2AZSV-F100-433

IC:32026-F100

Report Reference No. ..... :	23EFSS12041 00011
Date Sample(s) Received ..... :	2023-12-12
Date of tested ..... :	From 2023-12-12 to 2024-02-21
Date of issue ..... :	2024-02-21
Testing Laboratory ..... :	DongGuan ShuoXin Electronic Technology Co., Ltd.
Address ..... :	Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China
Applicant's name……..:	Chongqing Yuyue Spirit Technology Co., Ltd.
Address……..:	4-24, No. 8, No. 1, Yugu Road, Jiulongpo District Chongqing, China
Manufacturer……..::	Chongqing Yuyue Spirit Technology Co., Ltd.

Test specification:

Test item description ..... :	Restaurant Pager
Trade Mark ..... :	/
Model/Type reference ..... :	YY-F100-433
Ratings ..... :	I/P: DC 9V

Test Engineer: Blue Qiu

Blue Qiu

Responsible Engineer : Smile Wang

Smile Wang

Authorized Signatory: king wang

King Wang

TABLE OF CONTENTS

1. Summary of test Standards and results 4
2. General test information 5
2.1. Description of EUT 5
2.2. Accessories of EUT 5
2.3. Assistant equipment used for test 5
2.4. Block diagram of EUT configuration for test 5
2.5. Test environment conditions 6
2.6. Measurement uncertainty 6
3. 20dB Occupied Bandwidth 7
3.1. Test equipment 7
3.2. Block diagram of test setup 7
3.3. Limits 7
3.4 Test Procedure 7
3.5. Test Result 8
3.6. Original test data 8
4. Field Strength of Fundamental And Field Strength of Spurious Emissions 9
4.1. Test equipment 9
4.2. Block diagram of test setup 10
4.3. Limit 11
4.4. Test Procedure 12
4.5. Test result(For 15.205) 13
4.6 Test result(For 15.231) 18
5 Duration Time 21
5.1 Test equipment 21
5.2 Block diagram of test setup 21
5.3 Limits 21
5.4 Test Procedure 21
5.5 Test Result 21
5.6 Original test data 22
6.Power line conducted emission 23
6.1 Test equipment 23
6.2 Block diagram of test setup 23
6.3 Power Line Conducted Emission Limits(Class B) 23
6.4 Test Procedure 24

6.5 Test Result....24
7 Frequency Stability....27
7.1 Test equipment....27
7.2 Block diagram of test setup....27
7.3 Test Result....28
8. Antenna Requirements....29
8.1. Limit....29
8.2. Result....29

TEST REPORT DECLARE

Applicant	:	Chongqing Yuyue Spirit Technology Co., Ltd.
Address	:	4-24, No. 8, No. 1, Yugu Road, Jiulongpo District Chongqing, China
Equipment under Test	:	Restaurant Pager
Test Model No	:	YY-F100-433
Manufacturer	:	Chongqing Yuyue Spirit Technology Co., Ltd.
Address	:	4-24, No. 8, No. 1, Yugu Road, Jiulongpo District Chongqing, China

Test Standard Used: FCC Rules and Regulations Part 15 Subpart C (15.231)

RSS-210 Issue 10 Amendment 1 April 2020

Test procedure used: ANSI C63.10:2013,RSS-Gen Issue 5 Amendment 2 February 2021

We Declare:

The equipment described above is tested by DongGuan ShuoXin Electronic Technology Co., Ltd(ATT). and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and DongGuan ShuoXin Electronic Technology Co., Ltd.(ATT) is assumed of full responsibility for the accuracy and completeness of these tests.

ATT is not responsible for the sampling stage, so the results only apply to the sample as received.

ATT's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. ATT shall have no liability for any declarations, inferences or generalizations drawn by the client or others from ATT issued reports.

1. Summary of test Standards and results

The EUT have been tested according to the applicable standards as referenced below.

Description of Test Item	Standard	Results
20dB Occupied Bandwidth Occupied Bandwidth	FCC Part 15.231(c) RSS-210 A.1.3 RSS-Gen 6.7	PASS
Field Strength of Fundamental and Field Strength of Spurious Emissions	FCC Part 15.209,15.231(b) RSS-210 A.1.4	PASS
Duration Time	15.231(a) RSS-210 A.1.4	PASS
AC Line Conducted Emissions	FCC Part 15.207 (a) RSS-Gen 8.8	PASS
Antenna requirement	FCC Part 15: 15.203 RSS-Gen 6.8	PASS
Frequency Stability	RSS-Gen 6.11	PASS

Test Facility:
The Test site used by DongGuanShuoXin Electronic Technology Co., Ltd. to collect test data is located on the Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China

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

Item	Registration No.	Expiration Date
CNAS	L3098	2024-08-27
A2LA	4893.01	2024-06-30
Innovation, Science and Economic Development Canada (ISED)	11033A CAB identifer:CN0083	2024-06-30
Federal Communications Commission (FCC)	171688 Designation No.:CN1235	2024-06-30

2. General test information

2.1. Description of EUT

EUT* Name	Restaurant Pager
Model Number	YY-F100-433
EUT function description	Please reference user manual of this device
Power supply	DC 9V
Adaptor	AC 100-240V 50/60Hz 0.5A
Radio Technology	SRD
Operation frequency	433.92 MHz
Modulation	ASK
Antenna Type	maximum PK gain: 1.5 dBi
Date of Receipt	2023/12/12
Sample Type	Single production
Sample Number	A-NO.01
Hardware Version	V1.0
Software Version	V1.0

Note: EUT is the ab. of equipment under test.

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number or Type	Serial number
Adapter	QZT	QZT-0901000	N/A

2.3. Assistant equipment used for test

Description of Assistant equipment	Manufacturer	Model number or Type	Other

2.4. Block diagram of EUT configuration for test

New battery is used during all test
EUT enters the engineering interface by clicking the system version to control EUT work in test mode as blow table.

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.6. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test (9kHz-150kHz)	3.7 dB
Uncertainty for Conduction emission test (150kHz-30MHz)	3.3 dB
Uncertainty for Radiation Emission test (9kHz-30MHz)	3.6 dB
Uncertainty for Radiation Emission test (30MHz-200MHz)	4.60 dB (Polarize: V)
	4.60 dB (Polarize: H)
Uncertainty for Radiation Emission test (200MHz-1GHz)	6.10 dB (Polarize: V)
	5.08 dB (Polarize: H)
Uncertainty for Radiation Emission test (1GHz-6GHz)	5.01 dB (Polarize: V)
	5.01 dB (Polarize: H)
Uncertainty for Radiation Emission test (6GHz-18GHz)	5.26 dB (Polarize: V)
	5.26 dB (Polarize: H)
Uncertainty for Radiation Emission test (18GHz-40GHz)	5.06 dB (Polarize: V)
	5.06 dB (Polarize: H)
Uncertainty for radio frequency	±0.048kHz
Uncertainty for conducted RF Power	±0.32dB
Uncertainty for conducted Occupied Bandwidth	2.43%

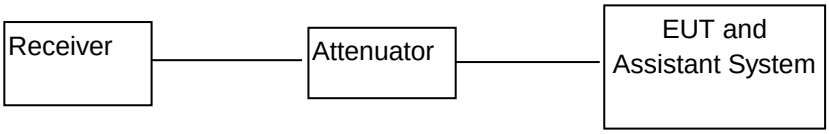
Note：This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. 20dB Occupied Bandwidth

3.1. Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until	Calibrated Date
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2024/05/23	2023/05/24
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A	N/A
3	RF Cable	Micable	C10-01-01-1	100309	N/A	N/A

3.2. Block diagram of test setup



3.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.3.4. Test Procedure

3.4 Test Procedure

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

(2) Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to

(3) measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

(4) The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied, video bandwidth (VBW) shall not be smaller than three times the RBW value

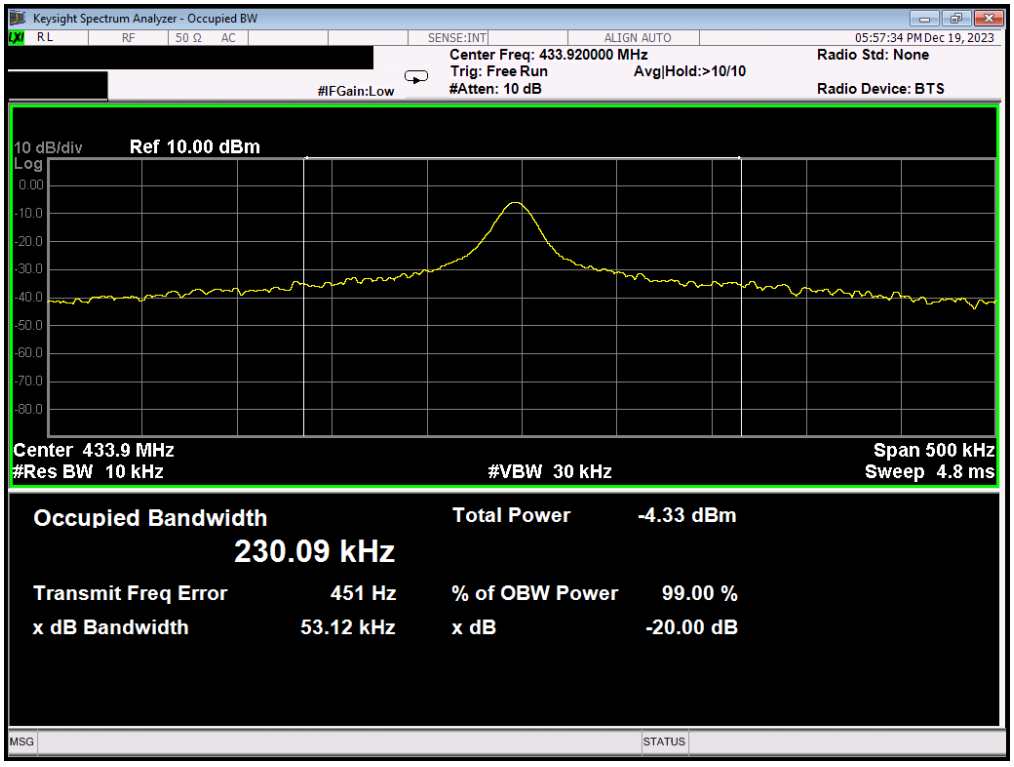
(5) Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.

3.5. Test Result

99% bandwidth (MHz)	-20dB bandwidth (MHz)	Limit (MHz)	Results
0.2301	0.05312	1.0848	Pass

Note: Limit= Fundamental frequency×0.25%=433.92×0.25%=1.0848MHz

3.6. Original test data



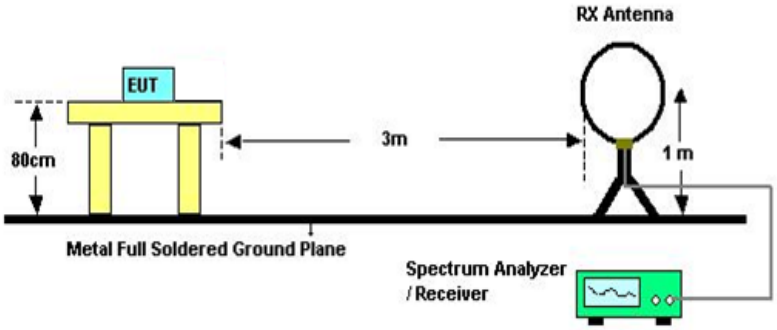
4. Field Strength of Fundamental And Field Strength of Spurious Emissions

4.1. Test equipment

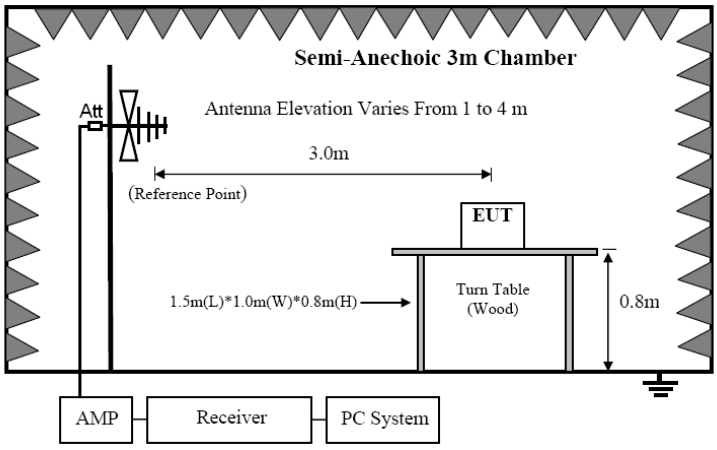
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	11/29/2024
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/06/2024
3	Loop antenna	SCHWARZBECK	FMZB1519	1519-062	01/15/2024
4	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	07/02/2024
5	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	04/09/2024
6	Preamplifier Amplifier	HP	8447F	3113A05680	12/04/2024
7	PRE-AMPLIFIER	EMEC	EM01G26G	060679	04/05/2024
8	RF Cable	N/A	Test Cable 4	4	12/04/2024
9	RF Cable	N/A	Test Cable 5	5	12/04/2024
10	RF Cable	N/A	Test Cable 8	8	04/18/2024
11	RF Cable	N/A	Test Cable 9	9	04/18/2024
12	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

4.2. Block diagram of test setup

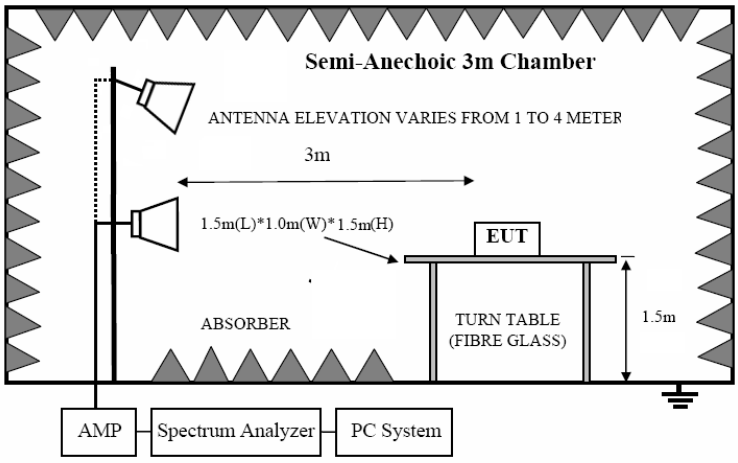
In 3m Anechoic Chamber Test Setup Diagram for 9kHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for 30MHz-1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

4.3. Limit

FCC 15.209 & RSS-Gen 8.9 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

FCC 15.231(b) & RSS-102 A.1.2 limilt

Fundamental Frequency (MHz)	Field strength of fundamental (millivolts/meter)	Field strength of spurious emissions (millivolts/meter)
40.66-40.70	2250	225
70-130	1250	125
130-174	1250 to 3750(see Note 1)	125 to 375(see Note 1)
174-260	3750	375
260-470	3750 to 12500(see Note 1)	375 to 1250(see Note 1)
Above 470	12500	1250

Note 1:For 130MHz-174MHz:Field Strength(uV/m)=(56.82*f)-6136

For 260MHz-470MHz:Field Strength(uV/m)=(41.67*f)-7083

dBuV/m=20loguV/m

Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions.

433.92MHz limit=20log(41.67*433.92)-7083≈80.82dBuV/m

Duty cycle= ON TIME/TOTAL TIME = 13.32ms/32.28ms ≈ 0.413

AVG = Peak +20*log(duty cycle) = Peak-7.69

4.4. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Setup EUT and assistant system according clause 2.4 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.

(a) Change work frequency or channel of device if practicable.

(b) Change modulation type of device if practicable.

(c) Change power supply range from 85% to 115% of the rated supply voltage

(d) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions

(4) Spectrum frequency from 9MHz to 4GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9KHz to 30MHz, so below final test was performed with frequency range from 30MHz to 4GHz.

(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(6) For emissions from 9kHz to 30MHz, Peak values were measured with EMI Receiver and the bandwidth of Receiver is 200Hz for 9kHz-150kHz,9kHz for 150kHz-30MHz.

(7) For emissions from 30MHz to 1GHz, Quasi-Peak values were measured with EMI Receiver and the bandwidth of Receiver is 120 KHz.

(8)For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure, Detector is at PK; RBW is set at 1MHz, VBW is set at 3MHz for Average measure, Detector is at RMS..

(9) For Field Strength of Fundamental were measured with Spectrum Analyzer, and the RBW is set at above 99% Occupied Bandwidth , VBW is set at equal to RBW for Peak measure, Detector is at PK

4.5. Test result(For 15.205)

Below 30M

EUT:	Restaurant Pager	**Model No.:**	YY-F100-433
Temperature:	24℃	**Relative Humidity:**	55%
Distance:	3m	**Test Power:**	DC 9V
Polarization:	--	**Test Result:**	Pass
Test Mode:	Keeping TX mode	**Test By:**	Leo

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

Note:

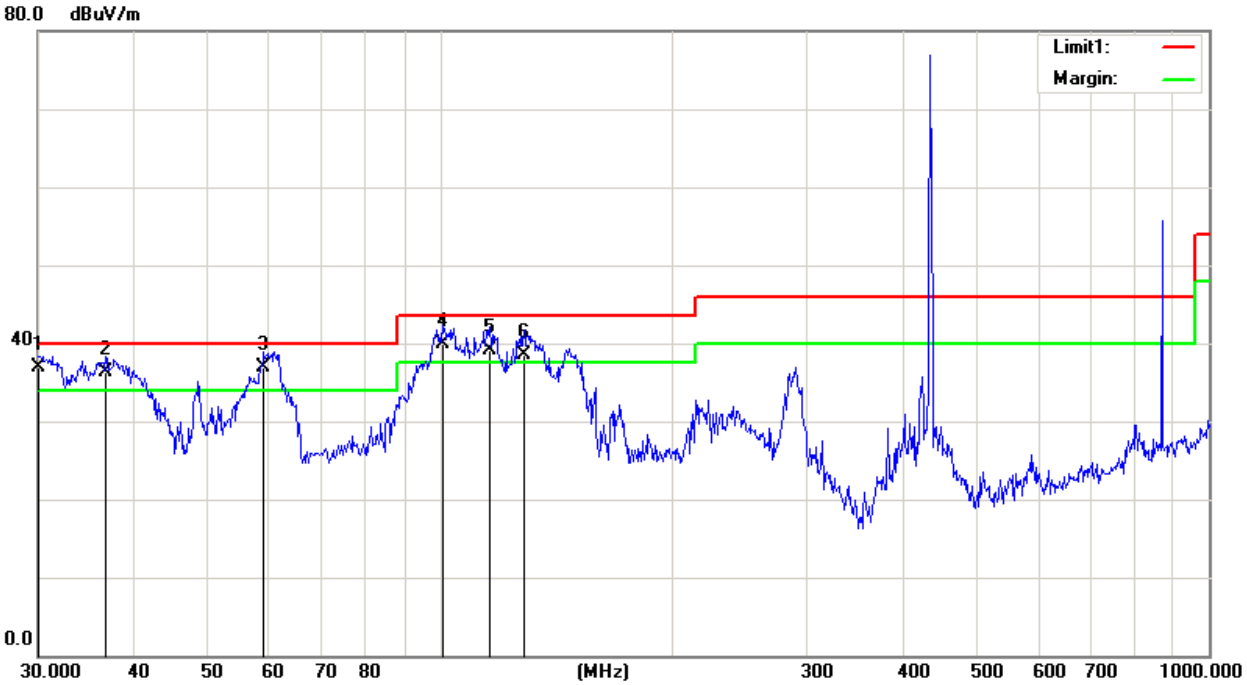
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =20 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor

Between 30M – 1000 MHz

EUT:	Restaurant Pager	Model No.:	YY-F100-433
Temperature:	23.1	Relative Humidity:	52%
Distance:	2m	Test Power:	DC 9V (AC 120V/60Hz)
Polarization:	Vertical	Test Result:	Pass
Test Time:	2023/12/19	Test By:	Jelena
Test Mode:	TX		

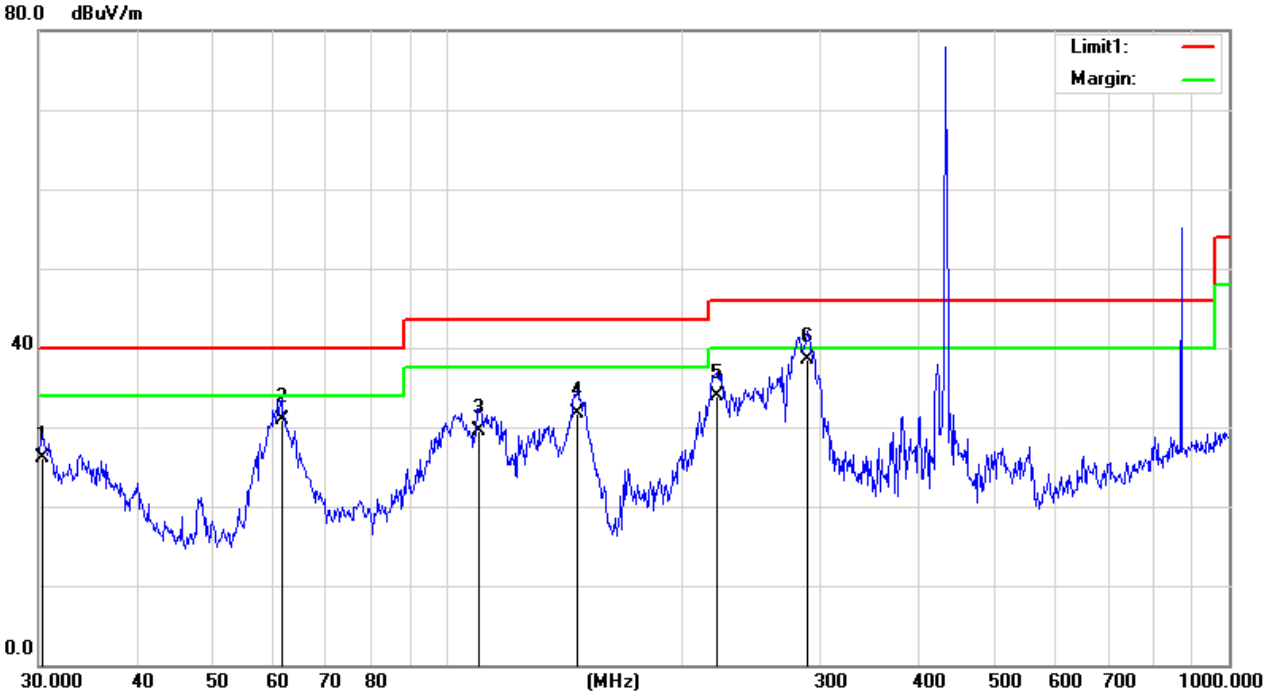


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	30.0000	49.78	-12.89	36.89	40.00	-3.11	QP
2	36.7661	49.42	-13.21	36.21	40.00	-3.79	QP
3	59.0251	49.16	-12.28	36.88	40.00	-3.12	QP
4	100.9338	55.21	-15.32	39.89	43.50	-3.61	QP
5	116.1320	53.58	-14.42	39.16	43.50	-4.34	QP
6	128.5629	52.60	-14.03	38.57	43.50	-4.93	QP

The test result is calculated as the following:

(1) Result = Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
(3) Margin = Result - Limit

EUT:	Restaurant Pager	Model No.:	YY-F100-433
Temperature:	23.1	Relative Humidity:	52%
Distance:	2m	Test Power:	DC 9V (AC 120V/60Hz)
Polarization:	Horizontal	Test Result:	Pass
Test Time:	2023/12/19	Test By:	Jelena
Test Mode:	TX		



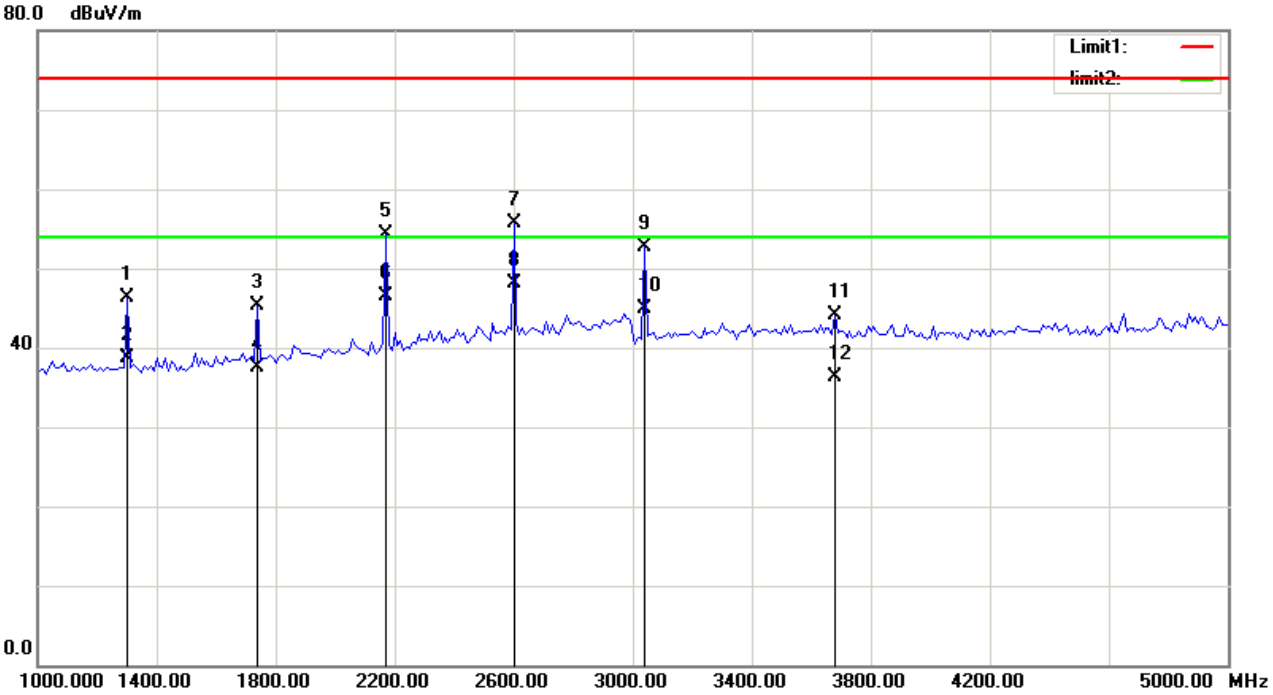
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	30.3170	40.96	-14.91	26.05	40.00	-13.95	QP
2	61.3462	45.79	-14.93	30.86	40.00	-9.14	QP
3	109.7960	44.53	-14.99	29.54	43.50	-13.96	QP
4	146.8877	45.88	-14.20	31.68	43.50	-11.82	QP
5	221.3916	43.38	-9.48	33.90	46.00	-12.10	QP
6	289.0021	46.67	-8.21	38.46	46.00	-7.54	QP

The test result is calculated as the following:

(1) Result = Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
(3) Margin = Result - Limit

Between 1000M – 5000 MHz

EUT:	Restaurant Pager	Model No.:	YY-F100-433
Temperature:	23.1	Relative Humidity:	52%
Distance:	3m	Test Power:	DC 9V (AC 120V/60Hz)
Polarization:	Vertical	Test Result:	Pass
Test Time:	2023/12/19	Test By:	Jelena
Test Mode:	TX		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1300.000	62.22	-15.92	46.30	74.00	-27.70	peak
2	1300.000			38.61	54.00	-15.39	AVG
3	1740.000	59.83	-14.59	45.24	74.00	-28.76	peak
4	1740.000			37.55	54.00	-16.45	AVG
5	2170.000	66.96	-12.67	54.29	74.00	-19.71	peak
6	2170.000			46.60	54.00	-7.40	AVG
7	2600.000	66.98	-11.25	55.73	74.00	-18.27	peak
8	2600.000			48.04	54.00	-5.96	AVG
9	3040.000	62.79	-10.11	52.68	74.00	-21.32	peak
10	3040.000			44.99	54.00	-9.01	AVG
11	3680.000	53.39	-9.36	44.03	74.00	-29.97	peak
12	3680.000			36.34	54.00	-17.66	AVG

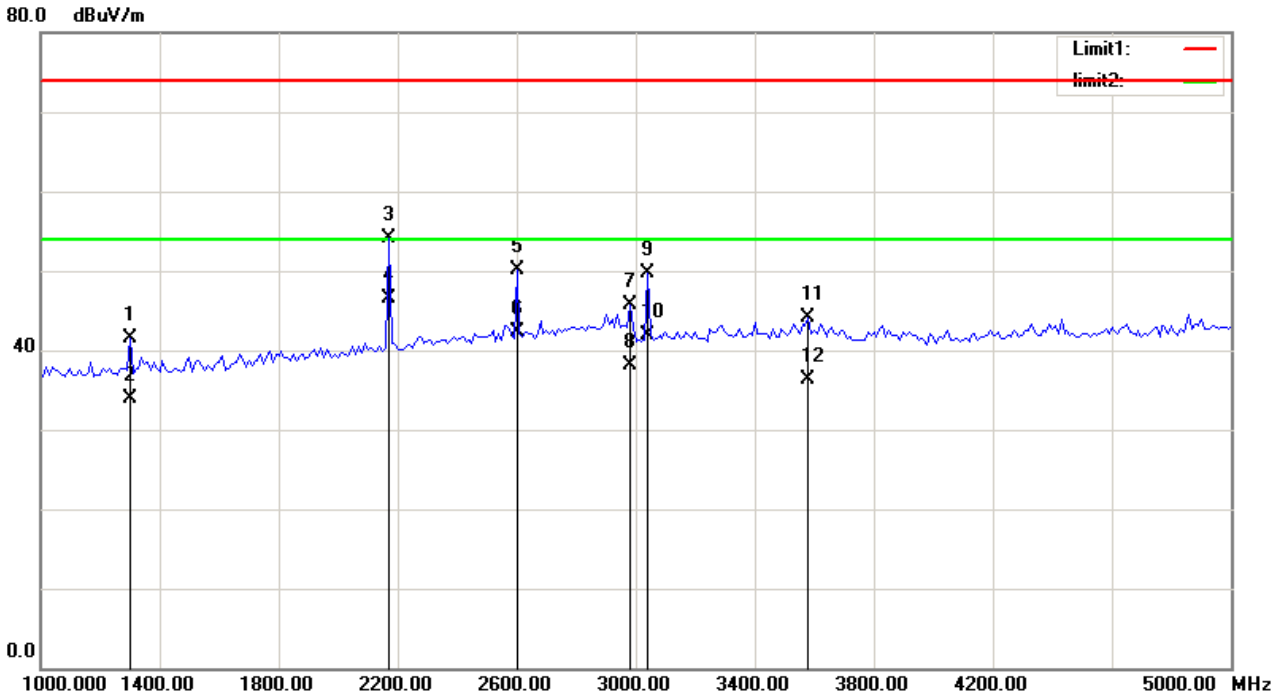
The test result is calculated as the following:

(1) Result = Reading + Correct Factor

(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator

(3) Margin = Result - Limit

EUT:	Restaurant Pager	Model No.:	YY-F100-433
Temperature:	23.1	Relative Humidity:	52%
Distance:	3m	Test Power:	DC 9V (AC 120V/60Hz)
Polarization:	Horizontal	Test Result:	Pass
Test Time:	2023/12/19	Test By:	Jelena
Test Mode:	TX		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1300.000	57.46	-15.92	41.54	74.00	-32.46	peak
2	1300.000			33.85	54.00	-20.15	AVG
3	2170.000	66.80	-12.67	54.13	74.00	-19.87	peak
4	2170.000			46.44	54.00	-7.56	AVG
5	2600.000	61.34	-11.25	50.09	74.00	-23.91	peak
6	2600.000			42.40	54.00	-11.60	AVG
7	2980.000	55.96	-10.22	45.74	74.00	-28.26	peak
8	2980.000			38.05	54.00	-15.95	AVG
9	3040.000	59.76	-10.11	49.65	74.00	-24.35	peak
10	3040.000			41.96	54.00	-12.04	AVG
11	3580.000	53.46	-9.38	44.08	74.00	-29.92	peak
12	3580.000			36.39	54.00	-17.61	AVG

The test result is calculated as the following:

(1) Result = Reading + Correct Factor

(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator

(3) Margin = Result - Limit

4.6 Test result(For 15.231)

EUT:	Restaurant Pager	Model No.:	YY-F100
Temperature:	23.1℃	Relative Humidity:	52%
Distance:	3m	Test Power:	DC 9V (AC 120V/60Hz)
Polarization:	Vertical	Test Result:	Pass
Test Time:	2023/12/19	Test By:	Jelena
Test Mode:	TX		

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	433.92	85.16	-8.29	76.87	100.82	-23.95	peak
2	433.92			69.18	80.82	-11.64	AVG
3	869.1299	54.61	1.01	55.62	80.82	-25.20	peak
4	869.1299			47.93	60.82	-12.89	AVG

The test result is calculated as the following:

(1) Result = Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
(3) Margin = Result - Limit

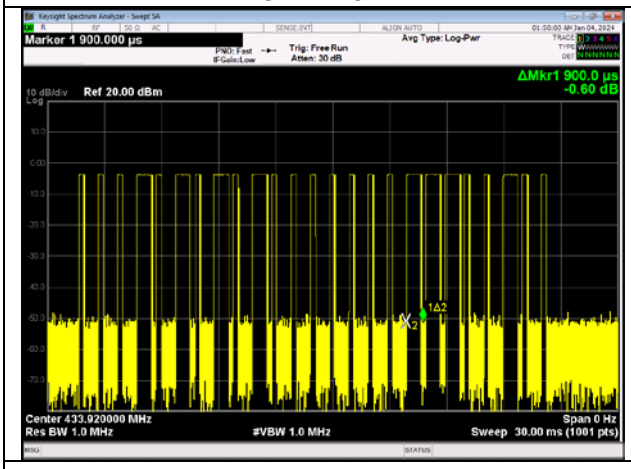
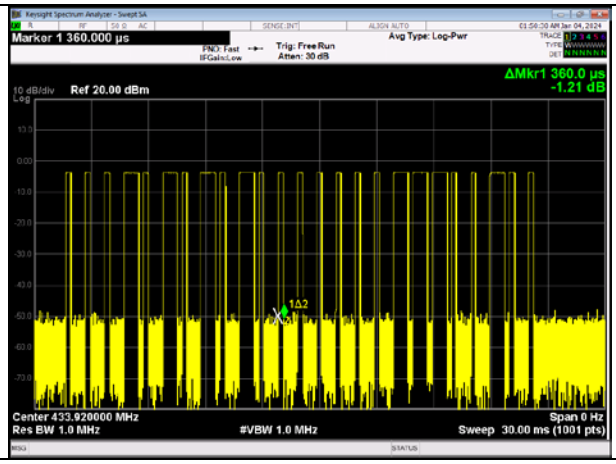
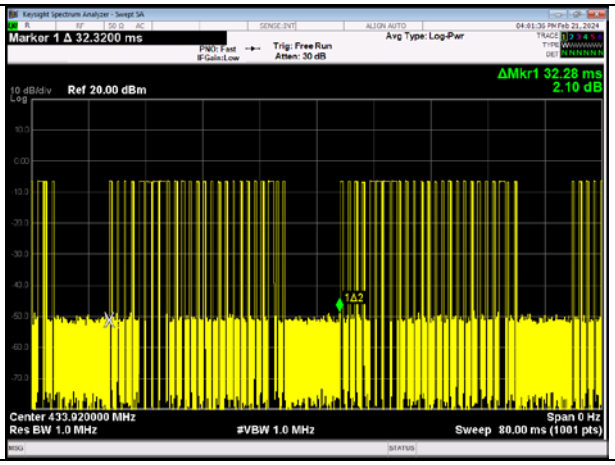
EUT:	**Restaurant Pager**	**Model No.:**	**YY-F100**
Temperature:	**23.1℃**	**Relative Humidity:**	**52%**
Distance:	**3m**	**Test Power:**	**DC 9V (AC 120V/60Hz)**
Polarization:	**Horizontal**	**Test Result:**	**Pass**
Test Time:	**2023/12/19**	**Test By:**	**Jelena**
Test Mode:	**TX**		

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	433.92	85.10	-7.29	77.81	100.82	-23.01	peak
2	433.92			70.12	80.82	-10.70	AVG
3	869.1299	44.11	1.01	55.12	80.82	-25.70	peak
4	869.1299			47.43	60.82	-13.39	AVG

The test result is calculated as the following:

(1) Result = Reading + Correct Factor
(2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
(3) Margin = Result - Limit

Duty Cycle

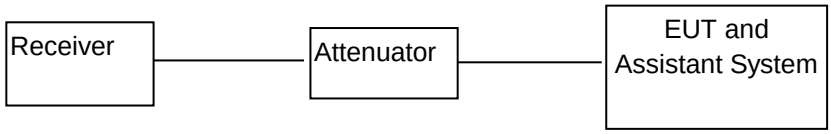
Duty Cycle=ON TIME/TOTAL TIME = 13.32ms/32.28ms ≈ 0.413	
ON Time 1	On Time 2
	
Total Time	
	

5 Duration Time

5.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until	Calibrated Date
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2024/05/23	2023/05/24
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A	N/A
3	RF Cable	Micable	C10-01-01-1	100309	N/A	N/A

5.2 Block diagram of test setup



5.3 Limits

Not more than 5 seconds

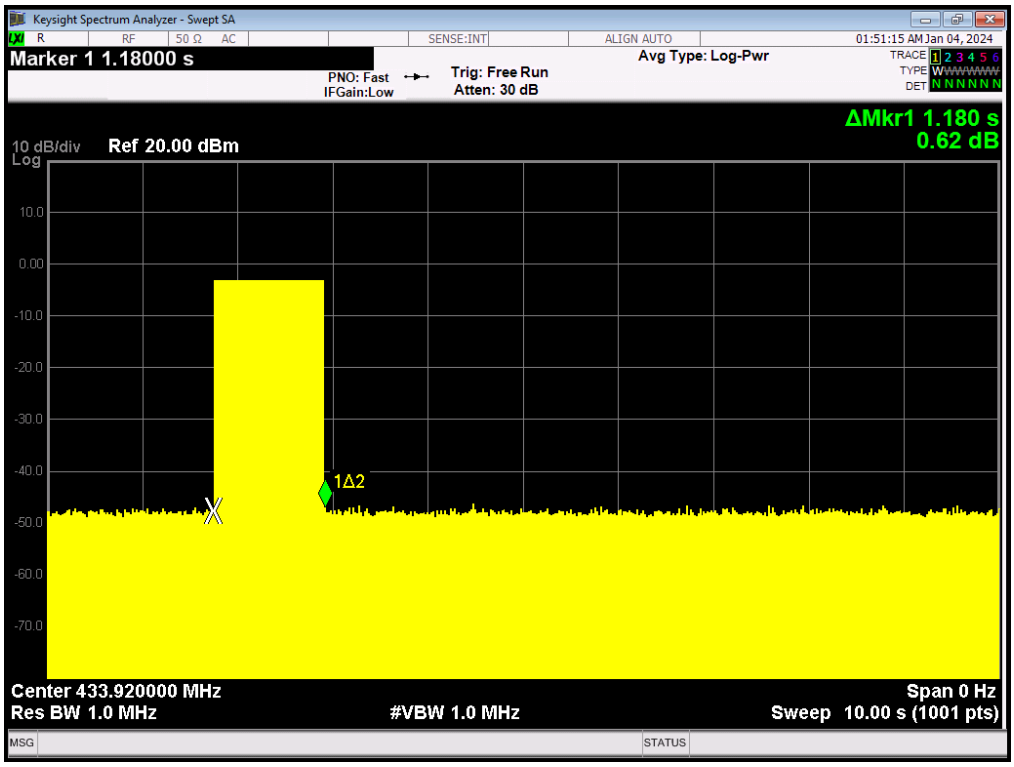
5.4 Test Procedure

1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT.
2. Set the EUT to proper test channel.
3. Single scan the transmission, and read the transmission time.

5.5 Test Result

Duration time (second)	Limit (second)	Result
1.18	5	pass

5.6 Original test data

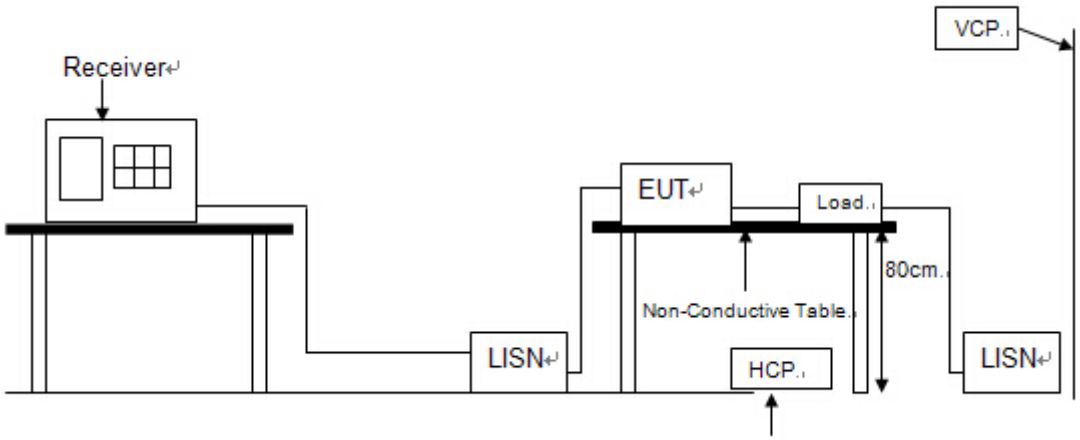


6.Power line conducted emission

6.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until	Calibrated Date
1	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0024	12/4/2024	12/5/2023
2	EMI Test Receiver	R&S	ESCI	101308	11/29/2024	11/30/2023
3	LISN	AFJ	LS16	16011103219	8/11/2024	8/12/2023
4	LISN	Schwarzbeck	NSLK 8127	8127-432	8/11/2024	8/12/2023
5	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A	N/A

6.2 Block diagram of test setup



6.3 Power Line Conducted Emission Limits(Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

6.4 Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 KHz.

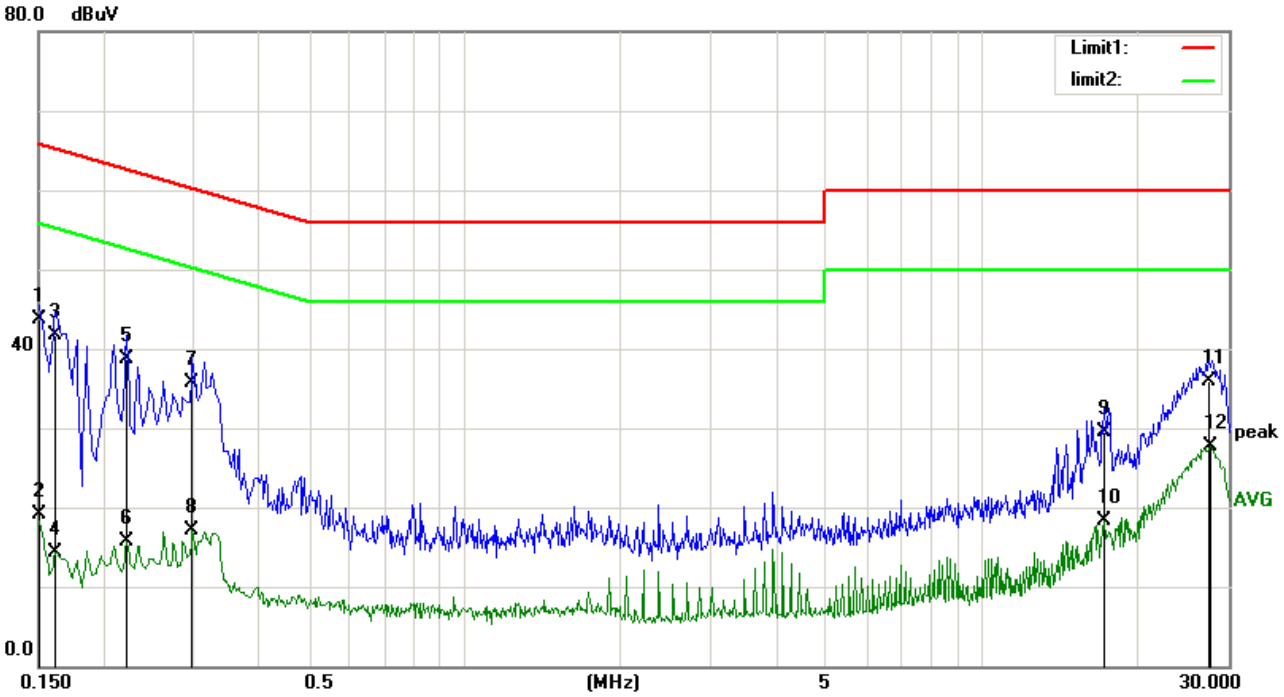
6.5 Test Result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: "-----" means peak detection; "-----" mans average detection

EUT:	Restaurant Pager	Model No.:	YY-F100
Temperature:	23.8	Relative Humidity:	57%
		Test Power:	DC 9V(AC 120V/60Hz)
Probe:	L1	Test Result:	Pass
Test Time:	2023/12/27	Test By:	Leo
Standard:	(CE)FCC PART 15 class B_QP		
Test Mode:	TX		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	32.59	11.07	43.66	65.99	-22.33	QP
2	0.1500	7.99	11.07	19.06	55.99	-36.93	AVG
3	0.1620	30.69	11.00	41.69	65.36	-23.67	QP
4	0.1620	3.38	11.00	14.38	55.36	-40.98	AVG
5	0.2220	27.93	10.68	38.61	62.74	-24.13	QP
6	0.2220	5.04	10.68	15.72	52.74	-37.02	AVG
7	0.2980	25.16	10.64	35.80	60.30	-24.50	QP
8	0.2980	6.45	10.64	17.09	50.30	-33.21	AVG
9	17.2780	18.60	10.88	29.48	60.00	-30.52	QP
10	17.2780	7.51	10.88	18.39	50.00	-31.61	AVG
11	27.5460	24.89	11.08	35.97	60.00	-24.03	QP
12	27.5860	16.64	11.08	27.72	50.00	-22.28	AVG

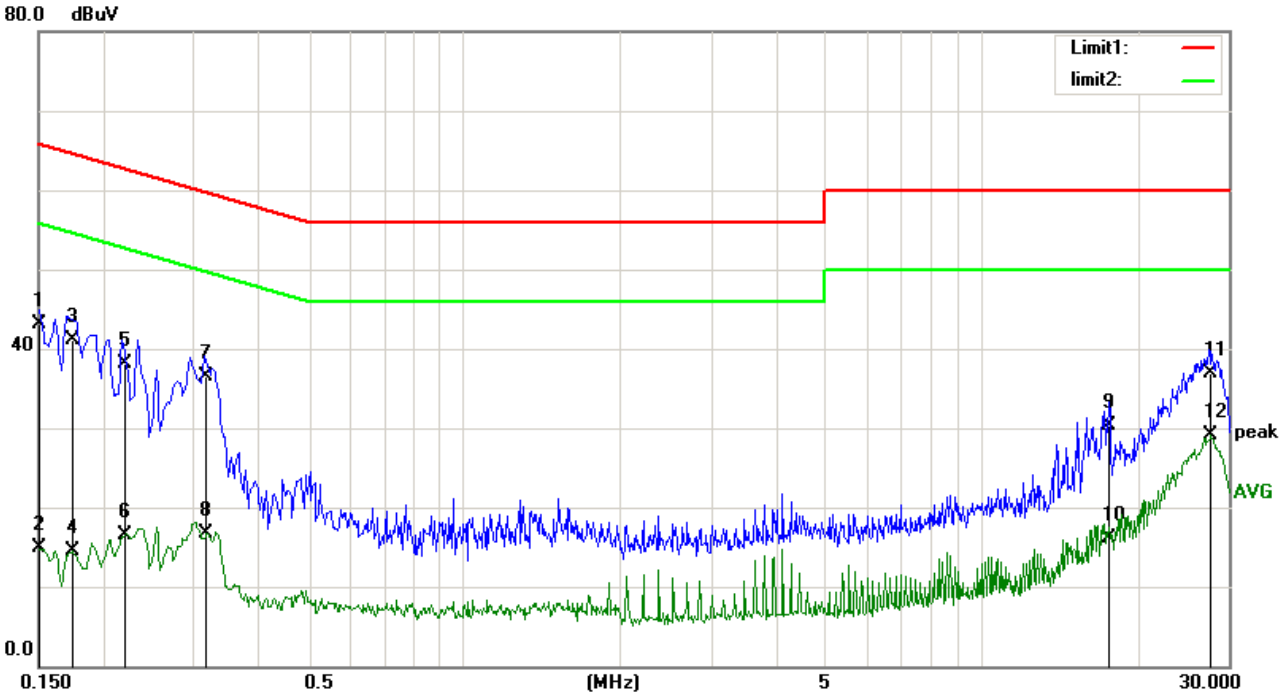
The test result is calculated as the following:

Result = Reading + Correct Factor

Correct Factor = (LISN, ISN, PLC or Current Probe) Factor + Cable Loss +Attenuator

Margin = Result - Limit

EUT:	Restaurant Pager	Model No.:	YY-F100
Temperature:	23.8	Relative Humidity:	57%
		Test Power:	DC 9V(AC 120V/60Hz)
Probe:	N	Test Result:	Pass
Test Time:	2023/12/27	Test By:	Leo
Standard:	(CE)FCC PART 15 class B_QP		
Test Mode:	TX		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	31.98	11.07	43.05	65.99	-22.94	QP
2	0.1500	3.76	11.07	14.83	55.99	-41.16	AVG
3	0.1740	30.23	10.93	41.16	64.76	-23.60	QP
4	0.1740	3.49	10.93	14.42	54.76	-40.34	AVG
5	0.2207	27.51	10.68	38.19	62.79	-24.60	QP
6	0.2207	5.87	10.68	16.55	52.79	-36.24	AVG
7	0.3180	25.82	10.67	36.49	59.76	-23.27	QP
8	0.3180	6.04	10.67	16.71	49.76	-33.05	AVG
9	17.6611	19.36	10.89	30.25	60.00	-29.75	QP
10	17.6611	5.30	10.89	16.19	50.00	-33.81	AVG
11	27.7540	25.83	11.08	36.91	60.00	-23.09	QP
12	27.7540	18.02	11.08	29.10	50.00	-20.90	AVG

The test result is calculated as the following:

Result = Reading + Correct Factor

Correct Factor = (LISN, ISN, PLC or Current Probe) Factor + Cable Loss +Attenuator

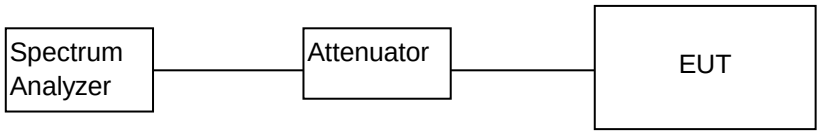
Margin = Result - Limit

7 Frequency Stability

7.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until	Calibrated Date
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2024/05/23	2023/05/24
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A	N/A
3	RF Cable	Micable	C10-01-01-1	100309	N/A	N/A
4	Temperature conditioning	Guan Jian.HTH1000	-20-130℃	GJ1000-10D 001	N/A	N/A
5	DC Power Supply	G.KE	IPR-10010D	010931954	N/A	N/A

7.2 Block diagram of test setup



7.3 Test Result

	Temperature vs. Frequency Stability	
Voltage	Temperature	Measurement Frequency (MHz)
9V	(℃)	433.92
	-20	433.915
	20	433.915
	50	433.915
6.8V	20	433.915
	Max. Deviation (MHz)	-0.005
	Max. Deviation (ppm)	-11.52

Note: 6.8V is the end point voltage, and products below 6.8V will cease working.

8. Antenna Requirements

8.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.231 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

8.2. Result

The antennas used for this product are built-in undetachable dipole antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 1.5dBi. The EUT has an internal antenna, the directional gain of antenna is 1.5 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

End of Report