

# TEST REPORT

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Report Number: SZGMA240305-10660E-RF-00  
FCC ID: 2ACLV8210

## Test Standard (s)

FCC PART 15.249

## Sample Description

Product Type: Wireless Transmission System-Transmitter  
Model No.: 8210T  
Multiple Model(s) No.: H210T  
Trade Mark: HUNICOM  
Date Received: 2024/03/05  
Issue Date: 2024/09/23

Test Result:	Pass▲
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▲ In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

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Andy Yu  
RF Engineer

## Approved By:

*Nancy Wang*

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.

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## TABLE OF CONTENTS

**DOCUMENT REVISION HISTORY .....3**

**GENERAL INFORMATION.....4**

    PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....4

    OBJECTIVE .....4

    TEST METHODOLOGY .....4

    MEASUREMENT UNCERTAINTY .....5

    TEST FACILITY .....5

**SYSTEM TEST CONFIGURATION .....6**

    DESCRIPTION OF TEST CONFIGURATION .....6

    EUT EXERCISE SOFTWARE .....6

    EQUIPMENT MODIFICATIONS .....6

    SUPPORT EQUIPMENT LIST AND DETAILS .....6

    SUPPORT CABLE DESCRIPTIONS .....7

    BLOCK DIAGRAM OF TEST SETUP .....7

**SUMMARY OF TEST RESULTS .....9**

**TEST EQUIPMENT LIST .....10**

**§1.1307 (B) (3) & §2.1093 - RF EXPOSURE.....11**

    APPLICABLE STANDARD .....11

**FCC§15.203 - ANTENNA REQUIREMENT.....12**

    APPLICABLE STANDARD .....12

    ANTENNA CONNECTOR CONSTRUCTION .....12

**FCC §15.207 (A) - AC LINE CONDUCTED EMISSIONS .....13**

    APPLICABLE STANDARD .....13

    EUT SETUP .....13

    EMI TEST RECEIVER SETUP.....13

    TEST PROCEDURE .....14

    FACTOR & OVER LIMIT CALCULATION.....14

    TEST DATA .....14

**FCC§15.205, §15.209 & §15.249(D) - RADIATED EMISSIONS.....17**

    APPLICABLE STANDARD .....17

    EUT SETUP .....17

    EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP .....19

    TEST PROCEDURE .....19

    FACTOR & OVER LIMIT/MARGIN CALCULATION .....19

    TEST DATA .....20

**FCC§15.215(C) - 20DB EMISSION BANDWIDTH .....29**

    APPLICABLE STANDARD .....29

    TEST PROCEDURE .....29

    TEST DATA .....30

**EUT PHOTOGRAPHS .....33**

**TEST SETUP PHOTOGRAPHS .....34**

## DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZGMA240305-10660E-RF-00	Original Report	2024/09/23

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Wireless Transmission System-Transmitter
Tested Model	8210T
Multiple Model(s)	H210T
Frequency Range	902.25-926.69MHz
Maximum E-field strength	93.89dBuV/m@3m
Modulation Technique	FM
Antenna Specification <sup>#</sup>	2.5 dBi (provided by the applicant)
Voltage Range	DC 3.7V from battery or DC 5V from USB port or charger
Sample serial number	2I9N-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A
Note: The Multiple models are electrically identical with the test model except for model number and sales channel. Please refer to the declaration letter <sup>#</sup> for more detail, which was provided by manufacturer.	

### 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°C
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.

A 1kHz sine wave voice was applied to EUT's microphone at the level declared by applicant during test.

### Frequency Channel List:

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	<b>902.250</b>	14	918.370	27	910.050	40	926.170
2	905.370	15	921.490	28	913.170	41	904.850
3	908.490	16	924.610	29	916.290	42	907.970
4	911.610	17	903.290	30	919.410	43	911.090
5	914.730	18	906.410	31	922.530	44	914.210
6	917.850	19	909.530	32	925.650	45	917.330
7	920.970	20	912.650	33	904.330	46	920.450
8	924.090	21	915.770	34	907.450	47	923.570
9	902.770	22	918.890	35	910.570	48	<b>926.690</b>
10	905.890	<b>23</b>	<b>922.010</b>	36	913.690	/	/
11	909.010	24	925.130	37	916.810	/	/
12	912.130	25	903.810	38	919.930	/	/
13	915.250	26	906.930	39	923.050	/	/

Note: Test on Channel 1, 23 and 48.

### EUT Exercise Software

No exercise software was used.

### Equipment Modifications

No modifications were made to the unit tested.

### Support Equipment List and Details

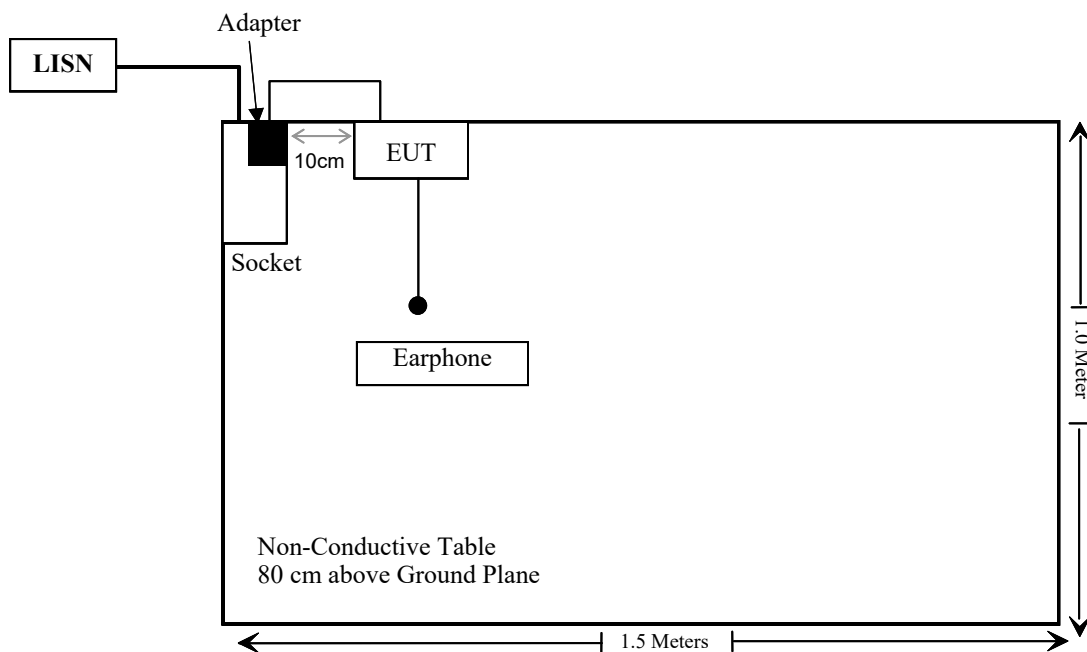
Manufacturer	Description	Model	Serial Number
Dachuan	Adapter	DCT07W050100US-C1	00714US5220901608717

### Support Cable Descriptions

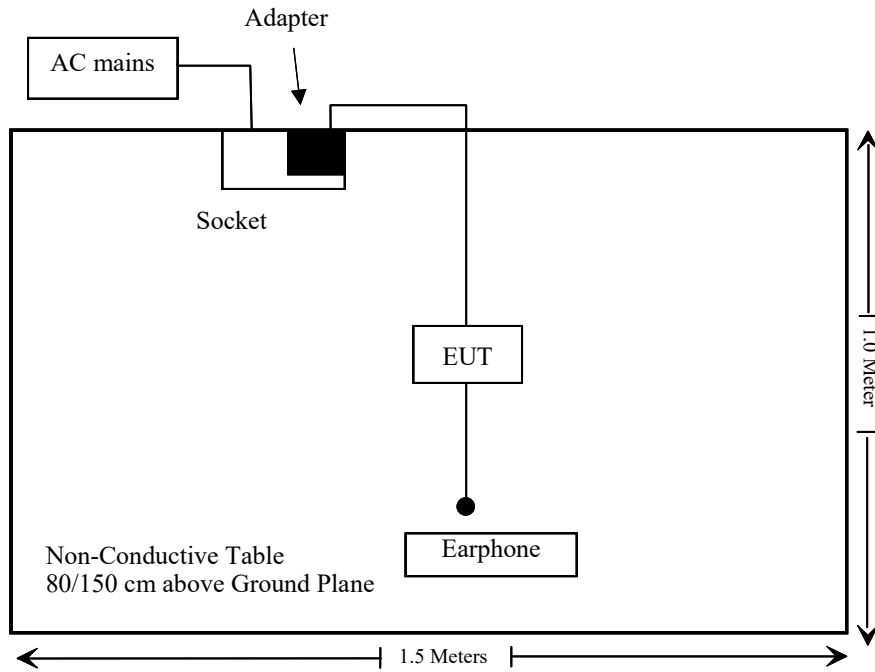
Cable Description	Length (m)	From/Port	To
Un-shielded un-detachable AC cable	1.0	Socket	LISN
Un-shielded detachable USB cable	0.5	Adapter	EUT
Un-shielded un-detachable earphone cable	1.0	EUT	Earphone

### Block Diagram of Test Setup

AC Line Conducted Emissions:



For Radiated Emission:





**SUMMARY OF TEST RESULTS**

<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
§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
<b>Conducted Emissions Test</b>					
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(V9)	NCR	NCR
<b>Radiated Emissions Test(below 1GHz)</b>					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/01/16	2025/01/15
Sonoma instrument	Pre-amplifier	310 N	186238	2023/06/08	2024/06/07
Sonoma instrument	Pre-amplifier	310 N	186238	2024/05/21	2025/05/20
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Cable	Chamber Cable 1	F-03-EM236	2023/08/03	2024/08/02
Unknown	Cable	Chamber A Cable 1	N/A	2024/06/18	2025/06/17
Unknown	Cable	XH500C	J-10M-A	2024/06/18	2025/06/17
Unknown	Cable	Chamber Cable 4	EC-007	2023/08/03	2024/08/02
BACL	Active Loop Antenna	1313-1A	4031911	2024/03/21	2025/03/20
Unknown	Cable	2Y194	0735	2024/05/21	2025/05/20
Unknown	Cable	PNG214	1354	2024/05/21	2025/05/20
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
<b>Radiated Emissions Test(above 1GHz)</b>					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2024/03/27	2025/03/26
COM-POWER	Pre-amplifier	PA-122	181919	2024/06/18	2025/06/17
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2023/07/26	2026/07/25
Unknown	RF Cable	KMSE	735	2024/06/18	2025/06/17
Unknown	RF Cable	UFA147	219661	2024/06/18	2025/06/17
JD	Multiplex Switch Test Control Set	DT7220FSU	DQ77926	2024/06/18	2025/06/17
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	902.25-926.69	93.89	-1.31	0.74	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.

Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### **Antenna Connector Construction**

The EUT has one internal antenna which was permanently attached and the antenna gain<sup>#</sup> is 2.5 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

<b>Antenna Type</b>	<b>Antenna Gain<sup>#</sup></b>	<b>Impedance</b>	<b>Frequency Range</b>
Monopole	2.5 dBi	50Ω	902-928MHz

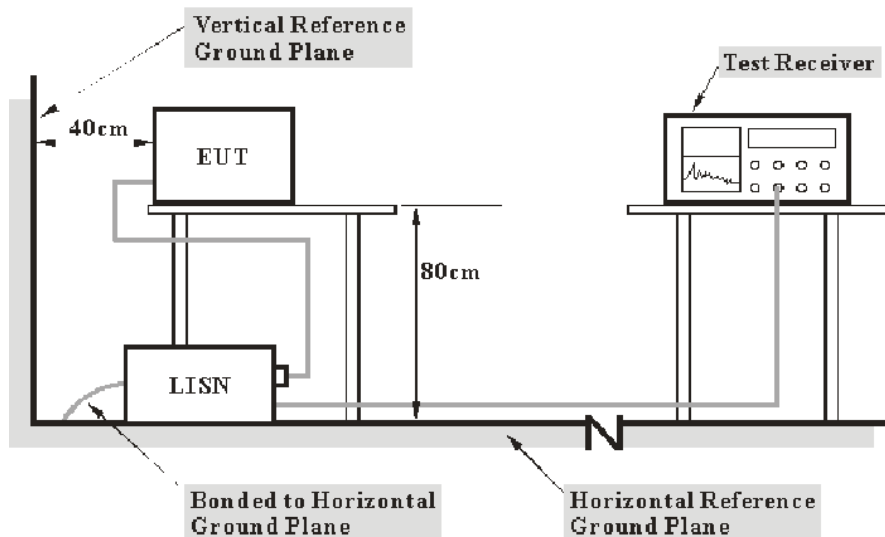
**Result: Compliant.**

## 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:

$$\text{Factor} = \text{LISN VDF} + \text{Cable Loss}$$

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:

$$\begin{aligned}\text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Read Level} + \text{Factor}\end{aligned}$$

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

## Test Data

### Environmental Conditions

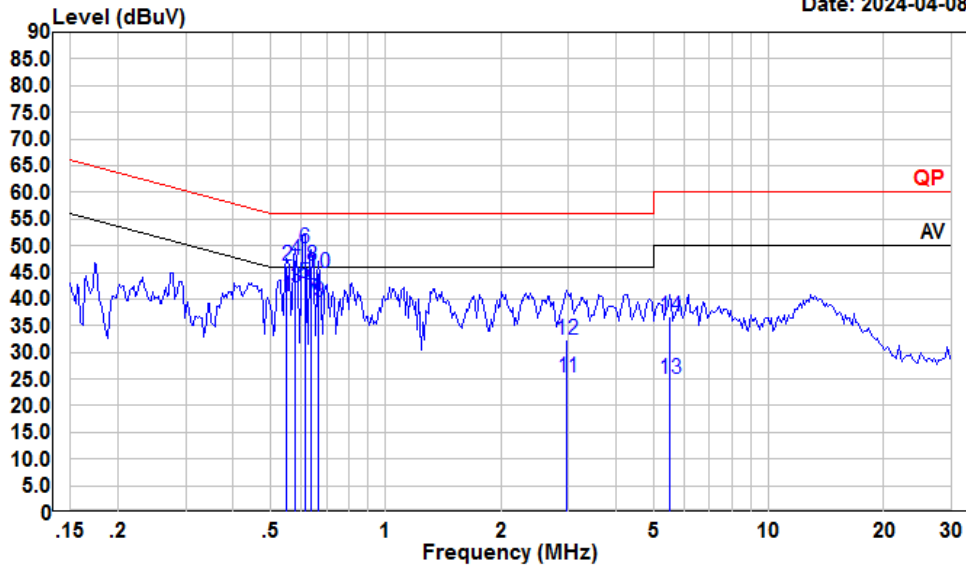
<b>Temperature:</b>	26 °C
<b>Relative Humidity:</b>	70 %
<b>ATM Pressure:</b>	101 kPa

*The testing was performed by Macy Shi on 2024-04-08.*

*EUT operation mode: Transmitting (maximum power mode high channel)*

AC 120V/60 Hz, Line

Date: 2024-04-08

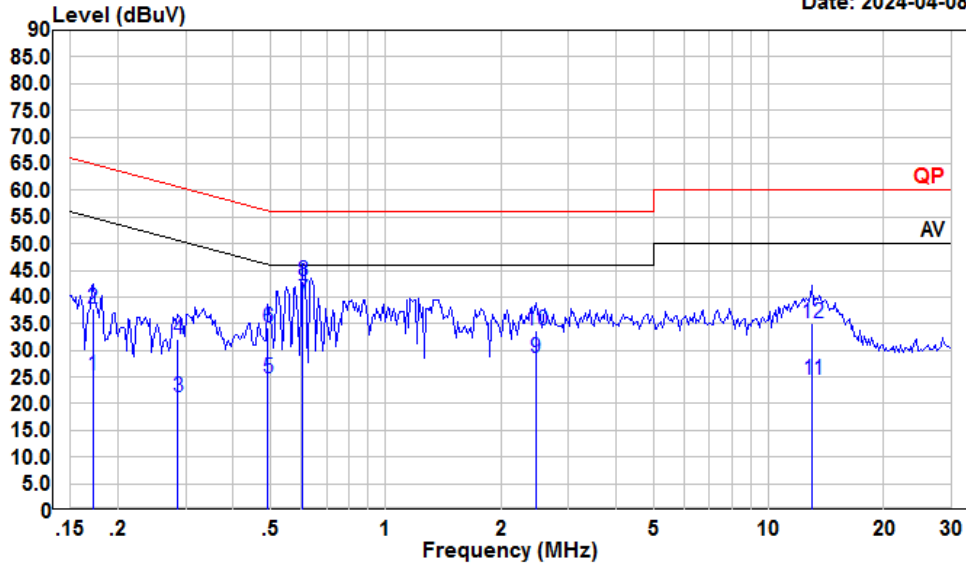


Condition: Line  
 Project : SZGMA240305-10660E-RF  
 Tester : Macy shi  
 Note : Transmitting

	Read Freq	Read Level	LISN Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.55	19.80	40.49	10.50	10.19	46.00	-5.51	Average
2	0.55	25.50	46.19	10.50	10.19	56.00	-9.81	QP
3	0.58	21.50	42.21	10.50	10.21	46.00	-3.79	Average
4	0.58	26.60	47.31	10.50	10.21	56.00	-8.69	QP
5	0.61	22.19	42.91	10.50	10.22	46.00	-3.09	Average
6	0.61	28.67	49.39	10.50	10.22	56.00	-6.61	QP
7	0.64	19.40	40.12	10.50	10.22	46.00	-5.88	Average
8	0.64	25.50	46.22	10.50	10.22	56.00	-9.78	QP
9	0.67	18.60	39.31	10.50	10.21	46.00	-6.69	Average
10	0.67	24.10	44.81	10.50	10.21	56.00	-11.19	QP
11	2.98	4.59	25.29	10.43	10.27	46.00	-20.71	Average
12	2.98	11.54	32.24	10.43	10.27	56.00	-23.76	QP
13	5.51	4.36	24.99	10.41	10.22	50.00	-25.01	Average
14	5.51	16.02	36.65	10.41	10.22	60.00	-23.35	QP

AC 120V/60 Hz, Neutral

Date: 2024-04-08



Condition: Neutral  
 Project : SZGMA240305-10660E-RF  
 Tester : Macy shi  
 Note : Transmitting

	Read Freq	Read Level	LISN Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.17	4.78	25.43	10.50	10.15	54.86	-29.43	Average
2	0.17	17.02	37.67	10.50	10.15	64.86	-27.19	QP
3	0.29	0.44	21.10	10.52	10.14	50.63	-29.53	Average
4	0.29	11.32	31.98	10.52	10.14	60.63	-28.65	QP
5	0.49	3.91	24.76	10.69	10.16	46.14	-21.38	Average
6	0.49	13.30	34.15	10.69	10.16	56.14	-21.99	QP
7	0.61	18.44	39.36	10.70	10.22	46.00	-6.64	Average
8	0.61	22.06	42.98	10.70	10.22	56.00	-13.02	QP
9	2.46	7.96	28.57	10.40	10.21	46.00	-17.43	Average
10	2.46	12.99	33.60	10.40	10.21	56.00	-22.40	QP
11	12.99	3.56	24.52	10.80	10.16	50.00	-25.48	Average
12	12.99	14.05	35.01	10.80	10.16	60.00	-24.99	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:

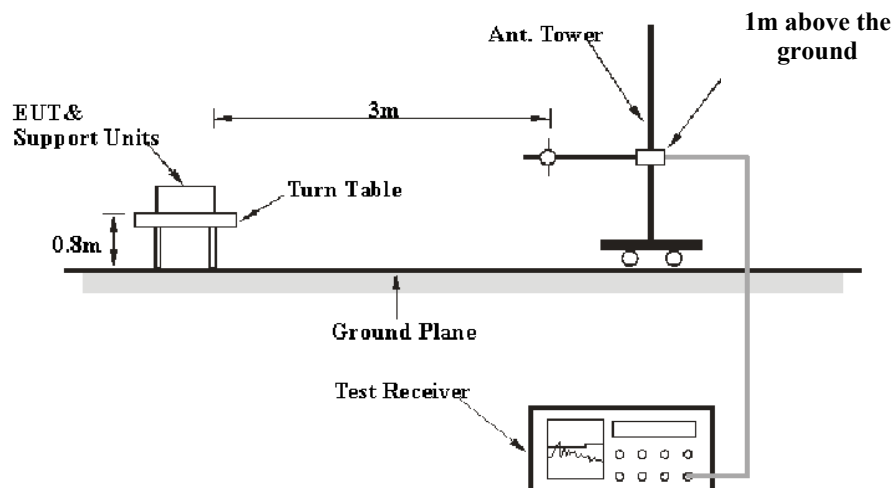
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

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

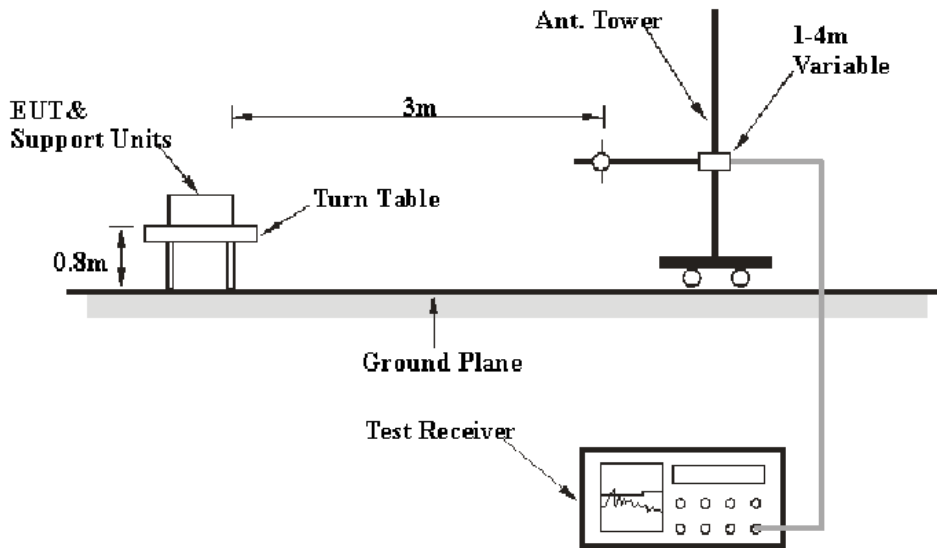
As per FCC§15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

### EUT Setup

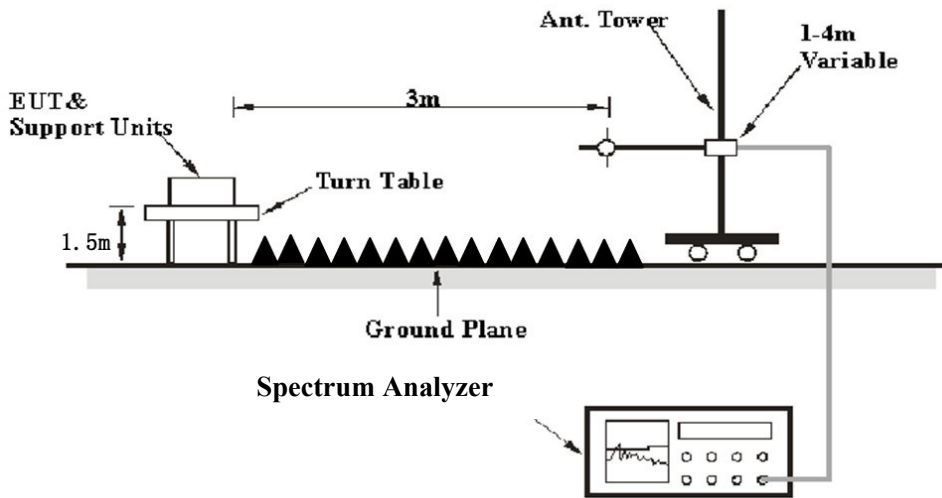
9 kHz-30MHz:



**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.

## EMI Test Receiver & Spectrum Analyzer Setup

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	/	/	200 Hz	QP
	300 Hz	1 kHz	/	PK
150 kHz – 30 MHz	/	/	9 kHz	QP
	10 kHz	30 kHz	/	PK
30 MHz – 1000 MHz	/	/	120 kHz	QP
	100 kHz	300 kHz	/	PK
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	AV

### 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.

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:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\begin{aligned} \text{Over Limit} &= \text{Level} - \text{Limit}; \text{Margin} = \text{Limit} - \text{Corrected Amplitude} \\ \text{Level} / \text{Corrected Amplitude} &= \text{Read Level} + \text{Factor} \end{aligned}$$

**Test Data****Environmental Conditions**

<b>Temperature:</b>	22~25.2 °C
<b>Relative Humidity:</b>	51~54 %
<b>ATM Pressure:</b>	101 kPa

*The testing was performed by Anson Su on 2024-04-07 and 2024-08-15 for below 1GHz and Dylan Yang on 2024-08-09 for above 1GHz.*

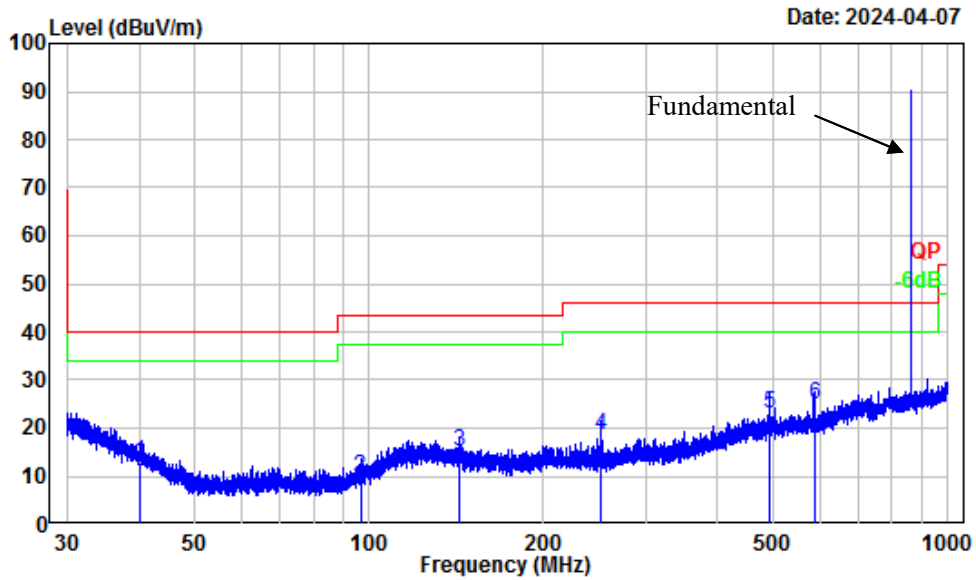
*EUT operation mode: Transmitting*

**9 kHz-30MHz:**

*The amplitude of spurious emissions attenuated more than 20 dB below the limit was not recorded.*

30MHz-1GHz: (maximum power mode high channel)

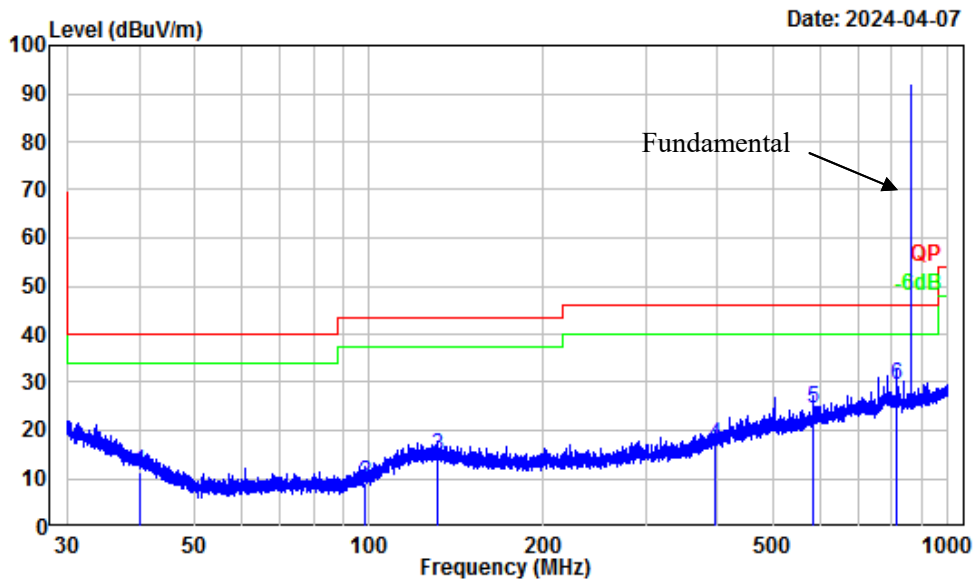
Horizontal



Site : Chamber A  
 Condition : 3m Horizontal  
 Project Number: SZGMA240305-10660E-RF  
 Note : Transmitting  
 Tester : Anson Su

	Freq Factor		Read Level		Limit	Over	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.03	-10.41	23.12	12.71	40.00	-27.29	QP
2	96.52	-14.72	24.60	9.88	43.50	-33.62	QP
3	142.82	-10.90	25.82	14.92	43.50	-28.58	QP
4	251.51	-11.80	30.43	18.63	46.00	-27.37	QP
5	491.82	-5.14	28.00	22.86	46.00	-23.14	QP
6	589.68	-4.48	29.30	24.82	46.00	-21.18	QP

**Vertical**



Site : Chamber A  
 Condition : 3m Vertical  
 Project Number: SZGMA240305-10660E-RF  
 Note : Transmitting  
 Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit	Over	Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB		
1	40.12	-11.96	23.25	11.29	40.00	-28.71	QP	
2	98.31	-15.59	24.65	9.06	43.50	-34.44	QP	
3	130.89	-10.83	25.60	14.77	43.50	-28.73	QP	
4	396.42	-7.75	24.76	17.01	46.00	-28.99	QP	
5	586.33	-4.57	28.98	24.41	46.00	-21.59	QP	
6	812.76	-0.51	30.00	29.49	46.00	-16.51	QP	

**Fundamental and Band edge:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Absolute Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
	Reading (dB $\mu$ V)	PK/AV					
Low Channel							
901.96	36.42	PK	V	-1.29	35.13	46	-10.87
902.25	89.87	PK	H	-1.29	88.58	94	-5.42
902.25	92.32	PK	V	-1.29	91.03	94	-2.97
Middle Channel							
922.01	92.24	PK	H	-1.15	91.09	94	-2.91
922.01	94.45	PK	V	-1.15	93.30	94	-0.70
High Channel							
926.69	93.24	PK	H	-1.13	92.11	94	-1.89
926.69	95.02	PK	V	-1.13	93.89	94	-0.11
928.01	29.82	PK	V	-1.11	28.71	46	-17.29

**Note:**

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Absolute Level (Corrected Amplitude) = Factor + Reading

Margin = Absolute Level - Limit

The result of Peak below the limit of QP/Average, so only record the PK level.



**Above 1GHz:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Absolute Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	PK/AV					
Low Channel							
2706.75	52.85	PK	H	-2.49	50.36	74	-23.64
2706.75	52.11	AV	H	-2.49	49.62	54	-4.38
2706.75	51.73	PK	V	-2.49	49.24	74	-24.76
2706.75	50.67	AV	V	-2.49	48.18	54	-5.82
3609.00	54.25	PK	H	-2.04	52.21	74	-21.79
3609.00	53.04	AV	H	-2.04	51.00	54	-3.00
3609.00	52.88	PK	V	-2.04	50.84	74	-23.16
3609.00	51.76	AV	V	-2.04	49.72	54	-4.28
4511.25	50.24	PK	H	1.19	51.43	74	-22.57
4511.25	49.26	AV	H	1.19	50.45	54	-3.55
4511.25	48.63	PK	V	1.19	49.82	74	-24.18
4511.25	47.92	AV	V	1.19	49.11	54	-4.89
Middle Channel							
2766.03	51.51	PK	H	-2.46	49.05	74	-24.95
2766.03	51.02	AV	H	-2.46	48.56	54	-5.44
2766.03	51.44	PK	V	-2.46	48.98	74	-25.02
2766.03	49.11	AV	V	-2.46	46.65	54	-7.35
3688.04	53.56	PK	H	-1.74	51.82	74	-22.18
3688.04	51.29	AV	H	-1.74	49.55	54	-4.45
3688.04	51.81	PK	V	-1.74	50.07	74	-23.93
3688.04	50.54	AV	V	-1.74	48.80	54	-5.20
4610.05	49.82	PK	H	0.99	50.81	74	-23.19
4610.05	48.38	AV	H	0.99	49.37	54	-4.63
4610.05	47.64	PK	V	0.99	48.63	74	-25.37
4610.05	46.67	AV	V	0.99	47.66	54	-6.34
High Channel							
2780.07	51.83	PK	H	-2.46	49.37	74	-24.63
2780.07	51.09	AV	H	-2.46	48.63	54	-5.37
2780.07	50.29	PK	V	-2.46	47.83	74	-26.17
2780.07	49.28	AV	V	-2.46	46.82	54	-7.18
3706.76	52.48	PK	H	-1.54	50.94	74	-23.06
3706.76	50.93	AV	H	-1.54	49.39	54	-4.61
3706.76	51.23	PK	V	-1.54	49.69	74	-24.31
3706.76	49.82	AV	V	-1.54	48.28	54	-5.72
4633.45	48.73	PK	H	1.09	49.82	74	-24.18
4633.45	48.04	AV	H	1.09	49.13	54	-4.87
4633.45	47.03	PK	V	1.09	48.12	74	-25.88
4633.45	46.90	AV	V	1.09	47.99	54	-6.01

**Note:**

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

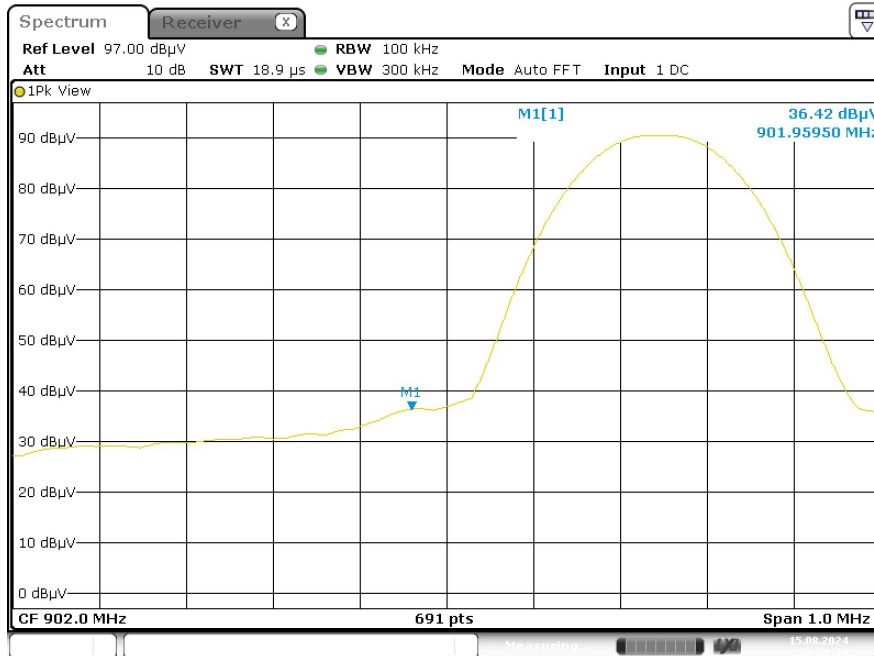
Absolute Level (Corrected Amplitude) = Factor + Reading

Margin = Absolute Level - Limit

The other spurious emission which is 20dB to the limit or in noise floor level was not recorded.

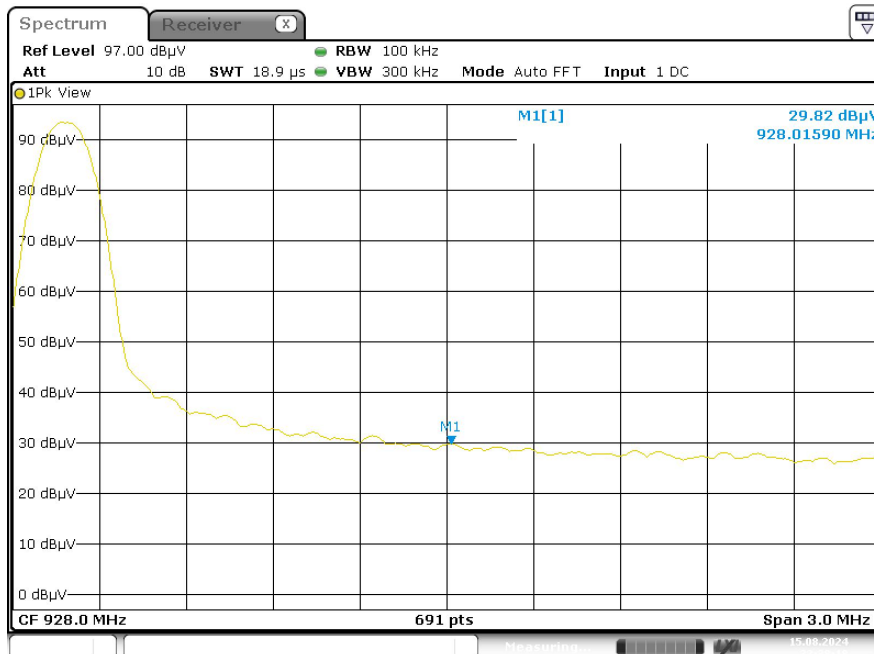
**Band edge:**

**Left Side**



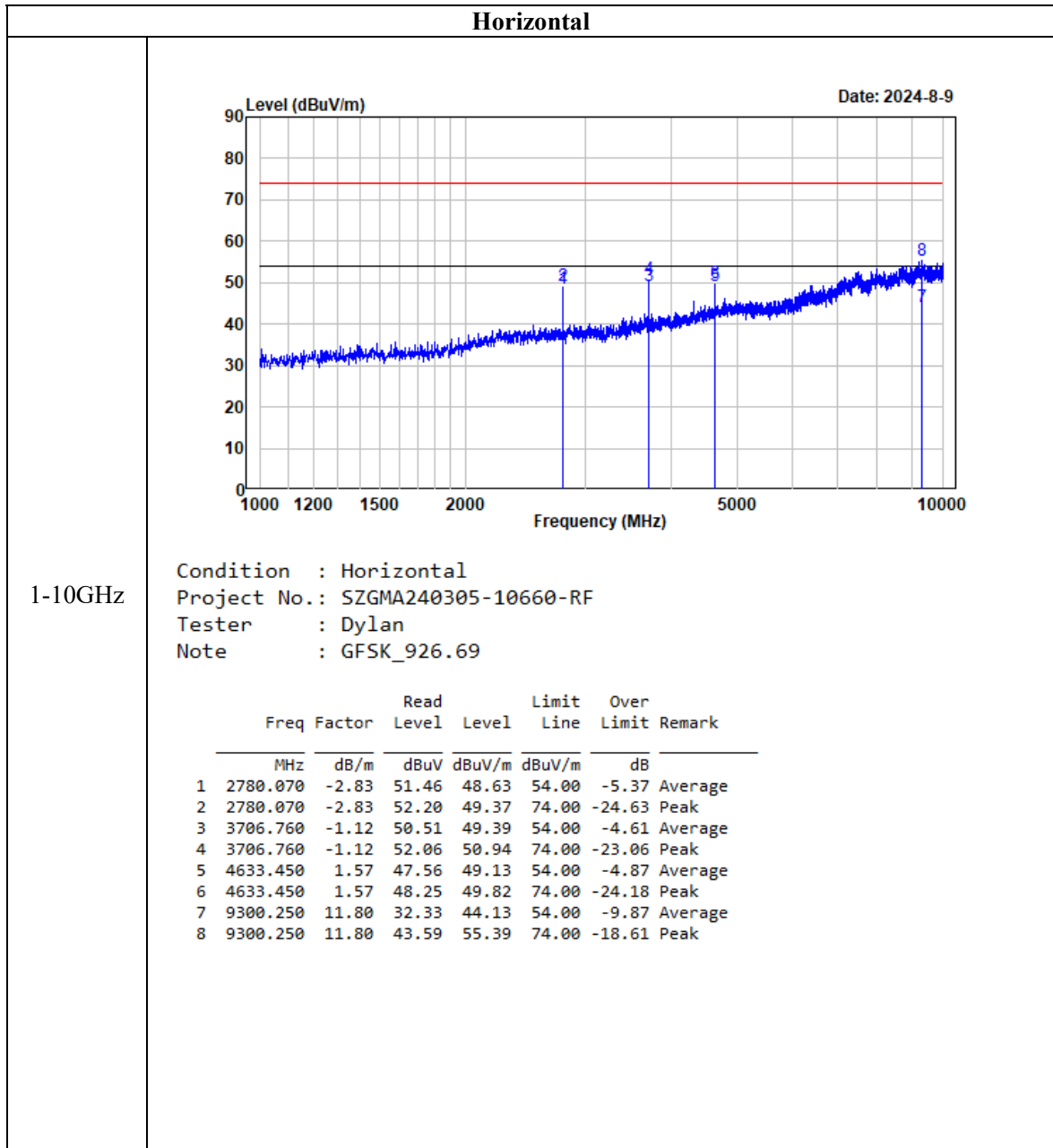
ProjectNo.:SZGMA240305-10660E-RF Tester:Anson Su  
Date: 15.AUG.2024 22:32:14

**Right Side**



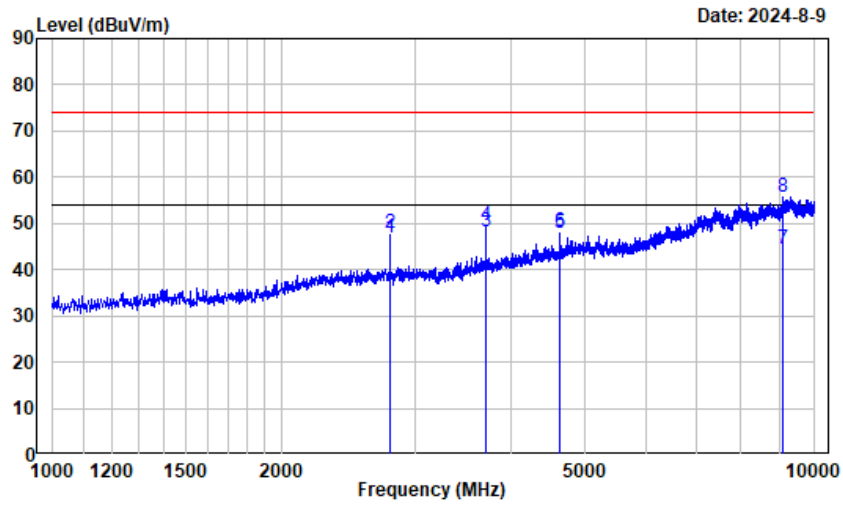
ProjectNo.:SZGMA240305-10660E-RF Tester:Anson Su  
Date: 15.AUG.2024 22:38:17

Listed with the test plot for harmonic measurement:



Vertical

1-10GHz



Condition : Vertical  
 Project No.: SZGMA240305-10660-RF  
 Tester : Dylan  
 Note : GFSK\_926.69

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2780.070	-2.83	49.65	46.82	54.00	-7.18	Average
2	2780.070	-2.83	50.66	47.83	74.00	-26.17	Peak
3	3706.760	-1.12	49.40	48.28	54.00	-5.72	Average
4	3706.760	-1.12	50.81	49.69	74.00	-24.31	Peak
5	4633.450	1.57	46.42	47.99	54.00	-6.01	Average
6	4633.450	1.57	46.55	48.12	74.00	-25.88	Peak
7	9098.375	11.41	32.96	44.37	54.00	-9.63	Average
8	9098.375	11.41	44.40	55.81	74.00	-18.19	Peak

## **FCC§15.215(c) - 20dB EMISSION BANDWIDTH**

### **Applicable Standard**

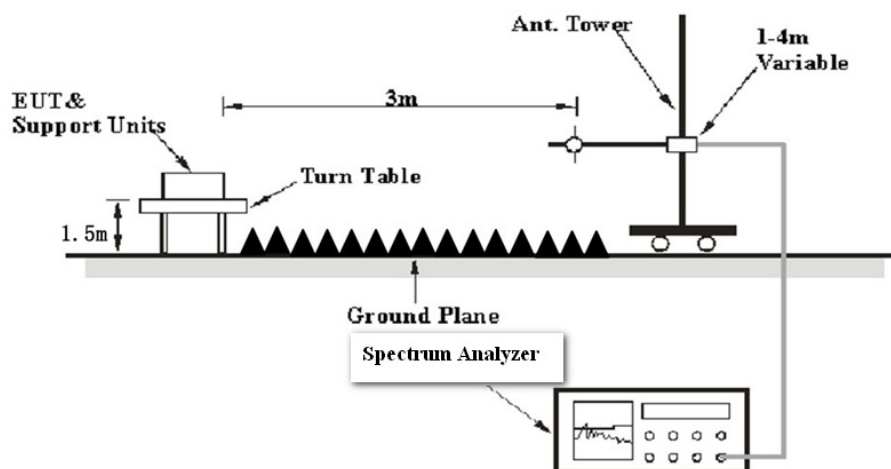
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific 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**

Test Method: ANSI C63.10-2013 Clause 7.8.7 & Clause 6.9.2

The following conditions shall be observed for measuring the occupied bandwidth and 20 dB bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / 20 dB bandwidth if the device is not transmitting continuously.
- The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW/ 20dB bandwidth and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.



**Test Data****Environmental Conditions**

<b>Temperature:</b>	22°C
<b>Relative Humidity:</b>	54 %
<b>ATM Pressure:</b>	101 kPa

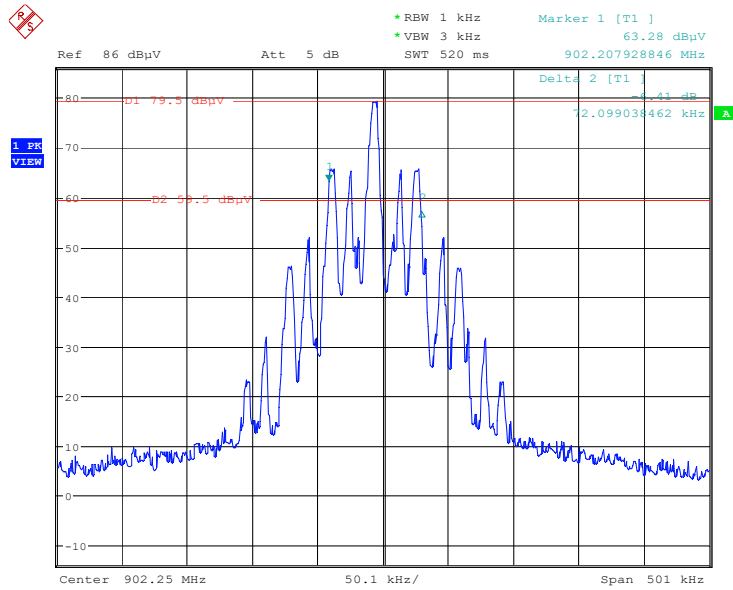
*The testing was performed by Cheeb Huang on 2024-09-21.*

*EUT operation mode: Transmitting*

*Please refer to the following table and plots.*

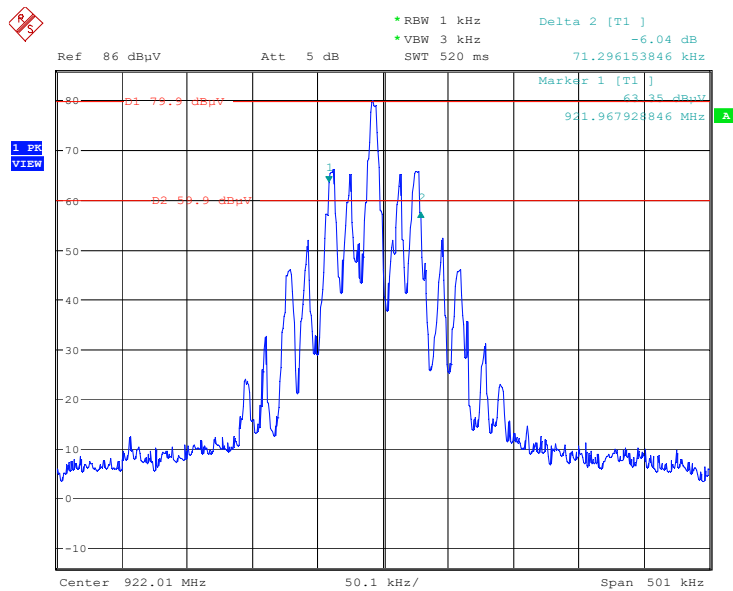
<b>Channel</b>	<b>Frequency (MHz)</b>	<b>20dB Bandwidth (kHz)</b>
Low	902.25	72.10
Middle	922.01	71.30
High	926.69	71.30

### Low channel



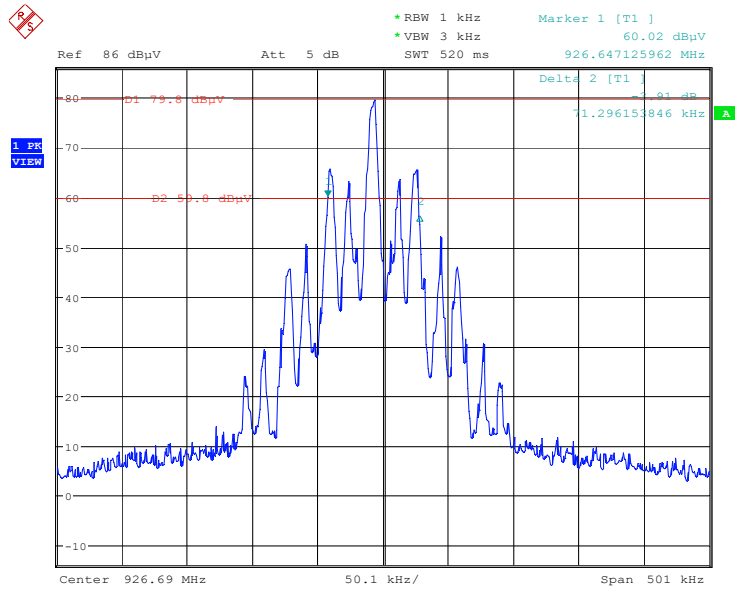
ProjectNo.:SZGMA240305-10660E-RF Tester:Cheeb Huang  
Date: 21.SEP.2024 14:08:23

### Middle Channel



ProjectNo.:SZGMA240305-10660E-RF Tester:Cheeb Huang  
Date: 21.SEP.2024 14:11:10

### High Channel



ProjectNo.:SZGMA240305-10660E-RF Tester:Cheeb Huang  
Date: 21.SEP.2024 14:15:07



## **EUT PHOTOGRAPHS**

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Please refer to the attachment SZGMA240305-10660E-RF External photo and SZGMA240305-10660E-RF Internal photo.

## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment SZGMA240305-10660E-RF Test Setup photo.

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