TEST REPORT

Applicant Name:	SAILSKY ELECTRONIC LIMITED
Address:	Huixiang Road 5, Jinglian Community, Qiaotou Town, Dongguan, China
Report Number:	SZ3240115-03436E-RF-00
FCC ID:	2AYB6-MU2

Test Standard (s)

FCC PART 15.249

Sample Description

Product Type:	USB Receiver
Model No.:	MU21023
Multiple Model(s) No.:	N/A
Trade Mark:	N/A
Date Received:	2024/01/15
Report Date:	2024/04/08

Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Michelle Zeng

RF Engineer

Approved By:

Nancy Wang

RF Supervisor

Note: The information marked# is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "▼".

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZ3240115-03436E-RF-00	Original Report	2024/04/08

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	USB Receiver
Tested Model	MU21023
Multiple Model(s)	N/A
UPC Number	1922343030515
SKU Number	9123703
Frequency Range	2405-2475MHz
Maximum E-field strength	93.13dBuV/m@3m
Modulation Technique	GFSK
Antenna Specification[#]	2dBi (provided by the applicant)
Voltage Range	DC 5V from USB port
Sample serial number	2GNK-2 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A

Objective

This test report is in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.249 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF Frequency		213.55 Hz(k=2, 95% level of confidence)
RF output power, conducted		0.72 dB(k=2, 95% level of confidence)
Unwanted Emission, conducted		1.75 dB(k=2, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz-150kHz	3.94dB(k=2, 95% level of confidence)
	150kHz-30MHz	3.84dB(k=2, 95% level of confidence)
Radiated Emissions	9kHz - 30MHz	3.30dB(k=2, 95% level of confidence)
	30MHz~200MHz (Horizontal)	4.48dB(k=2, 95% level of confidence)
	30MHz~200MHz (Vertical)	4.55dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Horizontal)	4.85dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Vertical)	5.05dB(k=2, 95% level of confidence)
	1GHz - 6GHz	5.35dB(k=2, 95% level of confidence)
	6GHz - 18GHz	5.44dB(k=2, 95% level of confidence)
	18GHz - 40GHz	5.16dB(k=2, 95% level of confidence)
Temperature		±1℃
Humidity		±1%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing by manufacturer.

Frequency Channel List:

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	**2405**	5	2457
2	2411	6	2463
3	2417	7	2469
4	**2451**	8	**2475**

Note: Test on Channel 1, 4 and 8.

EUT Exercise Software

No exercise software was used.

Equipment Modifications

No modifications were made to the unit tested.

Support Equipment List and Details

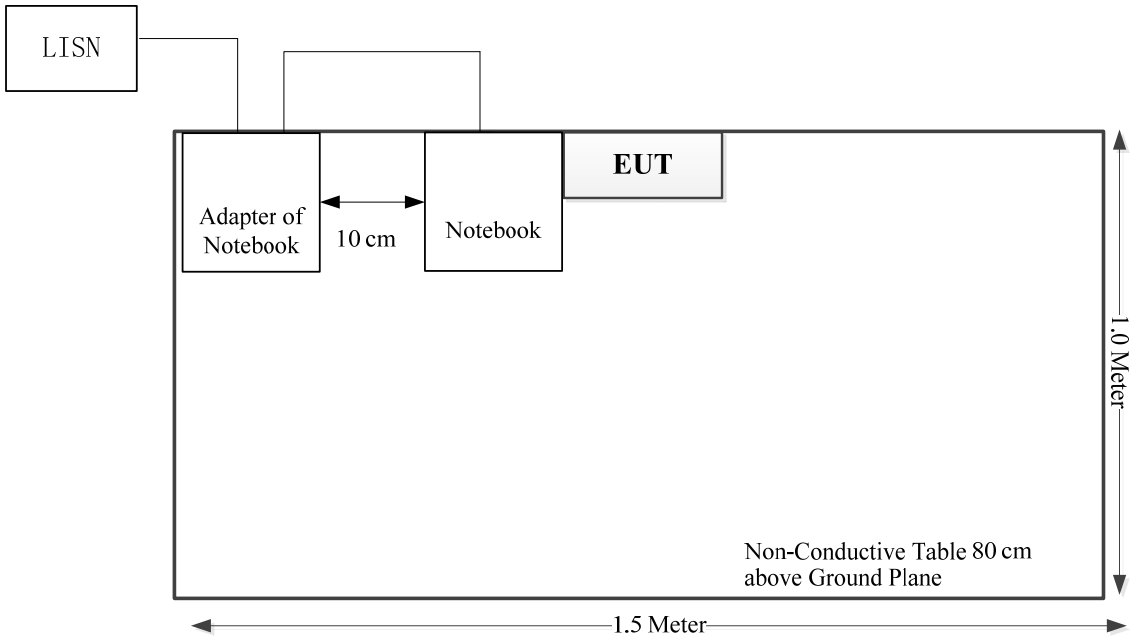
Manufacturer	Description	Model	Serial Number
Dell	Notebook	Latitude E5430	11429208685
Dell	Adapter of Notebook	PA-10	Unknown

Support Cable Descriptions

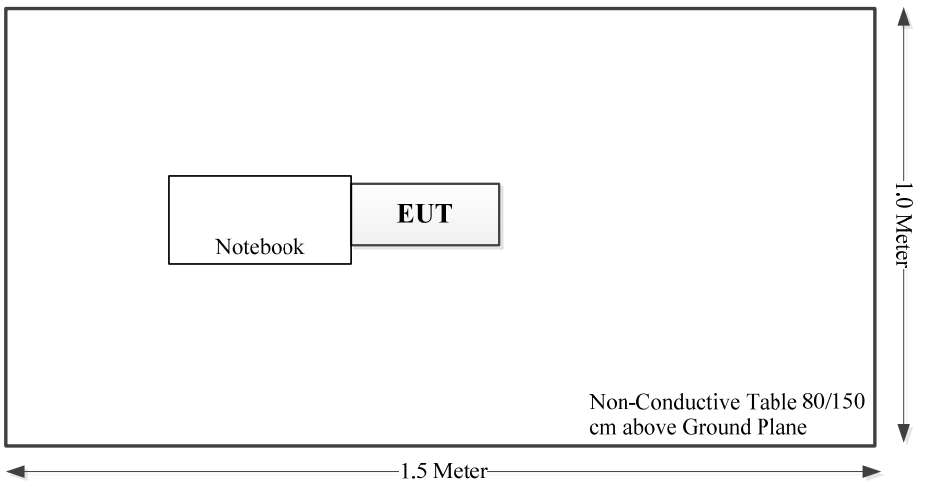
Cable Description	Length (m)	From/Port	To
Un-shielded Un-detachable DC Cable	1.5	Notebook	Adapter of Notebook
Un-shielded Detachable AC Cable	1.5	LISN	Adapter of Notebook

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emission:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (3) &§2.1093	RF EXPOSURE	Compliant
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conduction Emissions	Compliant
15.205, §15.209, §15.249(d)	Radiated Emissions& Outside of Band Emission	Compliant
§15.215 (c)	20 dB Bandwidth	Compliant

Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2024/01/16	2025/01/15
Rohde & Schwarz	LISN	ENV216	101613	2024/01/16	2025/01/15
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2023/08/03	2024/08/02
Unknown	CE Cable	CE Cable	UF A210B-1-0720-504504	2023/08/03	2024/08/02
Audix	EMI Test software	E3	191218	NCR	NCR
Radiated Emissions Test					
R&S	EMI Test Receiver	ESR3	102455	2024/01/16	2025/01/15
Sonoma instrument	Pre-amplifier	310 N	186238	2023/06/08	2024/06/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2024/07/19
ETS	Passive Loop Antenna	6512	29604	2023/07/07	2024/07/06
Unknown	Cable	Chamber Cable 1	F-03-EM236	2023/08/03	2024/08/02
Unknown	Cable	Chamber Cable 4	EC-007	2023/08/03	2024/08/02
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2023/04/18	2024/04/17
COM-POWER	Pre-amplifier	PA-122	181919	2023/06/29	2024/06/28
Schwarzbeck	Horn Anetenna	BBHA9120D(1201)	1143	2023/07/26	2024/07/25
Unknown	RF Cable	KMSE	0735	2023/10/08	2024/10/07
Unknown	RF Cable	UFA147	219661	2023/10/08	2024/10/07
SNSD	2.4G Band Reject filter	BSF2402-2480MN-0898-001	2.4G filter	2023/08/03	2024/08/02
A.H.System	Pre-amplifier	PAM-1840VH	190	2023/08/03	2024/08/02
Electro-Mechanics Co	Horn Antenna	3116	2026	2023/09/18	2026/09/17
UTIFLEX	RF Cable	NO. 13	232308-001	2023/08/03	2024/08/02
Audix	EMI Test software	E3	191218(V9)	NCR	NCR

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

§1.1307 (b) (3) &§2.1093 – RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (3), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D04 Interim General RF Exposure Guidance

1-mW Test Exemption:

Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

For worst case:

Mode	Frequency (MHz)	Maximum E-Field (dBuV/m@3m)	Maximum EIRP		1-mW Test Exemption
			(dBm)	(mW)	
GFSK	2405-2475	93.13	-2.07	0.62	**Yes**

Note: EIRP = E-Field – 95.2 @3m

Result: Compliant.

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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. 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. 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.

Antenna Connector Construction

The EUT has one internal antenna which was permanently attached and the antenna gain# is 2dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Antenna Type	Antenna Gain#	Impedance	Frequency Range
PCB	2dBi	50Ω	2405-2475MHz

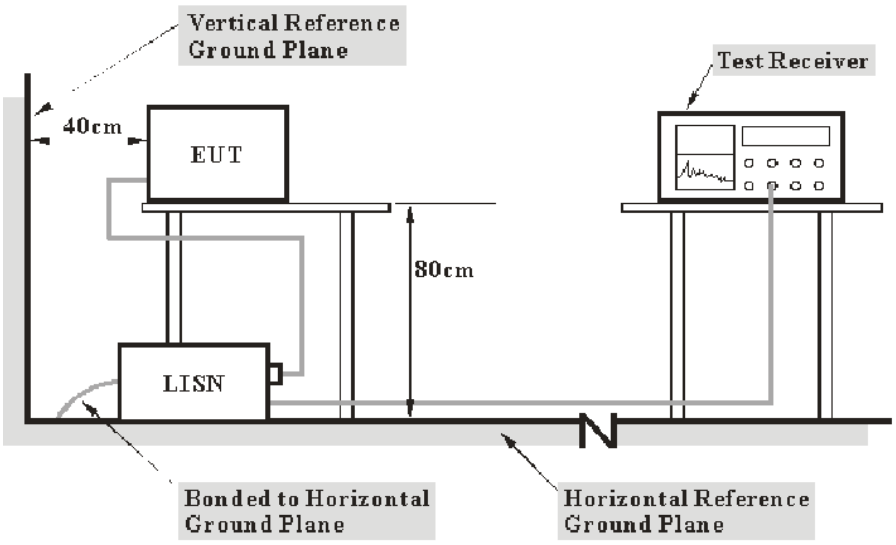
Result: Compliant.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

EUT Setup



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

The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Factor & Over Limit Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Note: The term "cable loss" refers to the combination of a cable and a 10dB transient limiter (attenuator).

Test Data

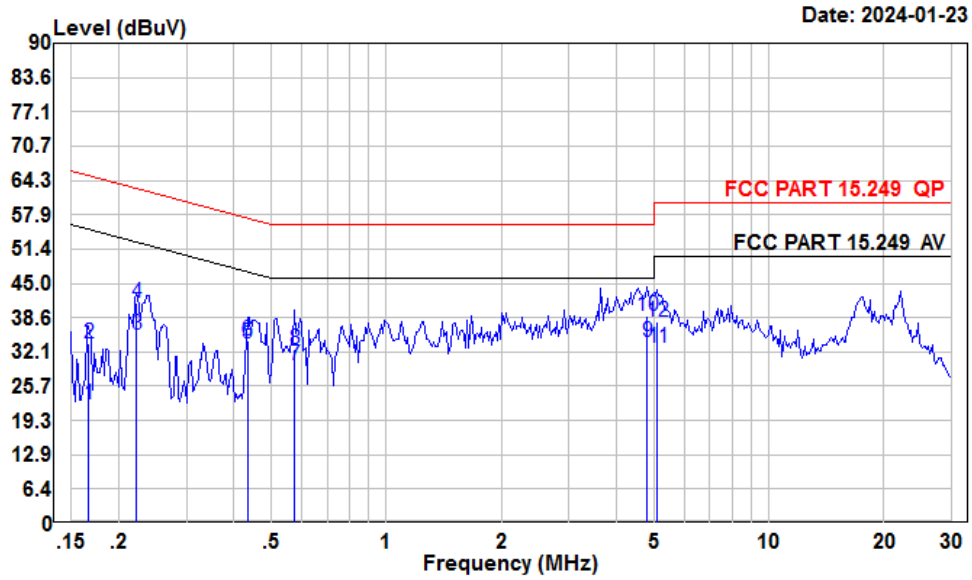
Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	50 %
ATM Pressure:	101 kPa

The testing was performed by Macy Shi on 2024-01-23.

EUT operation mode: Transmitting (Maximum output power mode, High channel

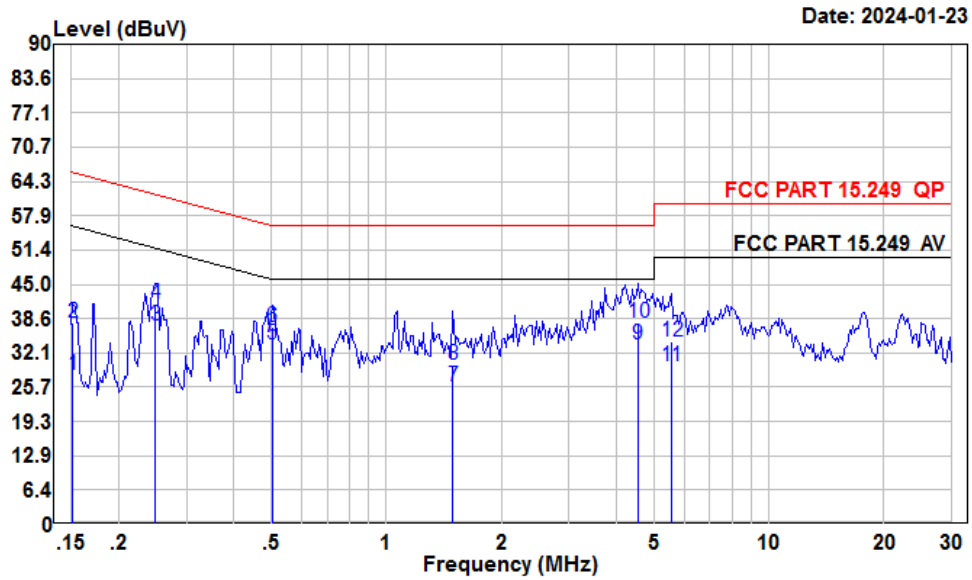
AC 120V/60 Hz, Line



Condition: Line
Project : SZ3240115-03436E-RF
Tester : Macy shi
Note : GFSK

	Freq	Read Level	LISN Level	Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.17	1.94	22.29	10.20	10.15	55.12	-32.83	Average
2	0.17	13.31	33.66	10.20	10.15	65.12	-31.46	QP
3	0.22	15.08	35.42	10.20	10.14	52.74	-17.32	Average
4	0.22	21.09	41.43	10.20	10.14	62.74	-21.31	QP
5	0.43	13.27	33.67	10.20	10.20	47.20	-13.53	Average
6	0.43	13.88	34.28	10.20	10.20	57.20	-22.92	QP
7	0.58	9.16	29.64	10.28	10.20	46.00	-16.36	Average
8	0.58	12.06	32.54	10.28	10.20	56.00	-23.46	QP
9	4.80	13.65	34.12	10.24	10.23	46.00	-11.88	Average
10	4.80	18.36	38.83	10.24	10.23	56.00	-17.17	QP
11	5.11	12.49	32.92	10.21	10.22	50.00	-17.08	Average
12	5.11	17.26	37.69	10.21	10.22	60.00	-22.31	QP

AC 120V/60 Hz, Neutral



Condition: Neutral
Project : SZ3240115-03436E-RF
Tester : Macy shi
Note : GFSK

	Freq	Read Level	LISN Level	Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.15	7.75	28.10	10.20	10.15	55.91	-27.81	Average
2	0.15	17.40	37.75	10.20	10.15	65.91	-28.16	QP
3	0.25	16.68	37.17	10.28	10.21	51.78	-14.61	Average
4	0.25	20.72	41.21	10.28	10.21	61.78	-20.57	QP
5	0.50	13.45	33.80	10.20	10.15	46.00	-12.20	Average
6	0.50	16.75	37.10	10.20	10.15	56.00	-18.90	QP
7	1.50	5.51	25.89	10.32	10.06	46.00	-20.11	Average
8	1.50	9.67	30.05	10.32	10.06	56.00	-25.95	QP
9	4.55	13.16	33.60	10.20	10.24	46.00	-12.40	Average
10	4.55	17.44	37.88	10.20	10.24	56.00	-18.12	QP
11	5.56	9.33	29.75	10.20	10.22	50.00	-20.25	Average
12	5.56	13.84	34.26	10.20	10.22	60.00	-25.74	QP

FCC§15.205, §15.209 & §15.249(d) - RADIATED EMISSIONS

Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

As per FCC§15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Test Equipment Setup

The spectrum analyzer or receiver is set as:

9 kHz - 150 kHz:

RBW = 300 Hz / VBW = 1 kHz / Sweep = Auto

150 kHz - 30 MHz:

RBW = 10 kHz / VBW = 30 kHz / Sweep = Auto

30 MHz - 1000MHz:

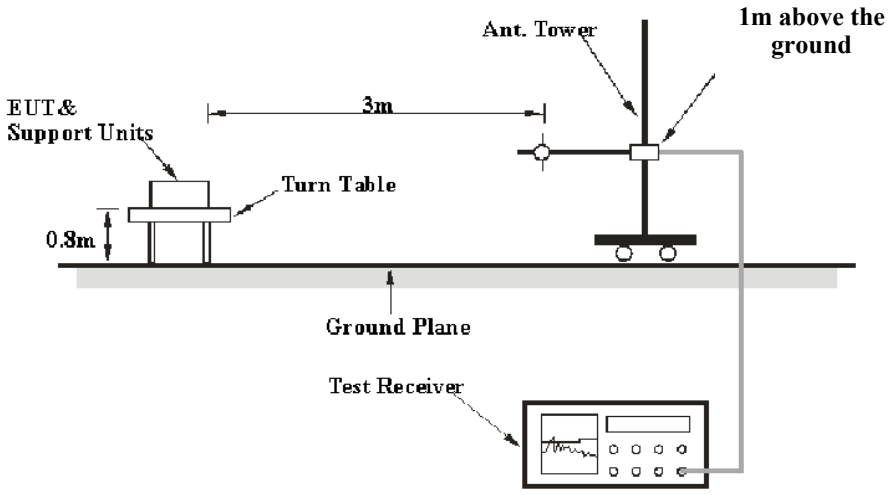
RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 1000MHz:

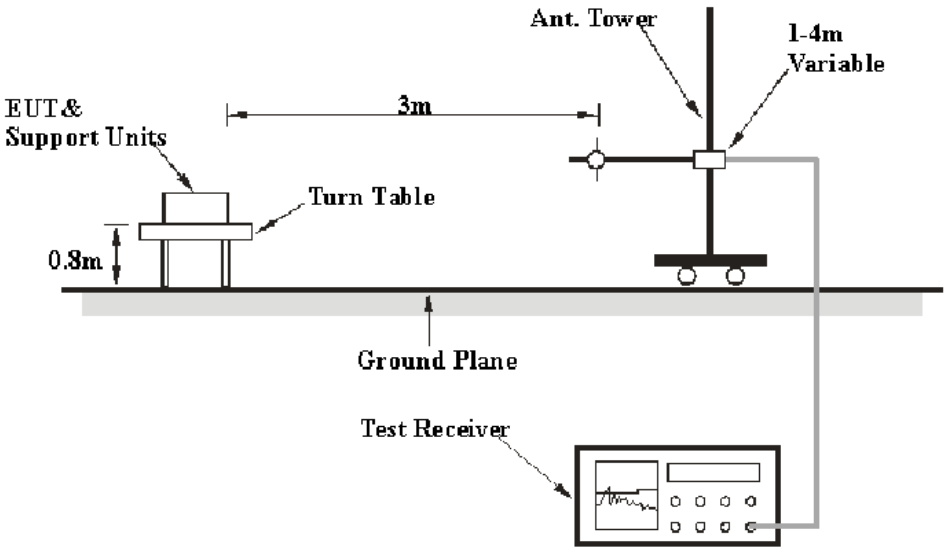
Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

EUT Setup

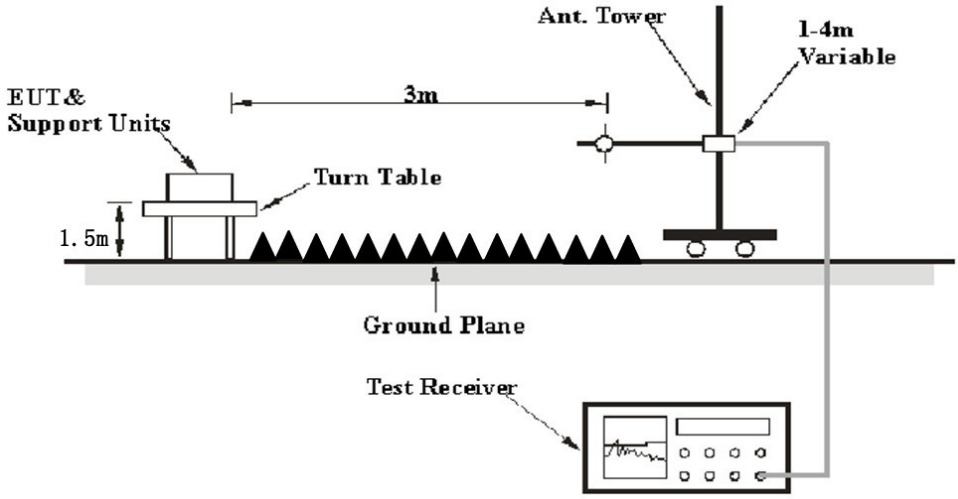
9 kHz-30MHz:



30MHz-1GHz:



Above 1GHz:



The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209/15.205 and FCC 15.249 limits.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane for below 1GHz or 1.5 meter for above 1GHz, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

For 9 kHz-30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB.

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

All emissions under the average limit and under the noise floor have not recorded in the report.

Factor & Over Limit/Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit; Margin = Limit–Corrected Amplitude
Level / Corrected Amplitude = Read Level + Factor

Test Results Summary

According to the EUT complied with the FCC Part 15.205, 15.209 & §15.249

Test Data

Environmental Conditions

Temperature:	22~27 ℃
Relative Humidity:	54~56 %
ATM Pressure:	101 kPa

The testing was performed by Anson Su on 2024-01-22 for below 1GHz and Dylan Yang on 2024-03-18 for above 1GHz.

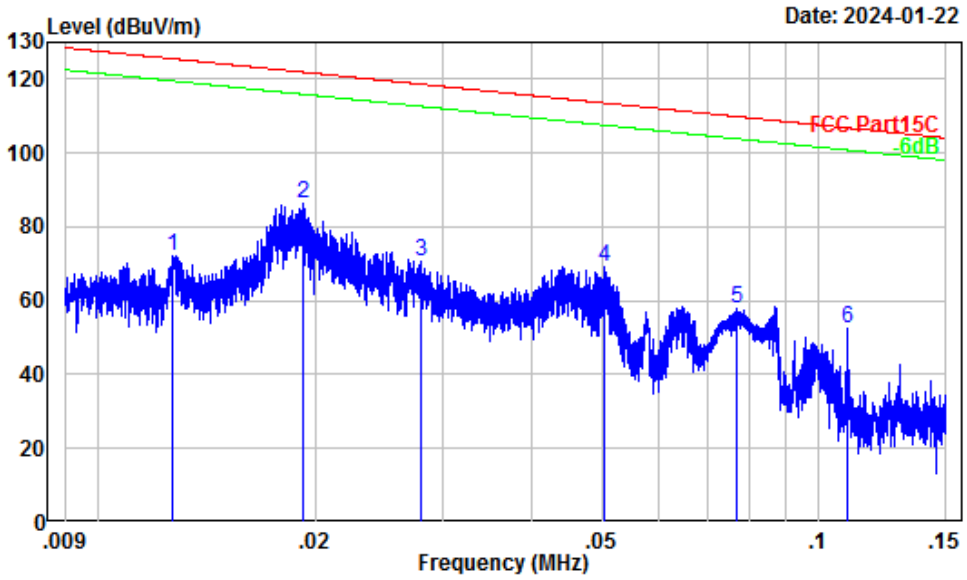
EUT operation mode: Transmitting

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case X-axis of orientation was recorded

9 kHz-30MHz: *(Maximum output power mode, High channel)*

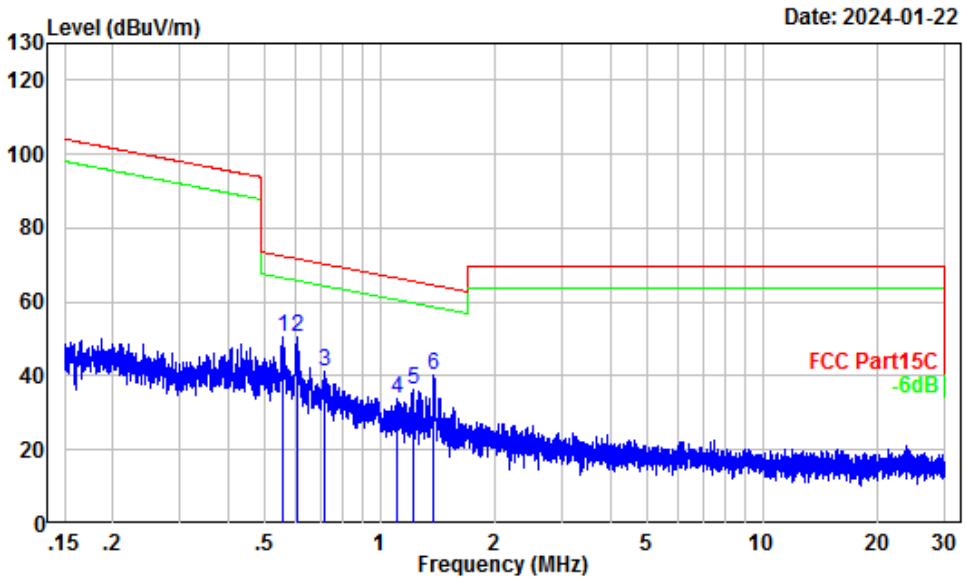
Note: When the test result of peak was less than the limit of QP more than 6dB, just peak value were recorded.

Parallel (worst case):



Site : Chamber A
Condition : 3m
Project Number: SZ3240115-03436E-RF
Note : GFSK
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.01	52.49	19.81	72.30	125.54	-53.24	Peak
2	0.02	50.47	35.96	86.43	121.92	-35.49	Peak
3	0.03	47.77	22.98	70.75	118.65	-47.90	Peak
4	0.05	40.95	28.22	69.17	113.56	-44.39	Peak
5	0.08	37.33	20.35	57.68	109.90	-52.22	Peak
6	0.11	33.65	19.05	52.70	106.82	-54.12	Peak

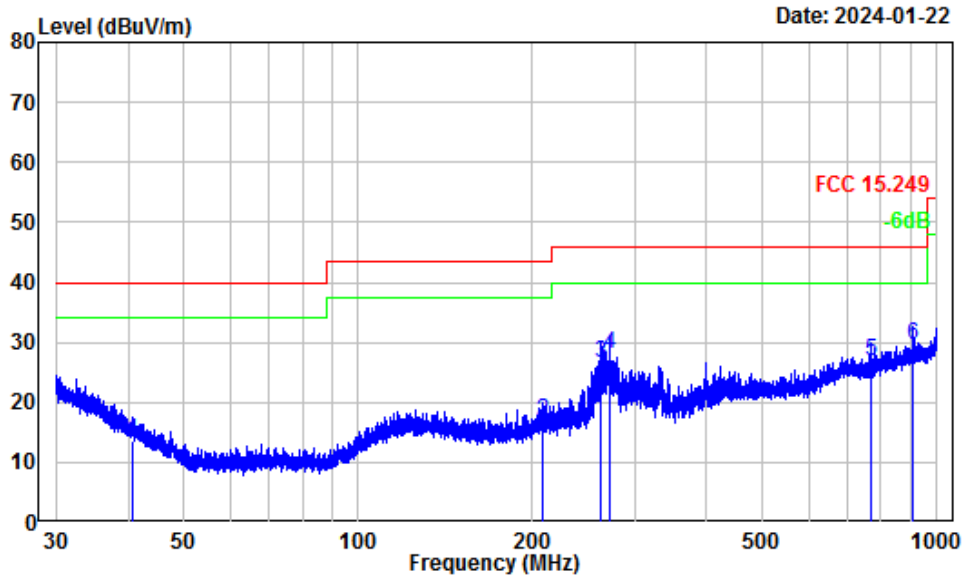


Site : Chamber A
Condition : 3m
Project Number: SZ3240115-03436E-RF
Note : GFSK
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.56	20.22	30.10	50.32	72.66	-22.34	Peak
2	0.61	19.55	31.08	50.63	71.87	-21.24	Peak
3	0.71	18.06	23.35	41.41	70.47	-29.06	Peak
4	1.11	14.89	19.08	33.97	66.53	-32.56	Peak
5	1.22	14.35	22.16	36.51	65.71	-29.20	Peak
6	1.39	13.53	26.53	40.06	64.58	-24.52	Peak

30MHz-1GHz: *(Maximum output power mode, High channel)*

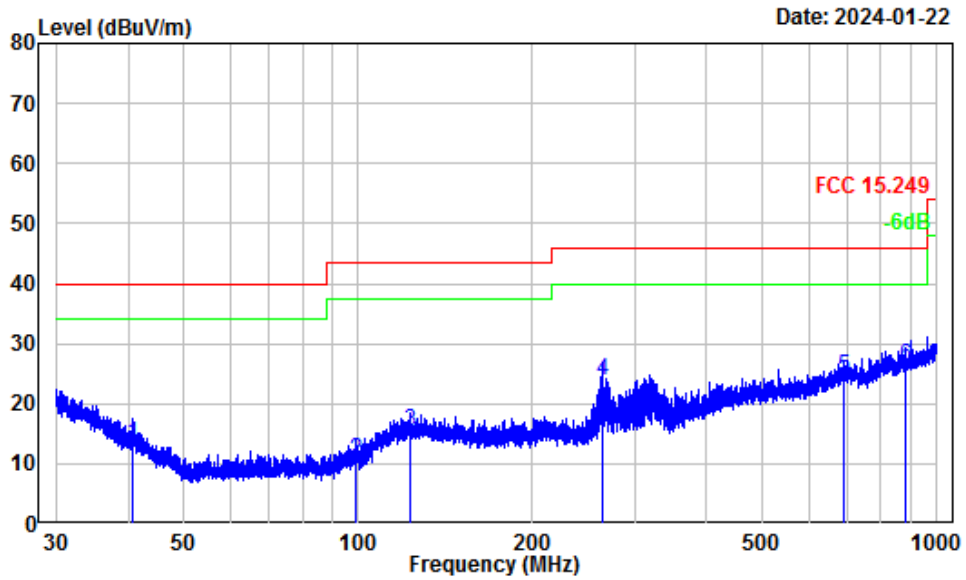
Horizontal



Site : chamber
Condition : 3m Horizontal
Project Number: SZ3240115-03436E-RF
Note : GFSK
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.74	-10.86	24.33	13.47	40.00	-26.53	QP
2	208.67	-11.17	28.00	16.83	43.50	-26.67	QP
3	263.24	-11.35	37.90	26.55	46.00	-19.45	QP
4	271.21	-11.05	39.13	28.08	46.00	-17.92	QP
5	768.75	-1.25	28.08	26.83	46.00	-19.17	QP
6	908.47	1.11	28.41	29.52	46.00	-16.48	QP

Vertical



Site : chamber
Condition : 3m Vertical
Project Number: SZ3240115-03436E-RF
Note : GFSK
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.76	-12.32	25.74	13.42	40.00	-26.58	QP
2	99.09	-15.42	25.98	10.56	43.50	-32.94	QP
3	123.05	-10.76	26.15	15.39	43.50	-28.11	QP
4	264.17	-11.71	35.43	23.72	46.00	-22.28	QP
5	692.59	-2.05	26.40	24.35	46.00	-21.65	QP
6	882.95	0.36	26.01	26.37	46.00	-19.63	QP

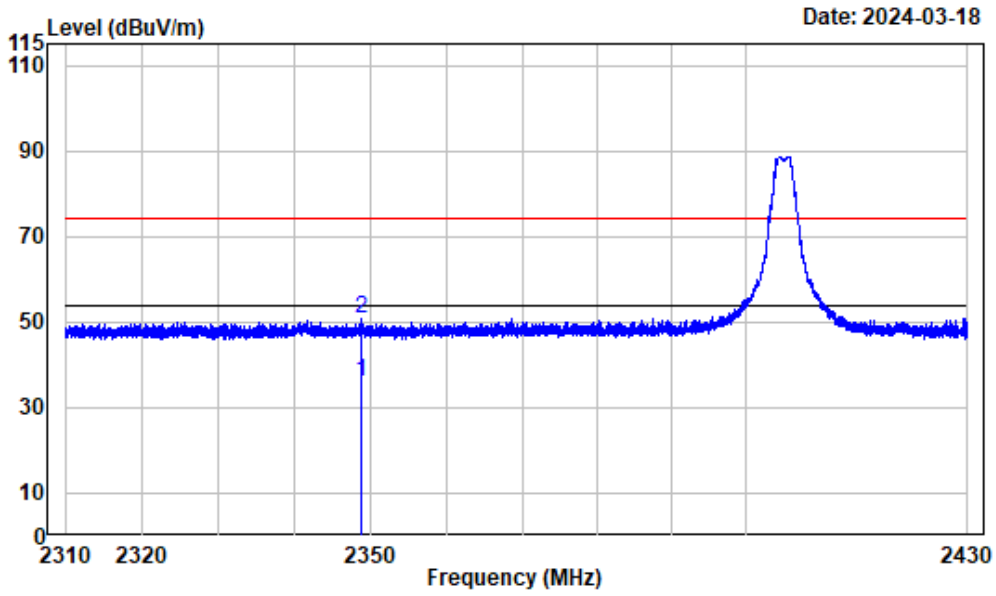
Above 1GHz:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Absolute Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave					
Low Channel							
2405.00	95.28	PK	H	-3.13	92.15	114	-21.85
2405.00	91.45	AV	H	-3.13	88.32	94	-5.68
2405.00	95.07	PK	V	-3.13	91.94	114	-22.06
2405.00	90.66	AV	V	-3.13	87.53	94	-6.47
4810.00	55.62	PK	H	2.43	58.05	74	-15.95
4810.00	44.72	AV	H	2.43	47.15	54	-6.85
4810.00	51.27	PK	V	2.43	53.70	74	-20.30
4810.00	40.65	AV	V	2.43	43.08	54	-10.92
Middle Channel							
2451.00	95.64	PK	H	-3.10	92.54	114	-21.46
2451.00	91.73	AV	H	-3.10	88.63	94	-5.37
2451.00	94.88	PK	V	-3.10	91.78	114	-22.22
2451.00	91.23	AV	V	-3.10	88.13	94	-5.87
4902.00	52.73	PK	H	1.79	54.52	74	-19.48
4902.00	42.41	AV	H	1.79	44.20	54	-9.80
4902.00	50.44	PK	V	1.79	52.23	74	-21.77
4902.00	38.98	AV	V	1.79	40.77	54	-13.23
High Channel							
2475.00	96.23	PK	H	-3.10	93.13	114	-20.87
2475.00	93.59	AV	H	-3.10	90.49	94	-3.51
2475.00	95.88	PK	V	-3.10	92.78	114	-21.22
2475.00	92.77	AV	V	-3.10	89.67	94	-4.33
4950.00	51.16	PK	H	2.77	53.93	74	-20.07
4950.00	40.24	AV	H	2.77	43.01	54	-10.99
4950.00	50.18	PK	V	2.77	52.95	74	-21.05
4950.00	38.05	AV	V	2.77	40.82	54	-13.18

Note:
Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Absolute Level (Corrected Amplitude） = Factor + Reading
Margin = Absolute Level - Limit
The other spurious emission which is 20dB to the limit or in noise floor level was not recorded.

Test plots for Band Edge Measurements (Radiated):

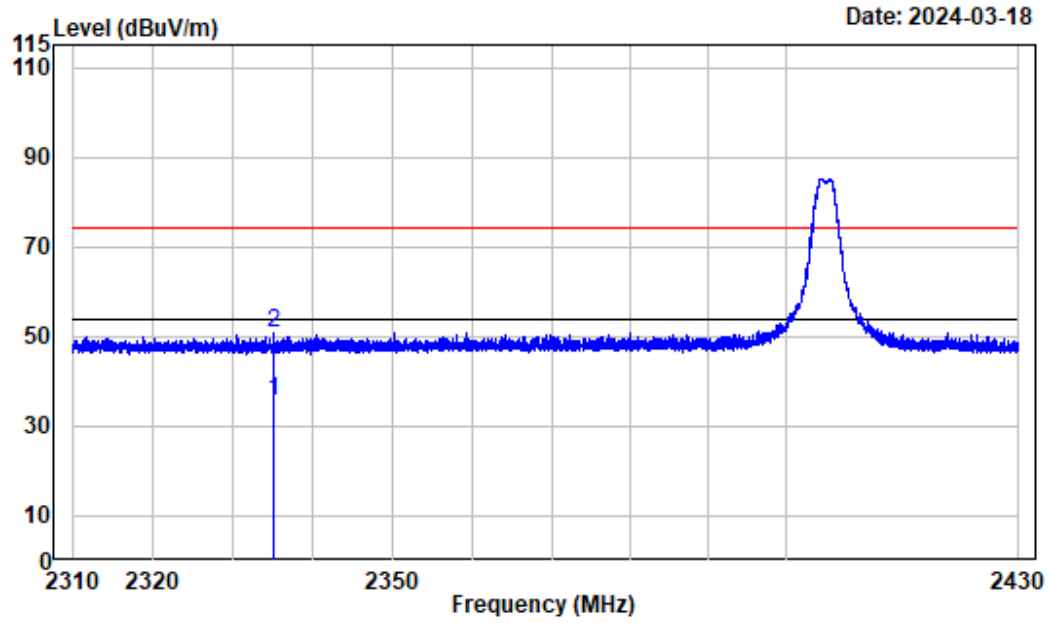
Test Channel:	2405MHz	Ant. Polar. :	Horizontal



Condition : Horizontal
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2405

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2348.595	-3.15	39.12	35.97	54.00	-18.03	Average
2	2348.595	-3.15	53.93	50.78	74.00	-23.22	peak

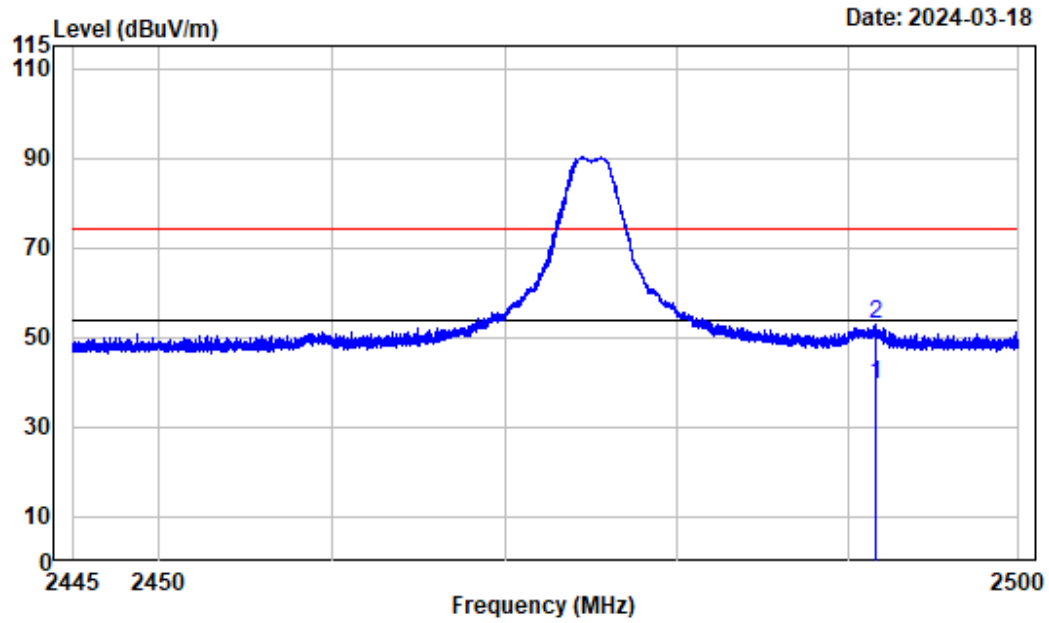
Test Channel:	2405MHz	Ant. Polar. :	Vertical



Condition : Vertical
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2405

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2335.110	-3.13	38.77	35.64	54.00	-18.36	Average
2	2335.110	-3.13	53.76	50.63	74.00	-23.37	peak

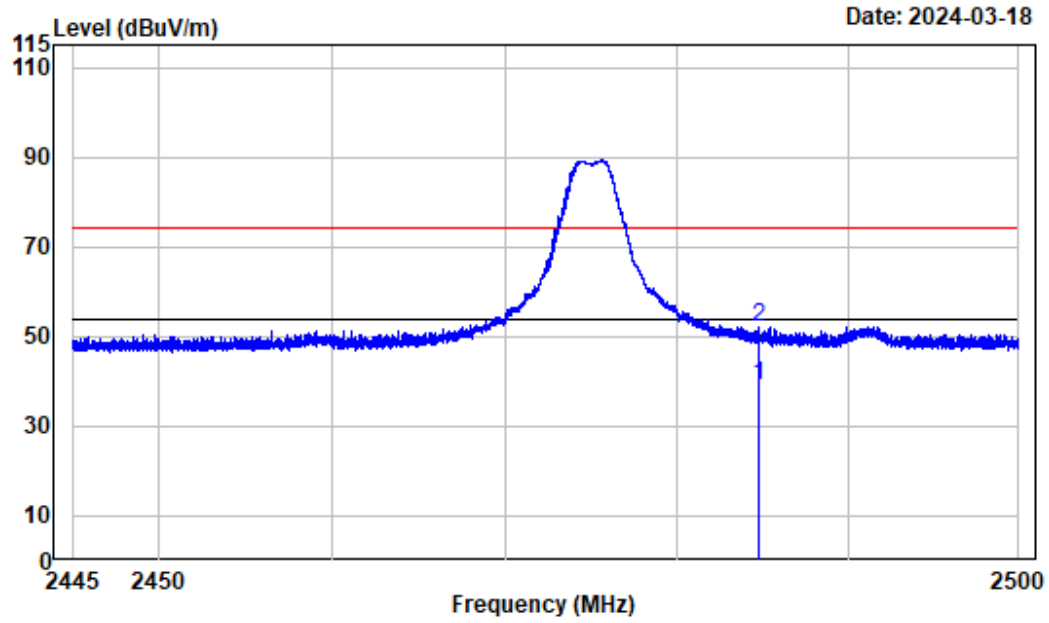
Test Channel:	2475MHz	Ant. Polar. :	Horizontal



Condition : Horizontal
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2475

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2491.654	-3.18	42.62	39.44	54.00	-14.56	Average
2	2491.654	-3.18	55.91	52.73	74.00	-21.27	peak

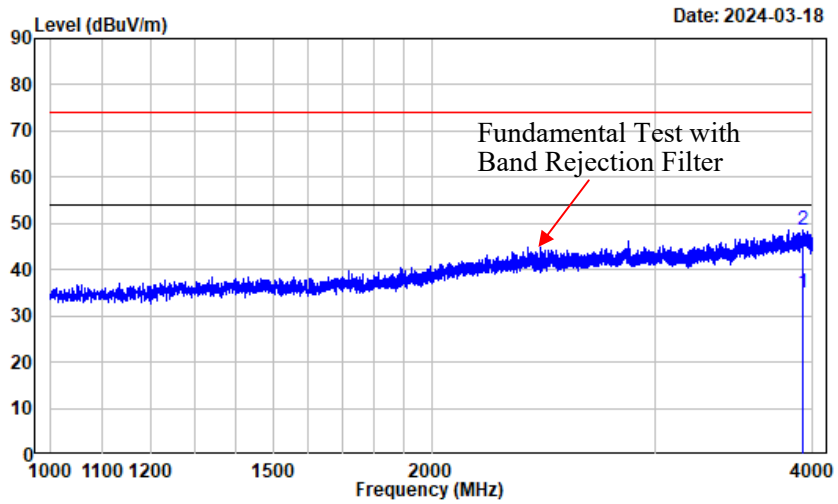
Test Channel:	2475MHz	Ant. Polar. :	Vertical



Condition : Vertical
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2475

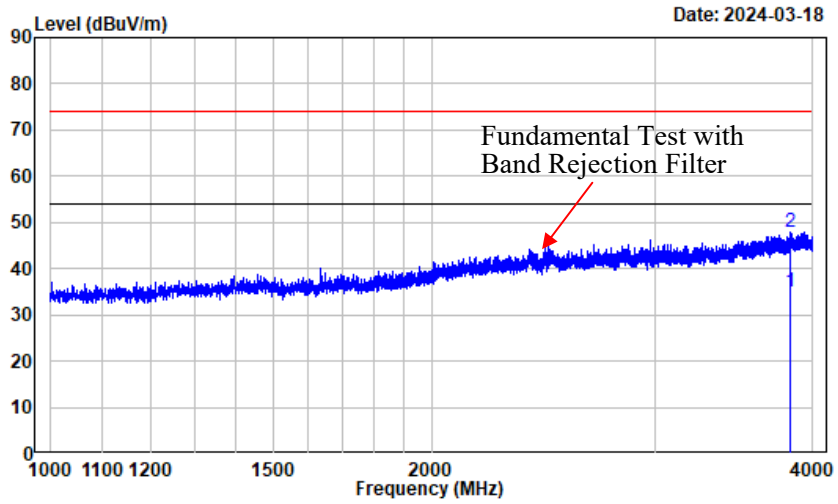
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2484.758	-3.17	42.26	39.09	54.00	-14.91	Average
2	2484.758	-3.17	55.33	52.16	74.00	-21.84	peak

Listed with the worst harmonic margin test plot: Low Channel

Horizontal	
1-4GHz	

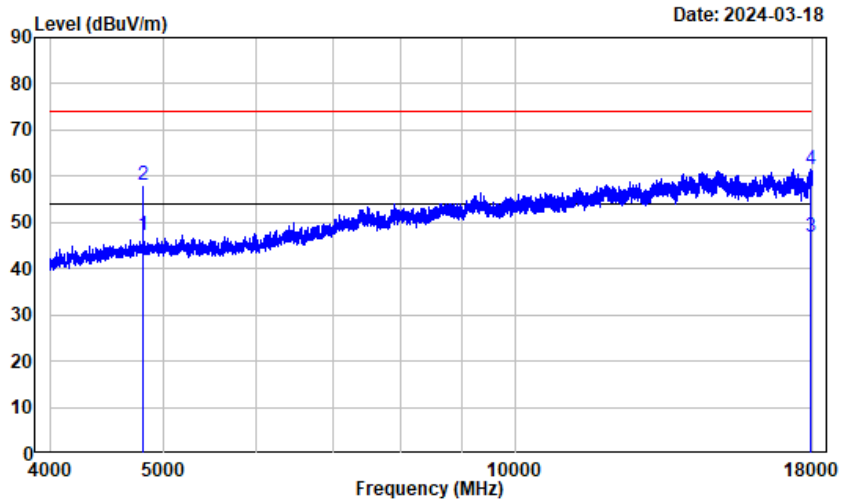
Condition : Horizontal
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2405

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3929.125	-0.32	35.28	34.96	54.00	-19.04	average
2	3929.125	-0.32	48.99	48.67	74.00	-25.33	peak

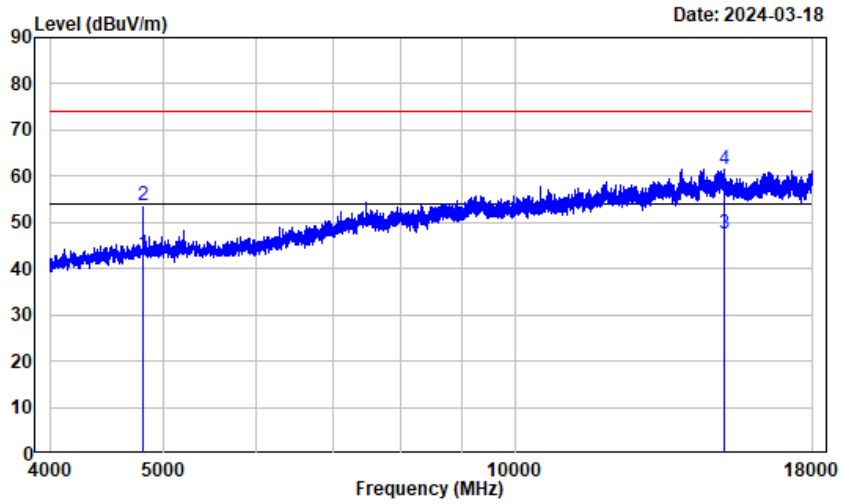
Vertical	
1-4GHz	

Condition : Vertical
Project No.: SZ3240115-03436E
Tester : Dylan
Note : GFSK_2405

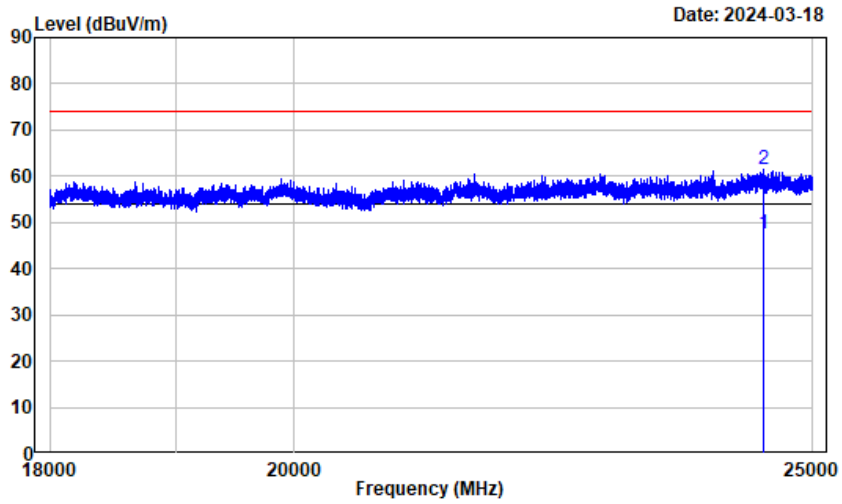
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3841.000	-0.78	35.75	34.97	54.00	-19.03	average
2	3841.000	-0.78	48.76	47.98	74.00	-26.02	peak

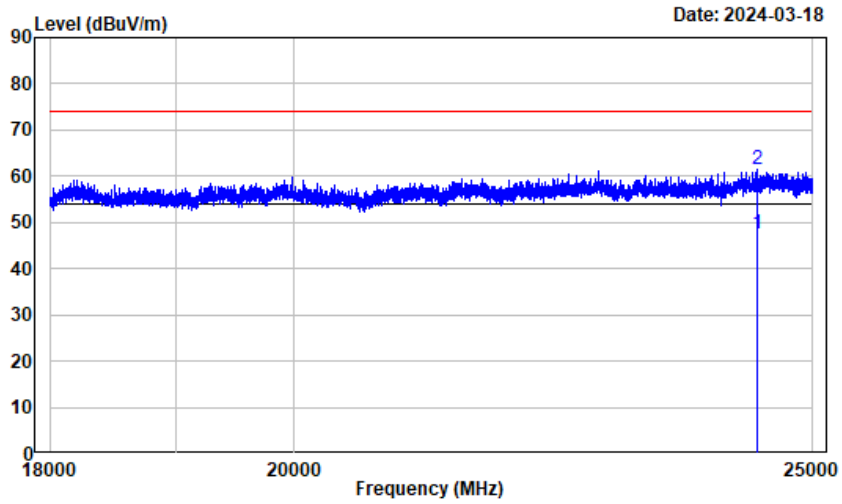
Horizontal	
4-18GHz	 Condition : Horizontal Project No.: SZ3240115-03436E Tester : Dylan Note : GFSK_2405

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4810.000	2.43	44.72	47.15	54.00	-6.85	Average
2	4810.000	2.43	55.62	58.05	74.00	-15.95	Peak
3	17903.750	23.94	23.02	46.96	54.00	-7.04	average
4	17903.750	23.94	37.53	61.47	74.00	-12.53	peak

Vertical	
4-18GHz	 Condition : Vertical Project No.: SZ3240115-03436E Tester : Dylan Note : GFSK_2405

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4810.000	2.43	40.65	43.08	54.00	-10.92	Average
2	4810.000	2.43	51.27	53.70	74.00	-20.30	Peak
3	15124.750	15.64	31.75	47.39	54.00	-6.61	average
4	15124.750	15.64	45.84	61.48	74.00	-12.52	peak

Horizontal	
18-25GHz	 Condition : Horizontal Project No.: SZ3240115-03436E Tester : Dylan Note : GFSK_2405 Freq / Factor / Read Level / Level / Limit Line / Over Limit / Remark MHz / dB/m / dBuV / dBuV/m / dBuV/m / dB 1 24482.880 18.96 28.59 47.55 54.00 -6.45 Average 2 24482.880 18.96 42.60 61.56 74.00 -12.44 peak

Vertical	
18-25GHz	 Condition : Vertical Project No.: SZ3240115-03436E Tester : Dylan Note : GFSK_2405 Freq / Factor / Read Level / Limit Level / Limit Line / Over Limit / Remark MHz / dB/m / dBuV / dBuV/m / dBuV/m / dB 1 24404.130 18.78 28.61 47.39 54.00 -6.61 Average 2 24404.130 18.78 42.68 61.46 74.00 -12.54 peak

FCC§15.215(c) - 20dB EMISSION BANDWIDTH

Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

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 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.

3. Measure the frequency difference of two frequencies that indicated 20dB bandwidth.

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

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	57 %
ATM Pressure:	101 kPa

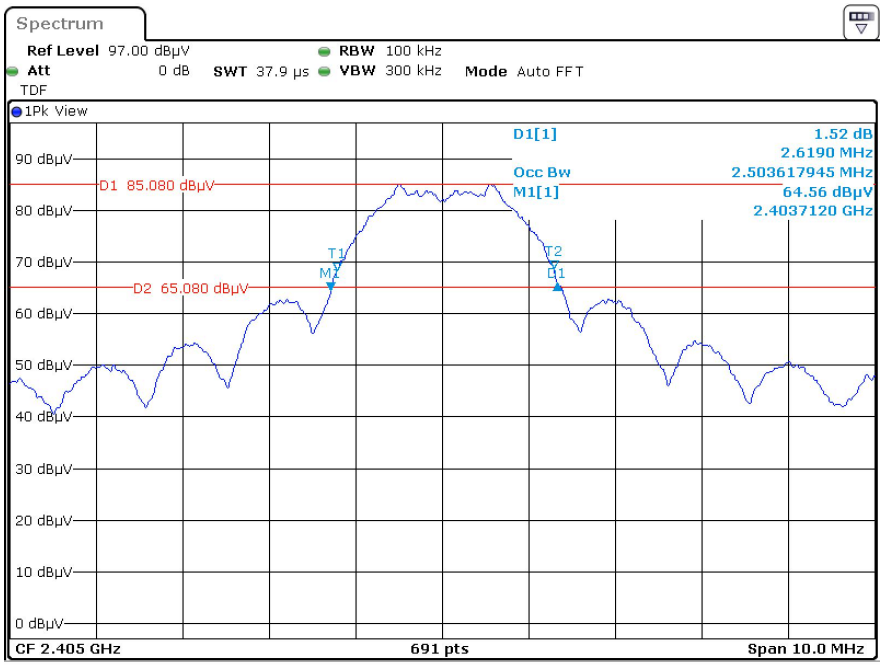
The testing was performed by Dylan Yang on 2024-03-28.

EUT operation mode: Transmitting

Please refer to the following table and plots.

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
Low	2405	2.619
Middle	2451	2.634
High	2475	2.587

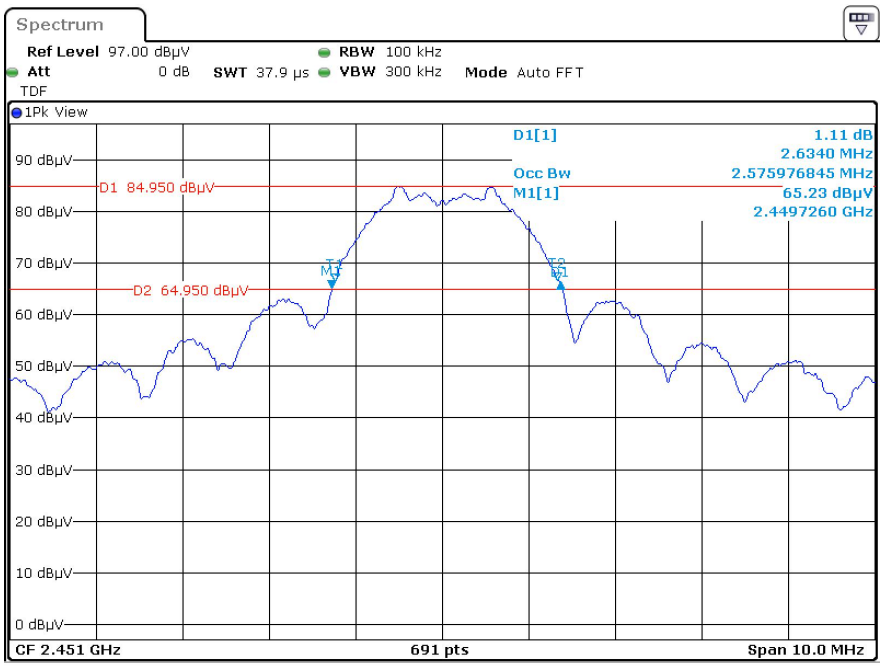
Low channel



ProjectNo.:SZ3240115-03436E-RF Tester:Dylan.Yang

Date: 28.MAR.2024 16:36:20

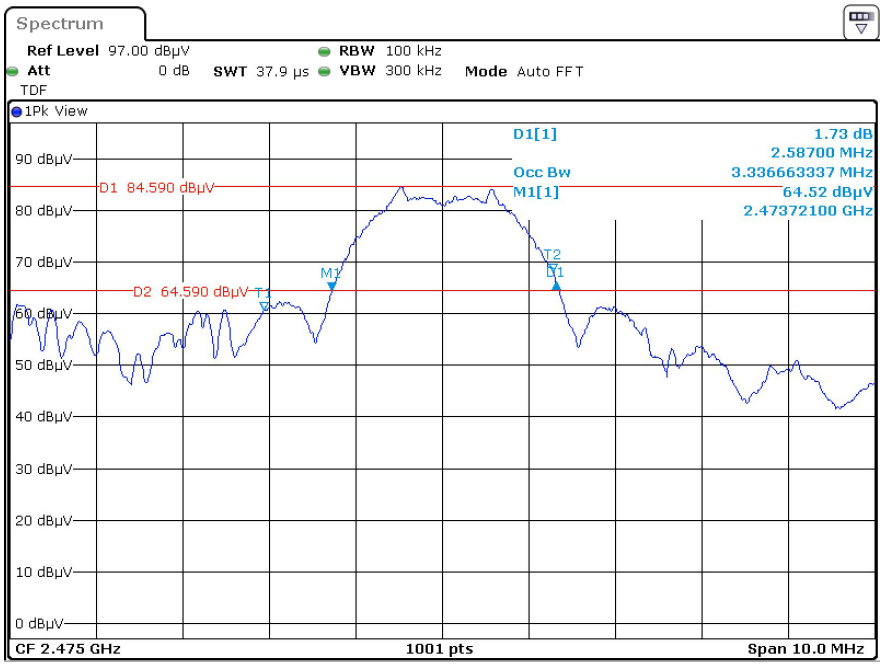
Middle Channel



ProjectNo.:SZ3240115-03436E-RF Tester:Dylan.Yang

Date: 28.MAR.2024 16:42:08

High Channel



ProjectNo.:SZ3240115-03436E-RF Tester:Dylan.Yang

Date: 28.MAR.2024 16:32:44

EUT PHOTOGRAPHS

Please refer to the attachment SZ3240115-03436E-RF External photo and SZ3240115-03436E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment SZ3240115-03436E-RF Test Setup photo.

******* END OF REPORT *******