

AXENT Intelligence Inc.

RF TEST REPORT

Report Type:

FCC Part 15.249 RF report

Model:

E601-01

REPORT NUMBER:

2510B1234SHA-001

ISSUE DATE:

January 12, 2026

DOCUMENT CONTROL NUMBER:

TTRF15.249-01_V1 © 2018 Intertek



Applicant: AXENT Intelligence Inc.
3 Musick Irvine, CA 92618 US

Manufacturer: AXENT Intelligence Inc.
3 Musick Irvine, CA 92618 US

Manufacturer Site: Xiamen AXENT Corporation Limited.
No. 2 East Xiafei Road, Xinyang Street, Haicang District, Xiamen,

Product Name: Intelligent Toilet

Type/Model: E601-01

FCC ID: 2AL4G-006

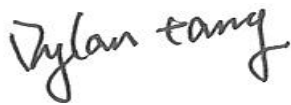
SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

47CFR Part 15 (2024): Radio Frequency Devices (Subpart C)

ANSI C63.10 (2020): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

PREPARED BY:



Project Engineer
Dylan Tang

REVIEWED BY:



Reviewer
Wakeyou Wang

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

TEST REPORT

Content

REVISION HISTORY.....	4
MEASUREMENT RESULT SUMMARY	5
1 GENERAL INFORMATION	6
1.1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	6
1.2 TECHNICAL SPECIFICATION.....	6
1.3 DESCRIPTION OF TEST FACILITY.....	7
2 TEST SPECIFICATIONS.....	8
2.1 STANDARDS OR SPECIFICATION	8
2.2 MODE OF OPERATION DURING THE TEST.....	8
2.3 TEST SOFTWARE LIST	8
2.4 TEST PERIPHERALS LIST.....	8
2.5 TEST ENVIRONMENT CONDITION:.....	9
2.6 INSTRUMENT LIST	10
2.7 MEASUREMENT UNCERTAINTY.....	11
3 RADIATED EMISSIONS	12
3.1 LIMIT	12
3.2 MEASUREMENT PROCEDURE	12
3.3 TEST CONFIGURATION	14
3.4 TEST RESULTS OF RADIATED EMISSIONS	16
3.5 DUTY CYCLE:	23
4 POWER LINE CONDUCTED EMISSION.....	26
4.1 LIMIT	26
4.2 TEST CONFIGURATION	26
4.3 MEASUREMENT PROCEDURE	27
4.4 TEST RESULTS OF POWER LINE CONDUCTED EMISSION.....	28
5 20 DB BANDWIDTH & 99% OCCUPIED BANDWIDTH.....	30
5.1 LIMIT	30
5.2 MEASUREMENT PROCEDURE	30
5.3 TEST CONFIGURATION	30
5.4 THE RESULTS.....	31
6 ANTENNA REQUIREMENT.....	34

Revision History

Report No.	Version	Description	Issued Date
2510B1234SHA-001	Rev. 01	Initial issue of report	January 12, 2026

Measurement result summary

TEST ITEM	FCC REFERENCE	RESULT
Radiated Emissions	15.249(a)&15.209	Pass
Power line conducted emission	15.207(a)	Pass
20 dB Bandwidth & 99% Occupied Bandwidth	15.215(c)	Pass
Antenna requirement	15.203	Pass

Notes: 1: NA =Not Applicable

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Intelligent Toilet
Type/Model:	E601-01
Description of EUT:	The EUT is Intelligent Toilet, it has only one model.
Rating:	120V~60Hz,750W
Category of EUT:	Class B
EUT type:	☐ Table top ☒ Floor standing
Software Version:	290003251105
Hardware Version:	V1.3
Sample received date:	October 9, 2025
Date of test:	October 9, 2025 ~ December 1, 2025

1.2 Technical Specification

Frequency Range:	24010MHz ~ 24200MHz
Type of Modulation:	FMCW
Channel Number:	1
Antenna Information:	Integrated antenna

Frequency Range:	24050MHz ~ 24210MHz
Type of Modulation:	FSK
Channel Number:	3
Antenna Information:	Integrated antenna

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0
	A2LA Accreditation Lab Certificate Number: 3309.02

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2024)

ANSI C63.10 (2020)

2.2 Mode of operation during the test

The channel was tested as representatives.

FMCW

Frequency Band (MHz)				24000 ~ 24250			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	24120	-	-	-	-	-	-

FSK

Frequency Band (MHz)				24000 ~ 24250			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	24050	2	24133.9	3	24204.5	-	-

2.3 Test software list

Test Items	Software	Manufacturer	Version
Conducted emission	ESxS-K1	R&S	V2.1.0
Radiated emission	ES-K1	R&S	V1.71

2.4 Test peripherals list

Item No.	Name	Band and Model	Description
-	-	-	-

2.5 Test environment condition:

Test items	Temperature	Humidity
20 dB Bandwidth & 99% Occupied Bandwidth	22°C	55% RH
Radiated Emissions		
Power line conducted emission	21°C	52% RH

TEST REPORT

2.6 Instrument list

Conducted Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Test Receiver	R&S	ESR7	EC 6194	2026-02-17
☒	A.M.N.	R&S2025-07-23	ESH2-Z5	EC 3119	2026-07-22
☐	A.M.N.	R&S	ENV4200	EC 3558	2026-06-04
☒	Attenuator	Hua Xiang	Ts5-10db-6g	EC 6194-1	2026-01-14
☒	Shielded room	Zhongyu	-	EC 2838	2026-01-09
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Test Receiver	R&S	ESIB 26	EC 3045	2026-08-05
☒	PXA Signal Analyzer	Keysight	N9030B	EC 6078	2026-03-25
☒	Bilog Antenna	TESEQ	CBL 6112B	EC 6411	2026-09-27
☐	Pre-amplifier	R&S	AFS42-00101800-25-S-42	EC 5262	2026-11-06
☒	Pre-amplifier	Tonscend	tap01018050	EC 6432-1	2025-12-03
☒	Horn antenna	Tonscend	bha9120d	EC 6432-2	2026-04-10
☒	Horn antenna	ETS	3116c	EC 5955	2026-08-24
☒	WW wave antenna (40-60G)	VDi	HD-500SGAH25	EC 6529-1	2026-03-09
☒	Mixer (40-60G)		M19RH	EC 6529	2026-03-24
☒	WW wave antenna (60-90G)	VDi	HD-620SGAH25	EC 6382-1	2026-03-12
☒	Mixer (60-90G)		M12RH	EC 6382	2026-03-24
☒	WW wave antenna (90-140G)	VDi	HD-900SGAH25	EC 6383-1	2026-03-12
☒	Mixer (90-140G)		M15RH	EC 6383	2026-03-24
☒	Semi-anechoic chamber	Albatross project	-	EC 3048	2026-07-11
Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Therom-Hygrograph	Testo	175h1	EC 6640	2026-08-03
☒	Pressure meter	YM3	Shanghai Mengde	EC 3320	2026-08-04

2.7 Measurement uncertainty

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

Test item	Measurement uncertainty
Radiated Emissions in restricted frequency bands below 1GHz	$\pm 4.90\text{dB}$
Radiated Emissions in restricted frequency bands above 1GHz	$\pm 5.02\text{dB}$
Emission outside the frequency band	$\pm 2.89\text{dB}$

3 Radiated Emissions

Test result: Pass

3.1 Limit

Fundamental Frequency (MHz)	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (millivolts/meter)
902 - 928	94	54
2400 - 2483.5	94	54
5725 - 5875	94	54
24000 - 24250	108	68

The radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified showed as below:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	$2400/F(\text{kHz})$	300
0.490 ~ 1.705	$24000/F(\text{kHz})$	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

3.2 Measurement Procedure

For Radiated emission below 30MHz:

- The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Both X and Y axes of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

TEST REPORT

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz:

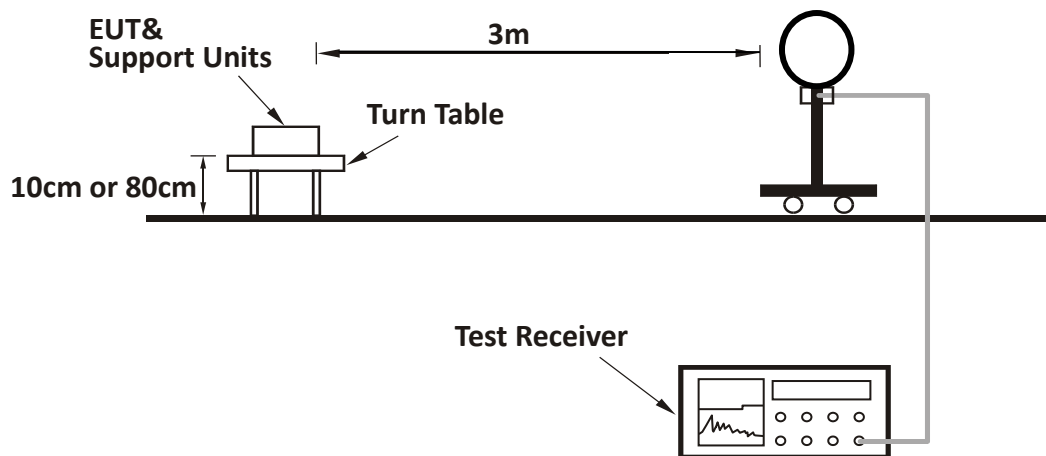
- a) The EUT was placed on the top of a rotating table 0.1 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b) The EUT was set 3 or 1 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c) The height of antenna 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.
- d) 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

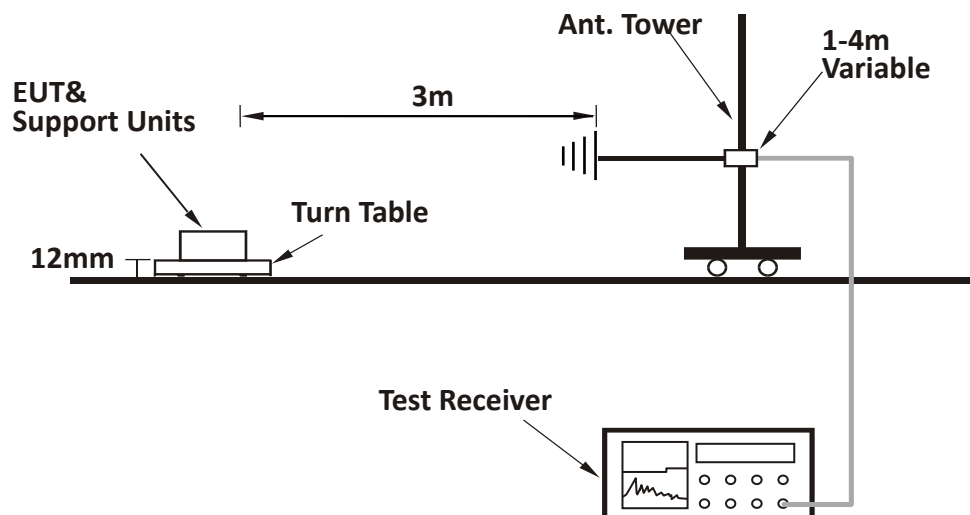
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or $3 \times \text{RBW}$ (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported

3.3 Test Configuration

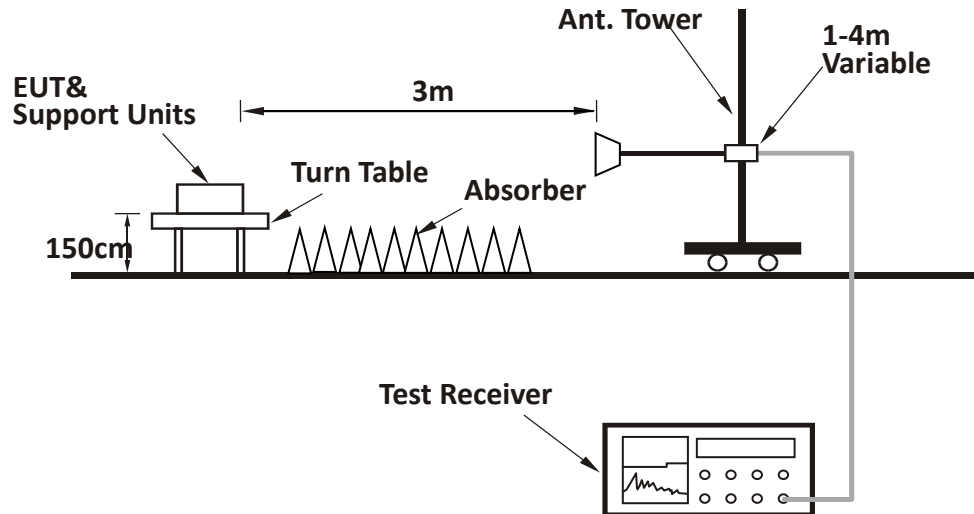
For Radiated emission below 30MHz:



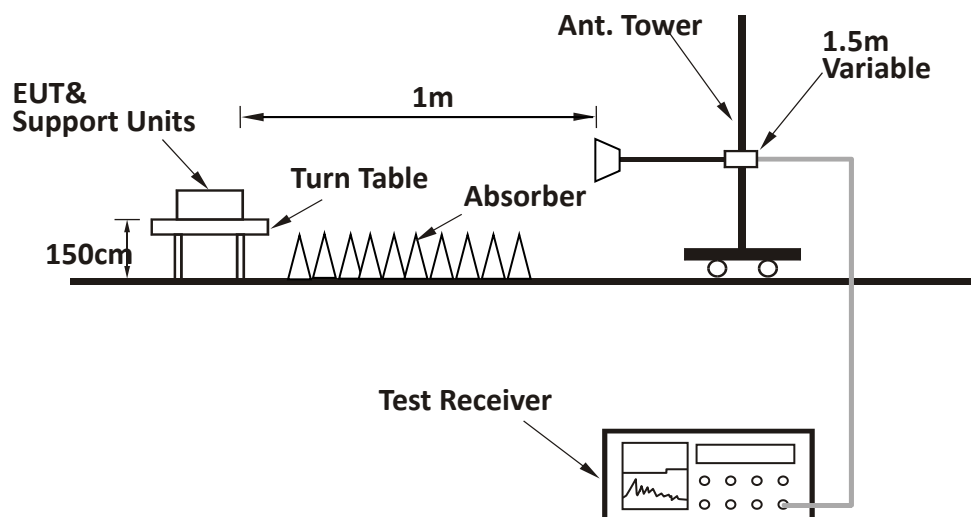
For Radiated emission 30MHz to 1GHz:



For Radiated emission 1GHz to 40GHz:



For Radiated emission above 40GHz:

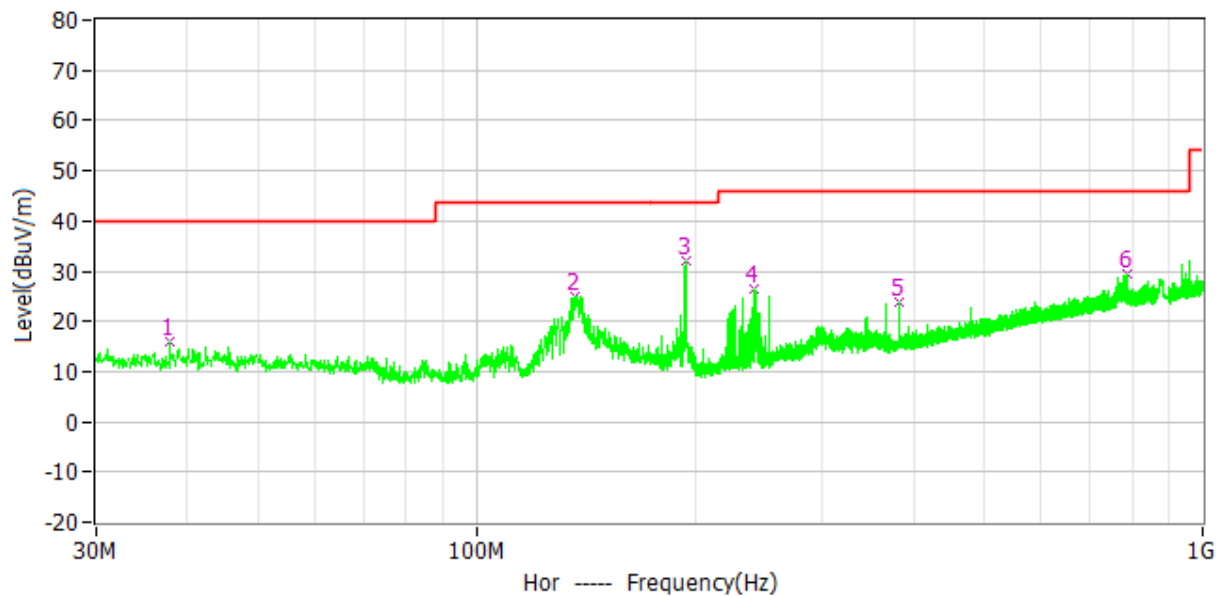


3.4 Test Results of Radiated Emissions

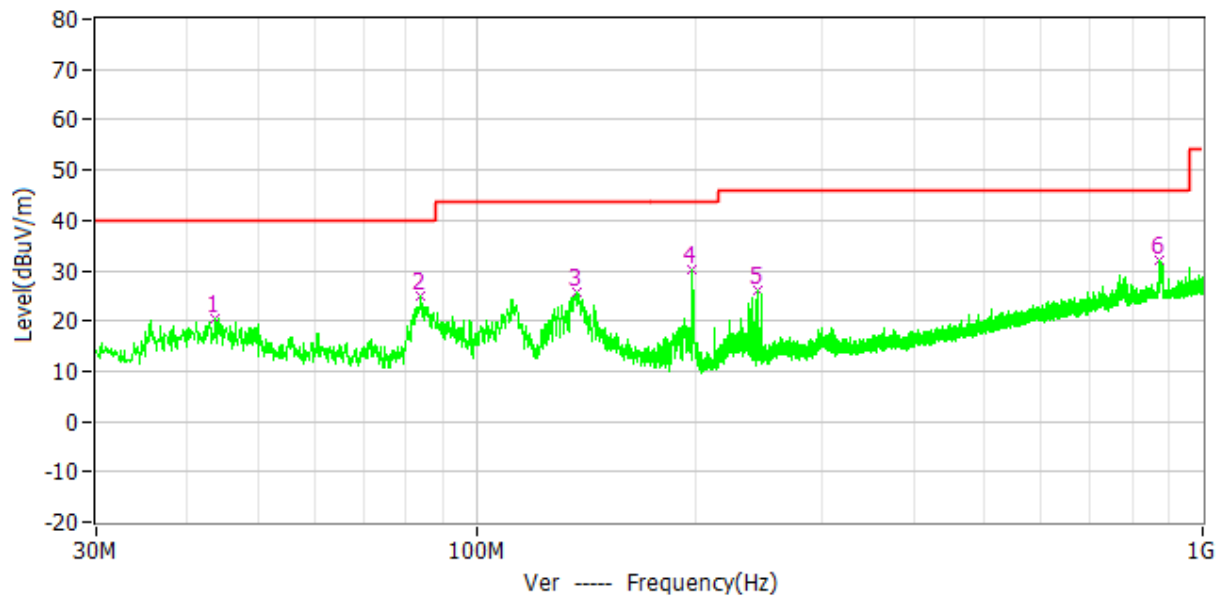
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

The worst waveform from 30MHz to 1000MHz is listed as below:

Horizontal



Vertical



Test data below 1GHz

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	37.857	16.1	13.8	40.0	23.9	QP
H	136.700	25.1	13.9	43.5	18.4	QP
H	194.027	32.1	12.0	43.5	11.4	QP
H	241.945	26.3	13.3	46.0	19.7	QP
H	381.722	23.7	17.4	46.0	22.3	QP
H	787.279	29.4	25.6	46.0	16.6	QP
V	43.774	20.6	14.2	40.0	19.4	QP
V	83.932	24.8	9.6	40.0	15.2	QP
V	137.864	25.6	14.0	43.5	17.9	QP
V	197.713	30.2	11.7	43.5	13.3	QP
V	243.788	25.9	13.4	46.0	20.1	QP
V	873.027	32.1	26.1	46.0	13.9	QP

FMCW

Test result above 1GHz:

Antenna	Frequency Band (GHz)	Desensitization factor (dB)	Peak Power @3m (dBuV/m)	Limit (dBuV/m)	Average Power @3m (dBuV/m)	Limit (dBuV/m)
H	24.00 ~ 24.25	6.09	82.50	128.0	52.07	108.0
V		6.09	80.40	128.0	49.97	108.0

FMCW desensitization factor = $20 * \log(\alpha) = 6.09\text{dB}$

$$\alpha = \frac{1}{\sqrt[4]{1 + \left(\frac{2\ln(2)}{\pi}\right)^2 \left(\frac{F_s}{T_s B^2}\right)^2}}$$

F_s = Sweep width = 211.27MHz

T_s = Sweep time = 54 μs

B = 3 dB IF bandwidth = 1MHz

Average Power= Peak Power + Ducus Cycle Factor

TEST REPORT

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	23825	47.12	74.00	26.88	PK
H	23825	41.28	54.00	12.72	AV
H	24000	43.58	74.00	30.42	PK
H	24000	38.40	54.00	15.60	AV
H	24250	42.82	74.00	31.18	PK
H	24250	37.64	54.00	16.36	AV
H	24316	46.52	74.00	27.48	PK
H	24316	41.34	54.00	12.66	AV
V	23862	46.96	74.00	27.04	PK
V	23862	41.78	54.00	12.22	AV
V	24000	43.40	74.00	30.60	PK
V	24000	38.22	54.00	15.78	AV
V	24250	43.56	74.00	30.44	PK
V	24250	38.38	54.00	15.62	AV
V	24315	45.72	74.00	28.28	PK
V	24315	40.54	54.00	13.46	AV

FSK

Test result above 1GHz:

Channel	Antenna	Frequency Band (GHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	24.00 ~ 24.25	91.16	128.00	36.84	PK
	H		75.86	108.00	32.14	AV
	V		86.73	128.00	41.27	PK
	V		71.26	108.00	36.74	AV
M	H		86.01	128.00	41.99	PK
	H		70.95	108.00	37.05	AV
	V		84.92	128.00	43.08	PK
	V		68.35	108.00	39.65	AV
H	H		94.73	128.00	33.27	PK
	H		77.85	108.00	30.15	AV
	V		89.94	128.00	38.06	PK
	V		73.55	108.00	34.45	AV

Channel	Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	23760.6	53.37	74.00	20.63	PK

TEST REPORT

	H	24000.0	50.47	74.00	23.53	PK
	H	24250.0	51.79	74.00	22.21	PK
	H	24445.5	53.96	74.00	20.04	PK
	V	23785.3	53.92	74.00	20.08	PK
	V	24000.0	49.47	74.00	24.53	PK
	V	24250.0	49.38	74.00	24.62	PK
	V	24437.8	53.97	74.00	20.03	PK
H	H	23719.4	51.34	74.00	22.66	PK
	H	24000.0	48.75	74.00	25.25	PK
	H	24250.0	50.79	74.00	23.21	PK
	H	24448.8	52.96	74.00	21.04	PK
	V	23710.5	52.70	74.00	21.30	PK
	V	24000.0	49.77	74.00	24.23	PK
	V	24250.0	49.80	74.00	24.20	PK
	V	24498.3	53.80	74.00	20.20	PK

The emission was conducted from 1GHz to 40GHz
FSK

Channel	Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	6723.0	45.50	74.00	28.50	PK
	H	6723.0	33.15	54.00	20.85	AV
	H	17830.0	52.19	74.00	21.81	PK
	H	17830.0	40.54	54.00	13.46	AV
	H	18665.5	59.60	74.00	14.4	PK
	H	18665.5	49.32	54.00	4.68	AV
	H	28252.5	56.03	74.00	17.97	PK
	H	28252.5	46.70	54.00	7.30	AV
	V	6723.0	44.26	74.00	29.74	PK
	V	6723.0	33.51	54.00	20.49	AV
	V	17864.0	51.93	74.00	22.07	PK
	V	17864.0	40.71	54.00	13.29	AV
	V	18668.0	57.17	74.00	16.83	PK
	V	18668.0	46.51	54.00	7.49	AV
	V	27398.5	56.89	74.00	17.11	PK
	V	27398.5	47.25	54.00	6.75	AV
M	H	6719.0	45.30	74.00	28.70	PK
	H	6719.0	33.05	54.00	20.95	AV
	H	17825.0	52.28	74.00	21.72	PK
	H	17825.0	40.65	54.00	13.35	AV
	H	18657.8	60.76	74.00	13.24	PK
	H	18657.8	49.58	54.00	4.42	AV
	H	37117.5	58.95	74.00	15.05	PK

TEST REPORT

	H	37117.5	49.12	54.00	4.88	AV
	V	6725.0	44.21	74.00	29.79	PK
	V	6725.0	33.08	54.00	20.92	AV
	V	17875.0	52.12	74.00	21.88	PK
	V	17875.0	40.95	54.00	13.05	AV
	V	18659.8	59.58	74.00	14.42	PK
	V	18659.8	48.85	54.00	5.15	AV
	V	35230.0	57.10	74.00	16.9	PK
	V	35230.0	46.55	54.00	7.45	AV
H	H	6720.0	45.42	74.00	28.58	PK
	H	6720.0	33.18	54.00	20.82	AV
	H	17842.0	52.42	74.00	21.58	PK
	H	17842.0	40.72	54.00	13.28	AV
	H	18667.3	58.49	74.00	15.51	PK
	H	18667.3	47.72	54.00	6.28	AV
	H	33939.8	58.58	74.00	15.42	PK
	H	33939.8	47.36	54.00	6.64	AV
	V	6722.0	44.35	74.00	29.65	PK
	V	6722.0	33.22	54.00	20.78	AV
	V	17860.0	52.35	74.00	21.65	PK
	V	17860.0	41.02	54.00	12.98	AV
	V	21784.4	58.99	74.00	15.01	PK
	V	21784.4	47.27	54.00	6.73	AV
	V	37005.1	56.58	74.00	17.42	PK
	V	37005.1	45.95	54.00	8.05	AV

The emission was conducted from 1GHz to 40GHz
FMCW

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	6758.0	45.82	74.00	28.18	PK
H	6758.0	33.35	54.00	20.65	AV
H	17845.0	52.26	74.00	21.74	PK
H	17845.0	40.55	54.00	13.45	AV
H	18671.0	52.57	74.00	21.43	PK
H	18671.0	47.39	54.00	6.61	AV
H	35309.0	53.02	74.00	20.98	PK
H	35309.0	47.84	54.00	6.16	AV
V	6728.0	44.82	74.00	29.18	PK
V	6728.0	33.75	54.00	20.25	AV
V	17876.0	52.05	74.00	21.95	PK
V	17876.0	40.95	54.00	13.05	AV
V	18665.5	53.67	74.00	20.33	PK
V	18665.5	48.49	54.00	5.51	AV

TEST REPORT

V	35318.5	52.73	74.00	21.27	PK
V	35318.5	47.55	54.00	6.45	AV

- Remark: 1. Correct Factor = Antenna Factor + Cable Loss (- Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
 2. Corrected Reading = Original Receiver Reading + Correct Factor
 3. Margin = Limit - Corrected Reading
 4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,
 Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,
 Limit = 40.00dBuV/m.
 Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m;
 Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m;
 Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB.

The emission was conducted from 40GHz to 100GHz
 FMCW

Antenna	Frequency (MHz)	Measured Level (dBm)	Antenna Gain (dBi)	Level@1m (dBuV/m)	Level@3m (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	40860	-70.37	22.76	76.35	66.81	74.00	7.19	PK
H	40860	-90.15	22.76	56.57	47.03	54.00	6.97	AV
H	60260	-69.26	22.64	80.96	71.42	74.00	2.58	PK
H	60260	-89.55	22.64	60.67	51.13	54.00	2.87	AV
H	91450	-73.71	22.63	80.14	70.60	74.00	3.40	PK
H	91450	-92.15	22.63	61.70	52.16	54.00	1.84	AV
V	40960	-70.25	22.76	76.50	66.95	74.00	7.05	PK
V	40960	-89.85	22.76	56.90	47.35	54.00	6.65	AV
V	69420	-68.42	23.23	82.44	72.90	74.00	1.10	PK
V	69420	-89.82	23.23	61.04	51.50	54.00	2.50	AV
V	93450	-72.19	22.84	81.64	72.10	74.00	1.90	PK
V	93450	-91.86	22.84	61.97	52.43	54.00	1.57	AV

FSK

Channel	Antenna	Frequency (MHz)	Measured Level (dBm)	Antenna Gain (dBi)	Level@1m (dBuV/m)	Level@3m (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	40880	-70.66	22.76	76.07	66.53	74.00	7.47	PK
	H	40880	-90.46	22.76	56.27	46.73	54.00	7.27	AV
	H	71040	-69.81	23.10	81.38	71.84	74.00	2.16	PK
	H	71040	-88.86	23.10	62.33	52.79	54.00	1.21	AV
	H	91600	-73.75	22.66	80.09	70.54	74.00	3.46	PK
	H	91600	-91.26	22.66	62.58	53.03	54.00	0.97	AV
	V	40920	-70.90	22.76	75.84	66.29	74.00	7.71	PK
	V	40920	-89.12	22.76	57.62	48.07	54.00	5.93	AV
	V	68520	-69.10	23.06	81.81	72.27	74.00	1.73	PK

TEST REPORT

	V	68520	-88.95	23.06	61.96	52.42	54.00	1.58	AV
	V	91450	-72.53	22.63	81.32	71.78	74.00	2.22	PK
	V	91450	-91.15	22.63	62.70	53.16	54.00	0.84	AV
M	H	40850	-69.95	22.76	76.77	67.23	74.00	6.77	PK
	H	40850	-88.15	22.76	58.57	49.03	54.00	4.97	AV
	H	71100	-68.56	23.10	82.64	73.09	74.00	0.91	PK
	H	71100	-88.12	23.10	63.08	53.53	54.00	0.47	AV
	H	91560	-72.25	22.63	81.61	72.07	74.00	1.93	PK
	H	91560	-91.05	22.63	62.81	53.27	54.00	0.73	AV
	V	40910	-70.26	22.76	76.47	66.93	74.00	7.07	PK
	V	40910	-88.42	22.76	58.31	48.77	54.00	5.23	AV
	V	68720	-69.86	23.06	81.08	71.54	74.00	2.46	PK
	V	68720	-89.16	23.06	61.78	52.24	54.00	1.76	AV
	V	91510	-72.92	22.63	80.94	71.40	74.00	2.60	PK
	V	91510	-91.46	22.63	62.40	52.86	54.00	1.14	AV
H	H	40810	-69.12	22.76	77.59	68.05	74.00	5.95	PK
	H	40810	-87.98	22.76	58.73	49.19	54.00	4.81	AV
	H	71250	-68.25	23.10	82.96	73.42	74.00	0.58	PK
	H	71250	-88.05	23.10	63.16	53.62	54.00	0.38	AV
	H	91620	-71.92	22.63	81.95	72.41	74.00	1.59	PK
	H	91620	-90.86	22.63	63.01	53.47	54.00	0.53	AV
	V	41020	-70.02	22.76	76.74	67.20	74.00	6.80	PK
	V	41020	-87.85	22.76	58.91	49.37	54.00	4.63	AV
	V	68650	-69.55	23.06	81.38	71.84	74.00	2.16	PK
	V	68650	-88.95	23.06	61.98	52.44	54.00	1.56	AV
	V	91730	-72.85	22.63	81.03	71.49	74.00	2.51	PK
	V	91730	-91.28	22.63	62.60	53.06	54.00	0.94	AV

Remark: 1. Correct Factor = Antenna Factor + Cable Loss + Mixer Conversion Loss, the value was added to Original Receiver Reading by the software automatically.

2. Level@1m = $126.8 - 20\log(\lambda) + P - G$

where (According to ANSI 63.10 section 9.4):

E is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

3. Margin = Limit - Level@1m

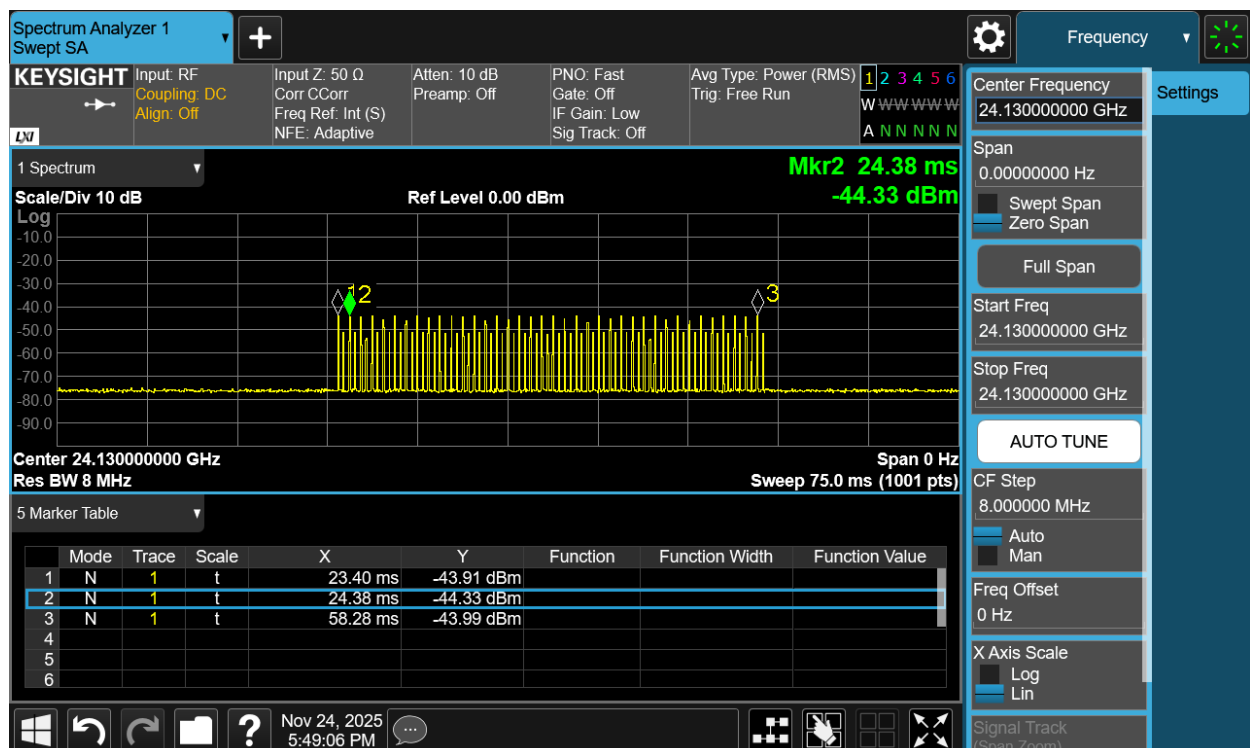
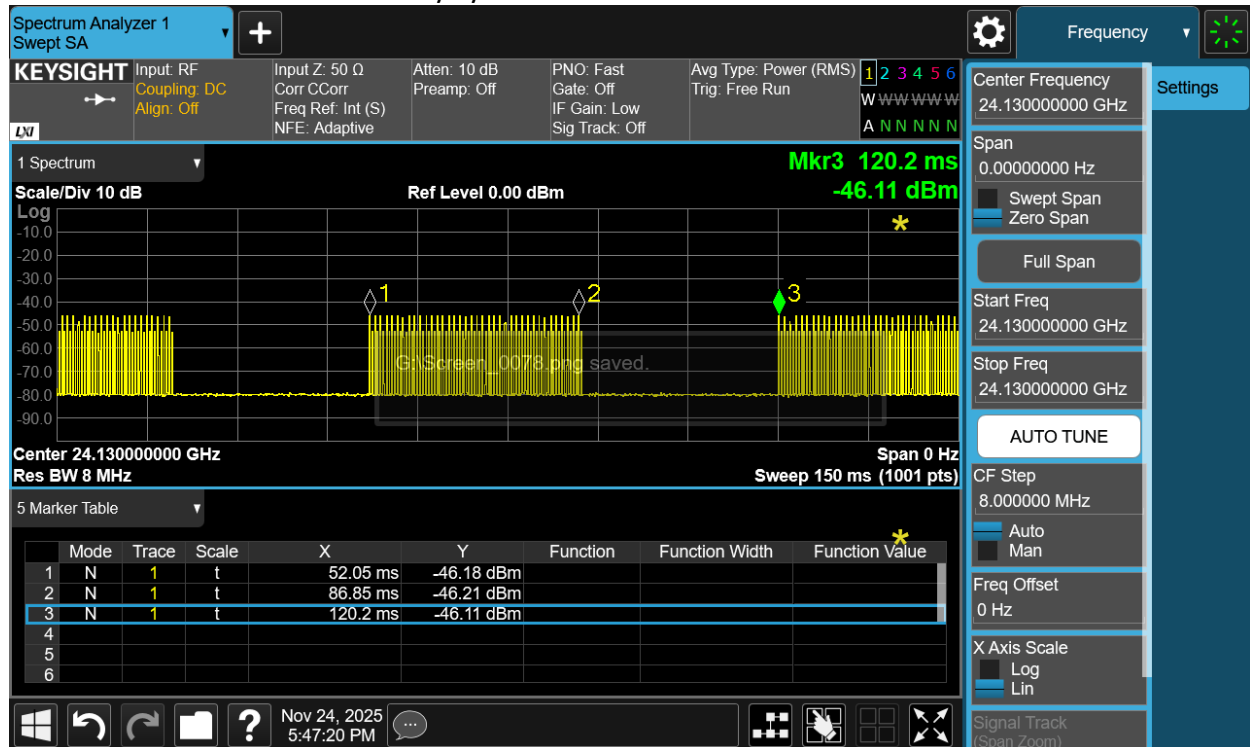
4. Level@3m = Level@1m + $20\log(1m/3m)$.

TEST REPORT

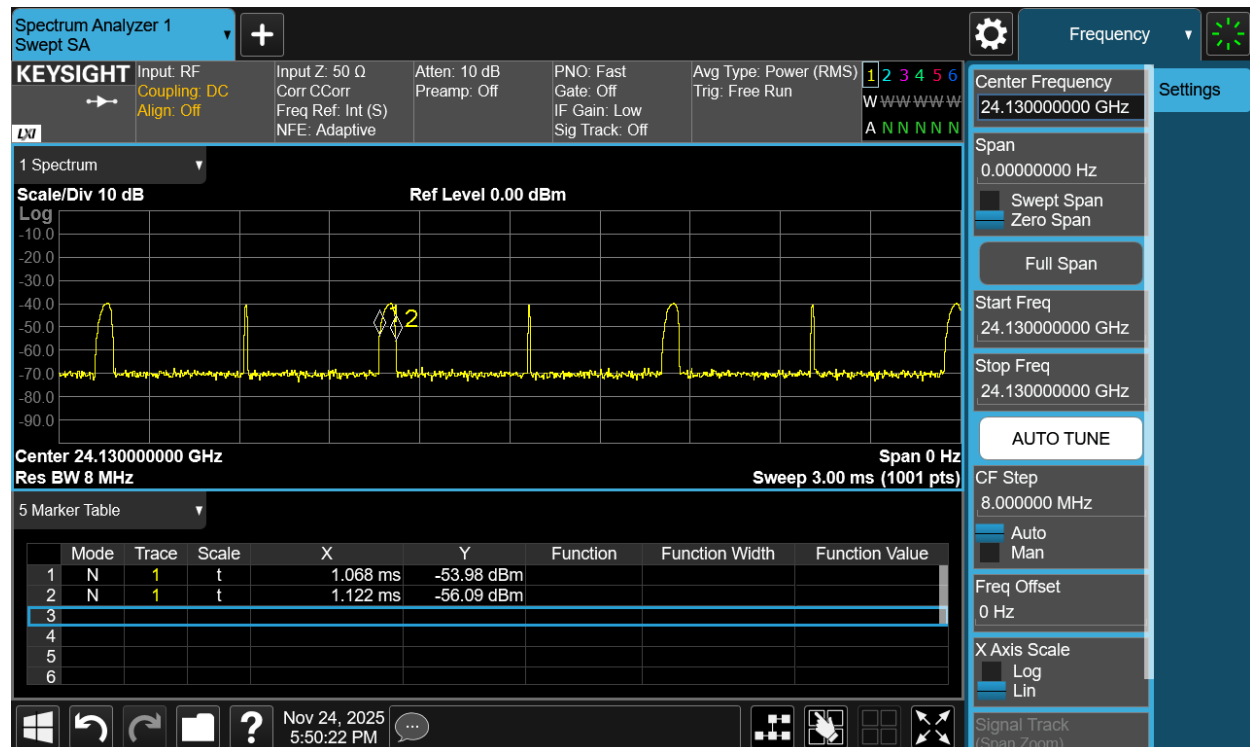
3.5 Duty Cycle:

FMCW

The test data with maximum duty cycle was listed below.



TEST REPORT



Duty Cycle Factor = $20 \lg^*(\text{Duty Cycle}) = -30.43 \text{ dB}$

Note 1: Duty Cycle = Transmission Time / Burst Period

2: Transmission Time = Chirp Width * Chirp number = $54 \mu\text{s} * 38 = 2.052 \text{ ms}$

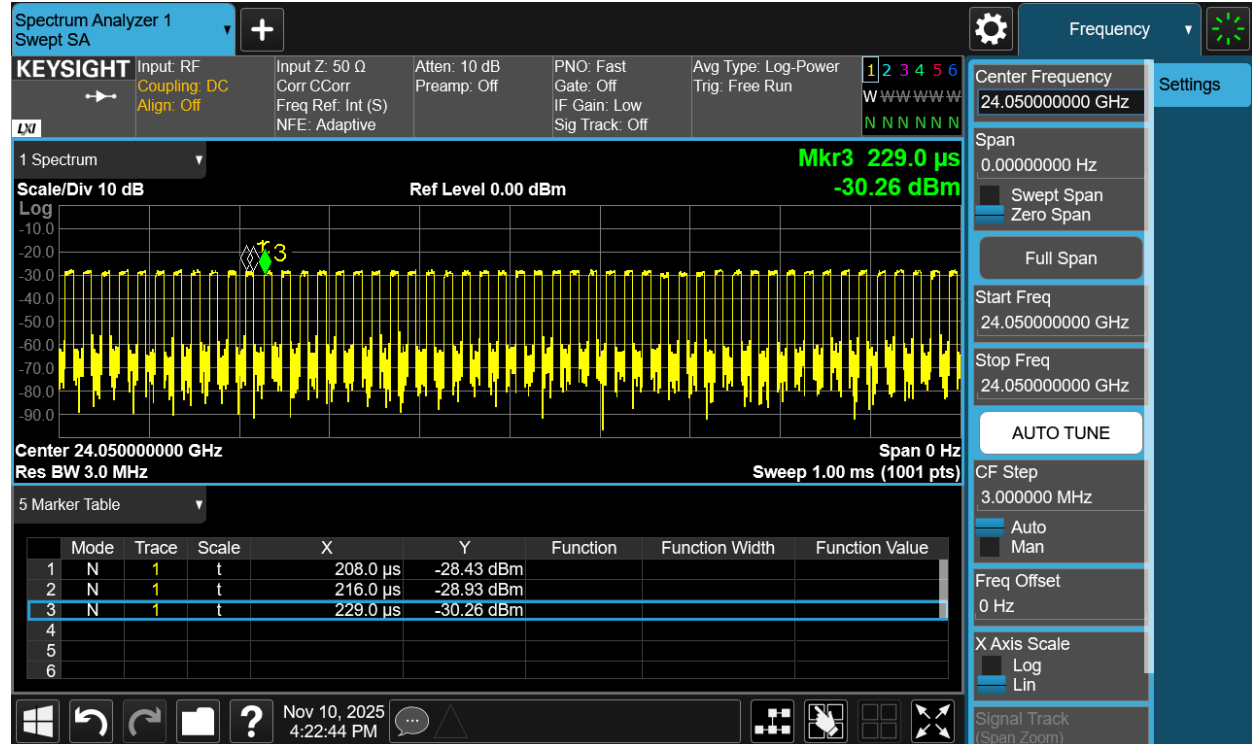
3: Burst Period = 68.15 ms

TEST REPORT

FSK

The test data with maximum duty cycle was listed below.

The worst Duty cycle= 38.1%, Factor =4.19dB.



4 Power line conducted emission

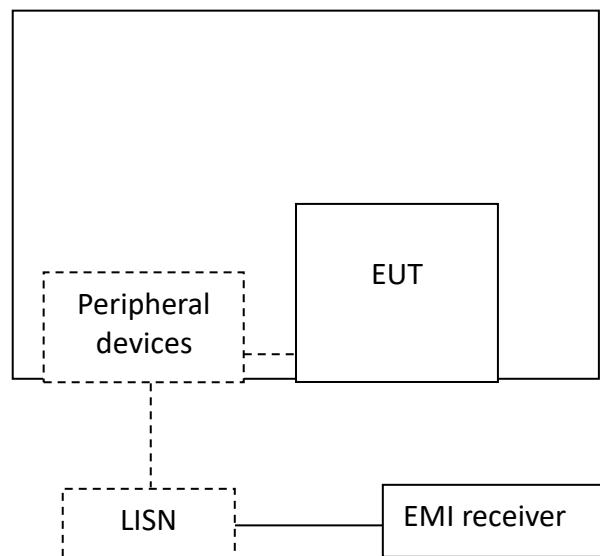
Test result: Pass

4.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

4.2 Test Configuration



TEST REPORT

4.3 Measurement Procedure

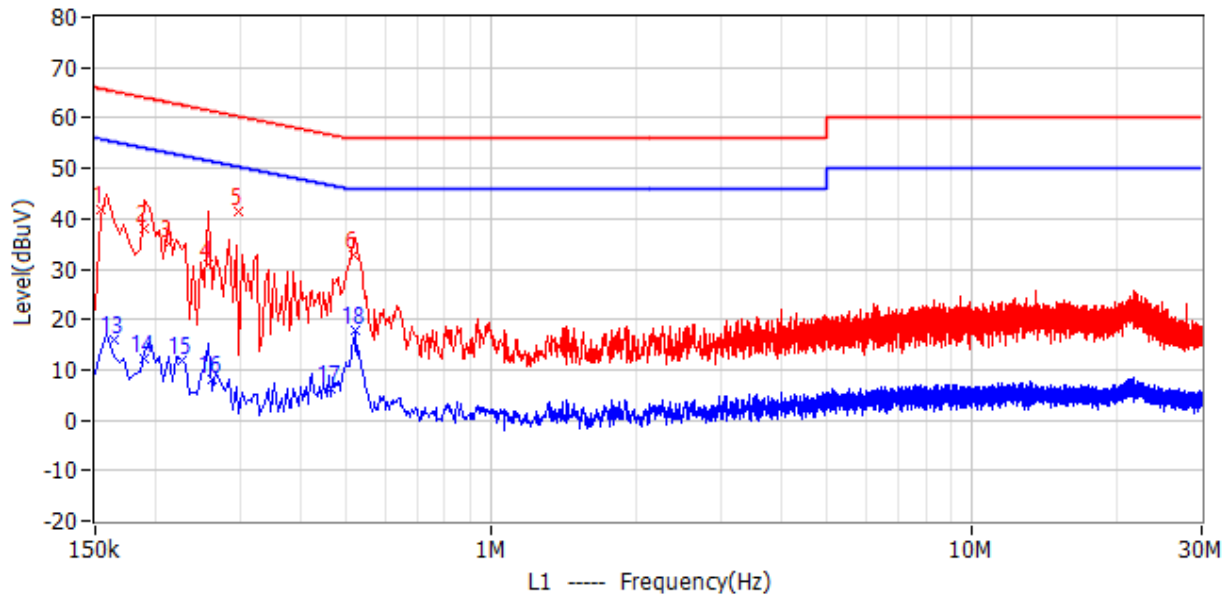
Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

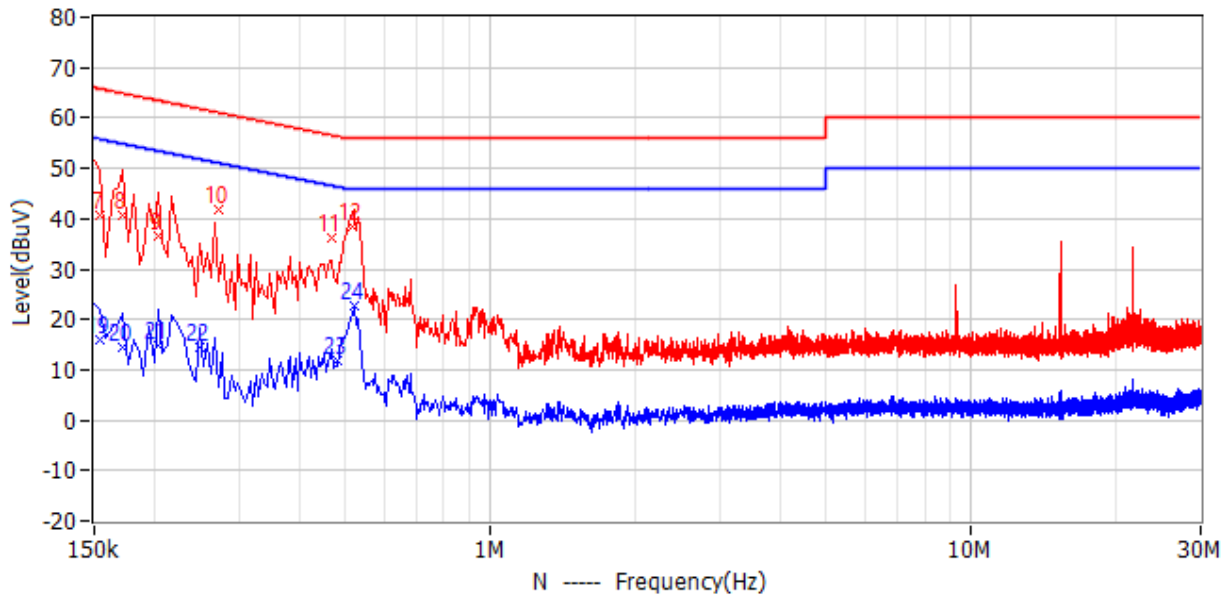
The bandwidth of the test receiver is set at 9 kHz.

4.4 Test Results of Power line conducted emission

L line



N line



TEST REPORT

Test Data:

No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Reading dBuV	Factor dB	Detector	Phase
1	154.500kHz	65.75	41.91	23.84	31.71	10.20	QP	L1
2	190.500kHz	64.01	37.87	26.14	27.67	10.20	QP	L1
3	213.000kHz	63.09	35.08	28.01	24.88	10.20	QP	L1
4	258.000kHz	61.50	30.77	30.73	20.57	10.20	QP	L1
5	298.500kHz	60.28	41.53	18.75	31.33	10.20	QP	L1
6	514.500kHz	56.00	32.88	23.12	22.68	10.20	QP	L1
7	154.500kHz	65.75	40.80	24.95	30.70	10.10	QP	N
8	172.500kHz	64.84	40.54	24.30	30.44	10.10	QP	N
9	204.000kHz	63.45	36.74	26.71	26.64	10.10	QP	N
10	271.500kHz	61.07	41.93	19.14	31.83	10.10	QP	N
11	469.500kHz	56.52	36.18	20.34	25.98	10.20	QP	N
12	514.500kHz	56.00	38.36	17.64	28.16	10.20	QP	N
13	163.500kHz	55.28	16.01	39.27	5.81	10.20	AV	L1
14	190.500kHz	54.01	12.37	41.64	2.17	10.20	AV	L1
15	226.500kHz	52.58	11.69	40.89	1.49	10.20	AV	L1
16	262.500kHz	51.35	8.03	43.32	-2.17	10.20	AV	L1
17	465.000kHz	46.60	6.38	40.22	-3.82	10.20	AV	L1
18	519.000kHz	46.00	17.73	28.27	7.53	10.20	AV	L1
19	154.500kHz	55.75	16.13	39.62	6.03	10.10	AV	N
20	172.500kHz	54.84	14.40	40.44	4.30	10.10	AV	N
21	204.000kHz	53.45	14.70	38.75	4.60	10.10	AV	N
22	249.000kHz	51.79	14.53	37.26	4.43	10.10	AV	N
23	478.500kHz	46.37	11.83	34.54	1.63	10.20	AV	N
24	519.000kHz	46.00	22.64	23.36	12.44	10.20	AV	N

Remark: 1. Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.

2. Level = Reading + Factor

3. Margin = Limit - Level

4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

5 20 dB Bandwidth & 99% Occupied Bandwidth

Test result: Pass

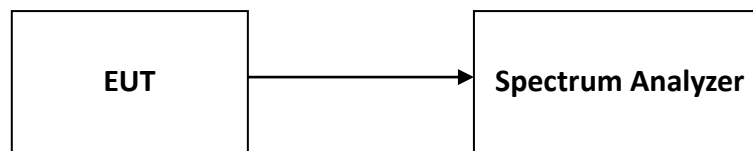
5.1 Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission is contained within the allocated frequency band.

5.2 Measurement Procedure

The 20dB Bandwidth is measured using the Spectrum Analyzer.
Set Span = 2 to 3 times the 20 dB bandwidth, RBW = approximately 1% of the 20 dB bandwidth, VBW>RBW, Sweep = auto, Detector = peak, Trace = max hold.
The test was performed at 2 channels (lowest and highest channel).

5.3 Test Configuration

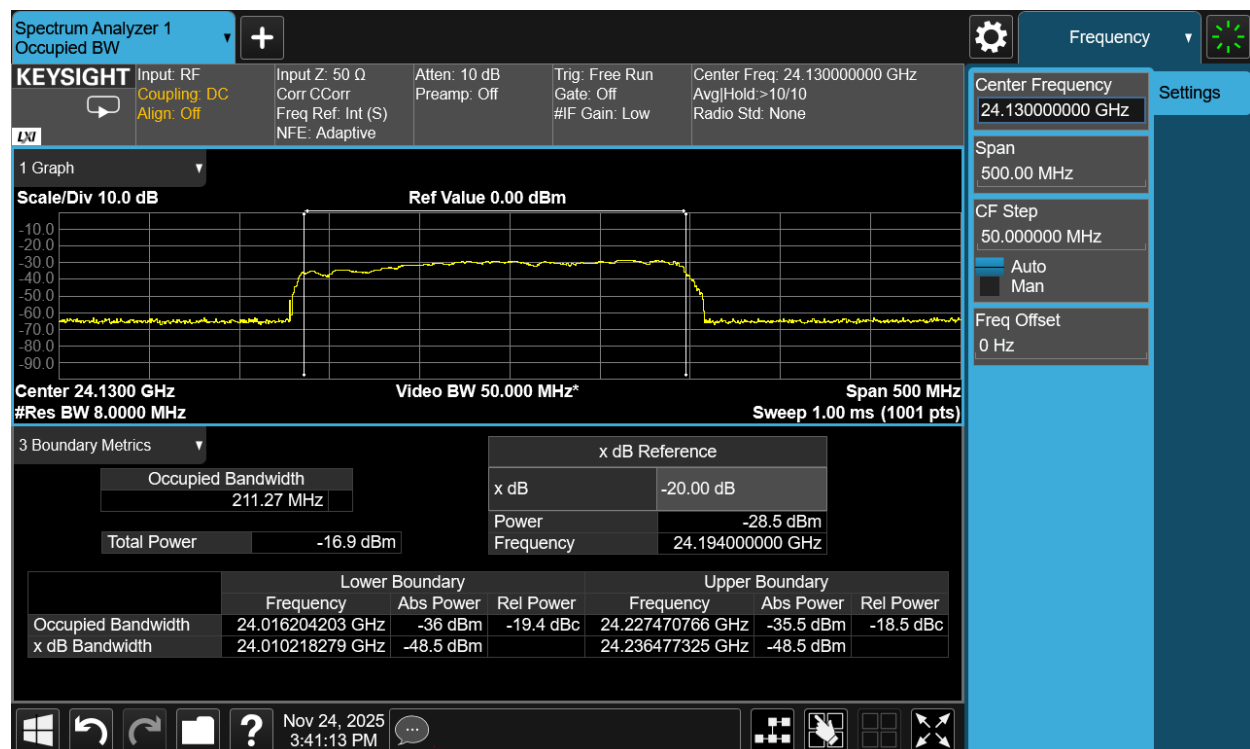


TEST REPORT

5.4 The results

FMCW

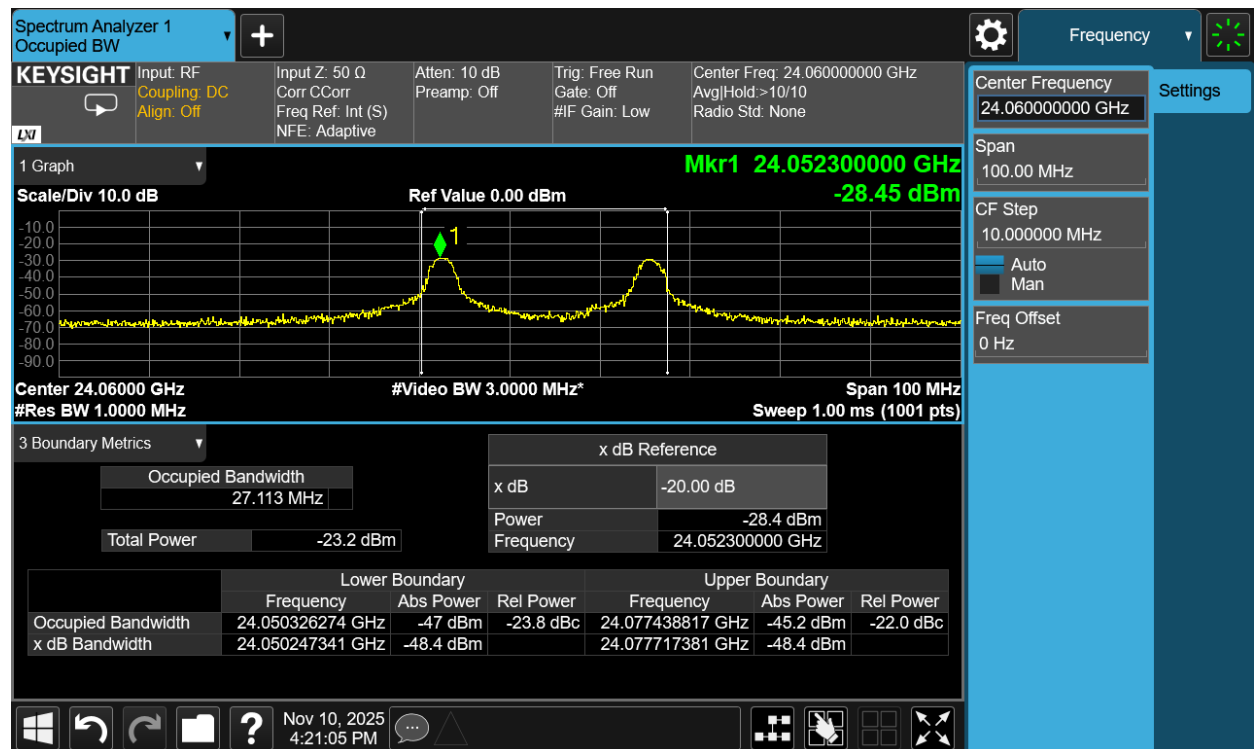
Frequency band (MHz)	F _L at 20dB BW (MHz)	F _H at 20dB BW (MHz)	F _L at 99% BW (MHz)	F _H at 99% BW (MHz)	20dB BW (MHz)	99% BW (MHz)
24000 ~ 24250	24010.22	24236.48	24016.20	24227.47	226.26	211.27
Limit	F _L > 24000	F _H < 24250	F _L > 24000	F _H < 24250	/	/
Result	Complied					



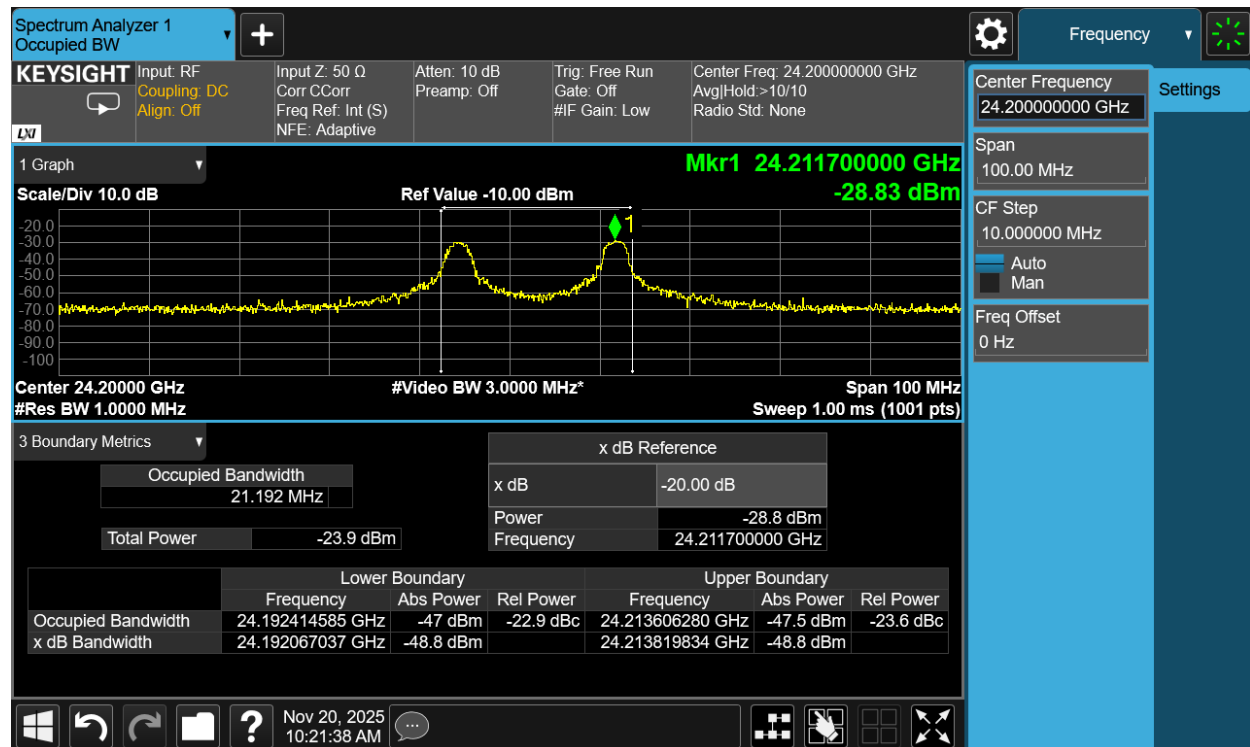
TEST REPORT

FSK

Frequency band (MHz)	CH	F _L at 20dB BW (MHz)	F _H at 20dB BW (MHz)	F _L at 99% BW (MHz)	F _H at 99% BW (MHz)	20dB BW (MHz)	99% BW (MHz)
24000 ~ 24250	L	24050.25	24077.72	24050.33	24077.44	27.47	27.11
	H	24192.07	24213.82	24192.41	24213.61	21.75	21.20
Limit		F _L >24000	F _H <24250	F _L >24000	F _H <24250	/	/
Result		Complied					



TEST REPORT



6 Antenna requirement

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 shall be considered sufficient to comply with the provisions of this section.

Result:

EUT uses permanently attached antenna to the intentional radiator, so it can comply with the provisions of this section.

***** END *****