

TEST REPORT

Applicant Name: Shenzhen Ysair Technology Co., LTD
Address: Room 403, 4th Floor, Building 4, Yunli Intelligent Park, No. 3
Changfa Middle Road, Yangmei Community Bantian Street,
Longgang District, Shenzhen China
Report Number: SZ4240130-07027E-EM-00
FCC ID: 2A30OHD2

Test Standard (s)

FCC Part 15, Subpart B (Class B)

Sample Description

Product Type: DMR Digital Transceiver
Model No.: HD2
Multiple Model(s) No.: HD3, H1, H2
Trade Mark: RETEVIS
Date Received: 2024/01/30
Issue Date: 2024/05/14

Test Result:

Pass▲

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

Prepared and Checked By:

Joson Xiao

Joson Xiao
EMC Engineer

Approved By:

Moon Liu

Moon Liu
EMC 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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Bay Area Compliance Laboratories Corp. (Shenzhen)

5F(B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China

Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZ4240130-07027E-EM-00	Original Report	2024/05/14

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	DMR Digital Transceiver
Tested Model	HD2
Multiple Model(s)	HD3, H1, H2
Voltage Range	DC 7.4V from battery or DC 8.4V from Charger
Highest operating frequency [#]	2480MHz (Provided by the applicant)
Equipment Class	Class B
Sample number	2HDZ-1: Two Way Radio, 2HDZ-2: Base (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A
Charger Information	Model: Ailunce CB01 Input: DC 5V, 1A Output: DC Max 8.4V, 540mA
Note: The Multiple models are electrically identical with the test model except for with or without GPS. Please refer to the declaration letter [#] for more detail, which was provided by manufacturer.	

Objective

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

The objective of the manufacturer is to determine the compliance of the EUT with FCC Part 15B.
Note: DUT is a kind of RF device-Amateur radio, whose transmitting portion is subject to FCC's Equipment authorized under the SDoC procedure.

Measurement Uncertainty

Item	Frequency Range		Expanded Measurement uncertainty
Conducted Emissions	AC Mains	150 kHz ~30MHz	3.84dB(k=2, 95% level of confidence)
Radiated Disturbance	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)

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.

Each test item follows test standards and with no deviation.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in worst case condition.

Test mode 1: Charging

Test mode 2: Receiving (UHF)

Test mode 3: Receiving (VHF)

Test mode 4: FM receiving

Test mode 5: GPS receiving

Test mode 6: NOAA receiving

Test mode 7: Scanning

Note[#]: The applicant declares: Do not use the product during charging. This will affect the normal charging of the battery pack, causing damage to the product and possible accidents.

Operation Frequency and Test Channel

Operation Modes	Operation Frequency Range (MHz)	Test Frequency (MHz)
Receiving(UHF)	430-440	430,440
	420-450	420,435,450
Receiving(VHF)	144-146	144,146
	144-148	144,148
	222-225	222,225
FM receiving	88-108	88,98,108
GPS receiving	1176.45	1176.45
	1227.60	1227.60
	1575.42	1575.42
NOAA receiving	161.650-162.550	162.425
Scanning	136-174	136,155,174
	400-520	400,460,520

EUT exercise software

No exercise software was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

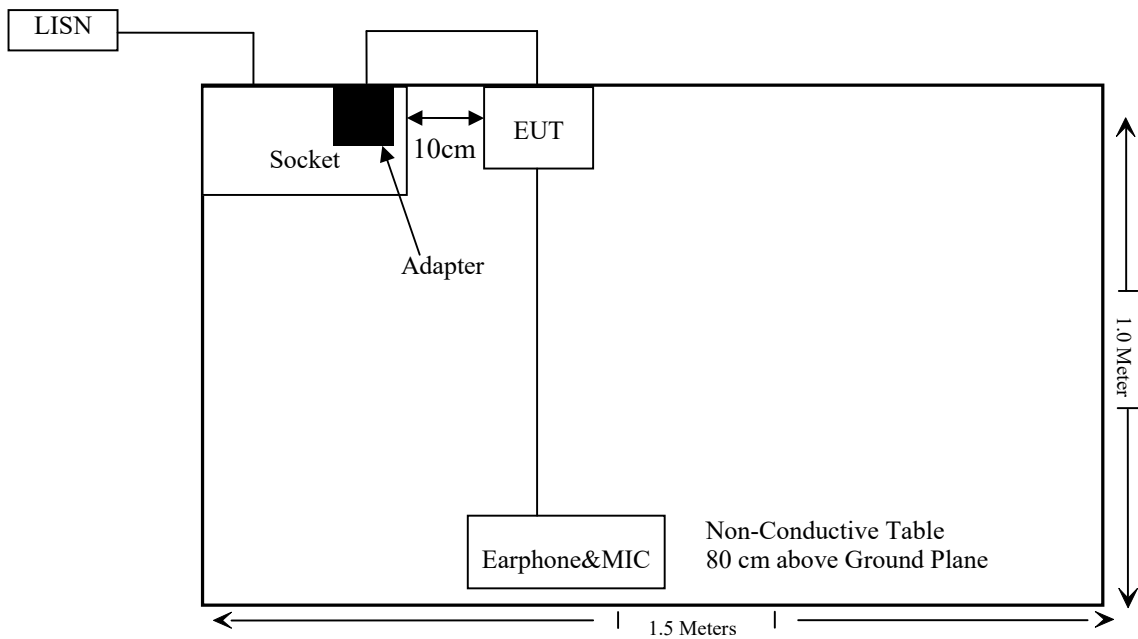
Manufacturer	Description	Model	Serial Number
HP	Signal Generator	8657A	3217A04699
KEYSIGHT	Vector signal source	N5182B	MY53051503
/	Antenna	/	/
Ysair	Two Way Radio	DH2	/
KODAK	Adapter	SGITL1A	/

External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Un-detachable AC cable	1.0	Socket	Mains/LISN
Unshielded detachable DC cable	1.0	EUT	Adapter
Unshielded Un-detachable earphone cable	1.0	EUT	Earphone&MIC
Shielded detachable RF cable	8.0	Antenna	Signal generator

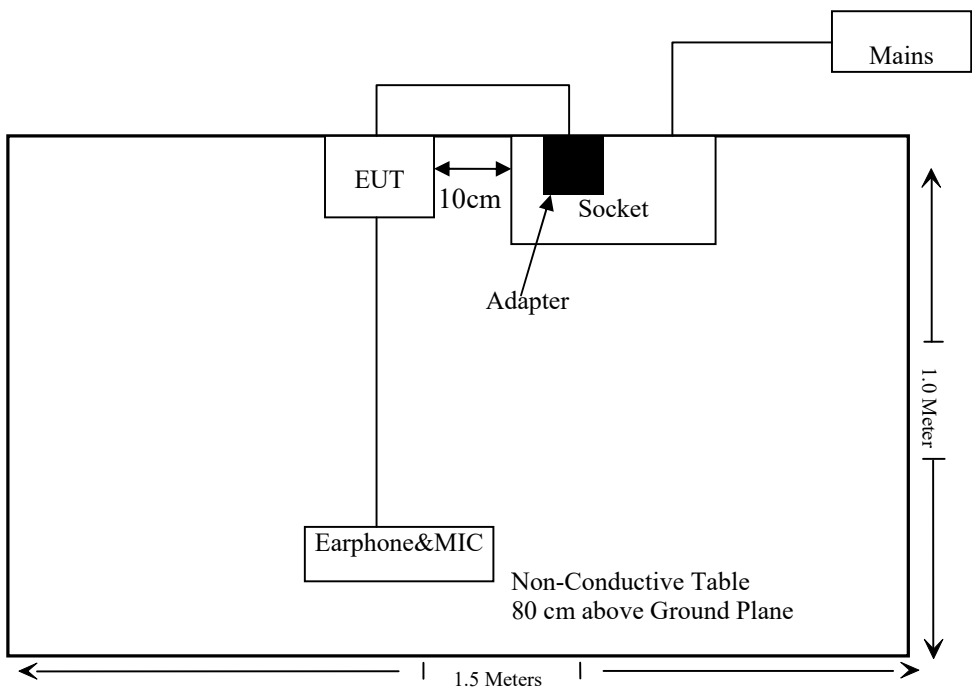
Block Diagram of Test Setup

For conduction emission

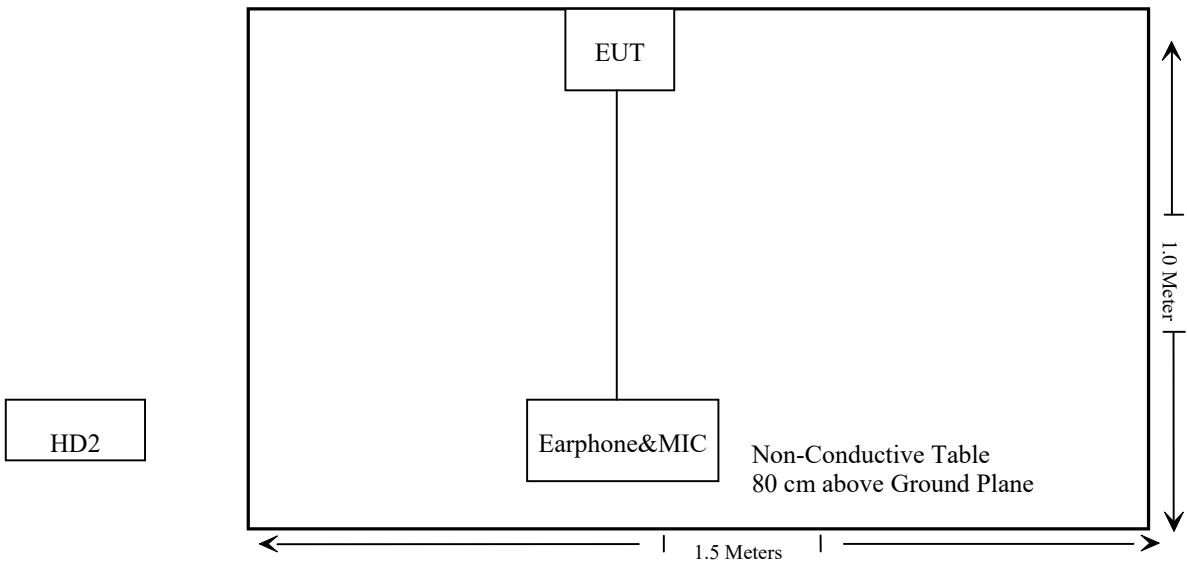


For radio emission

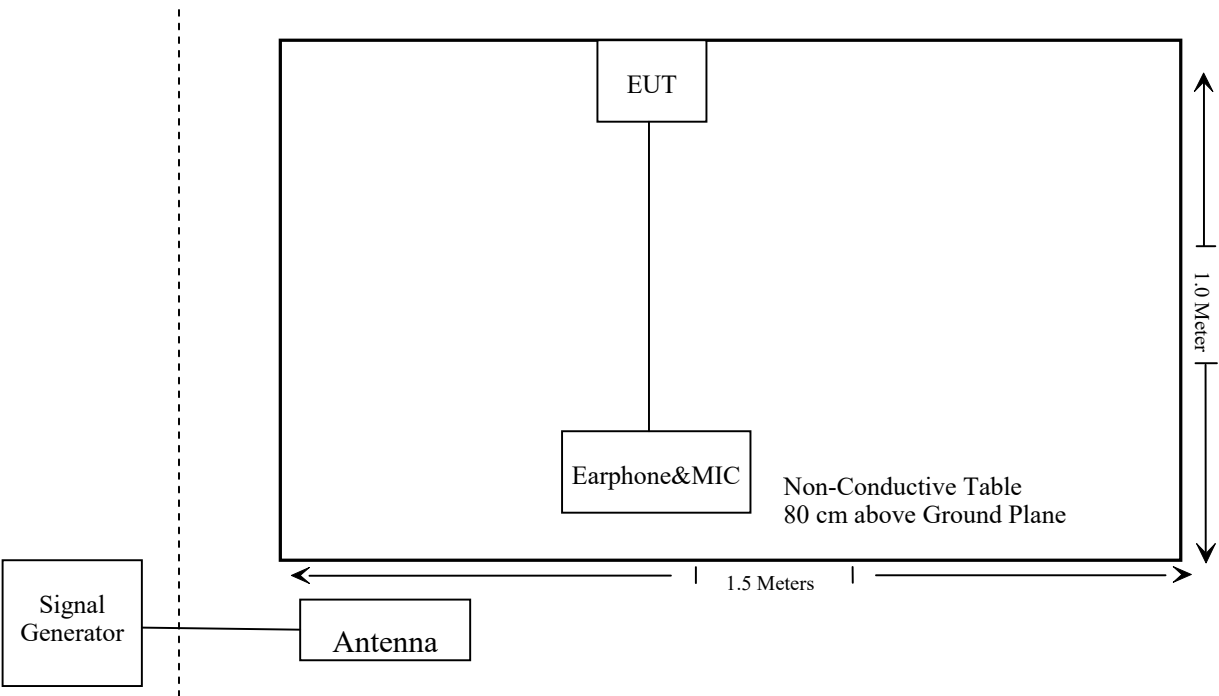
Test Mode 1



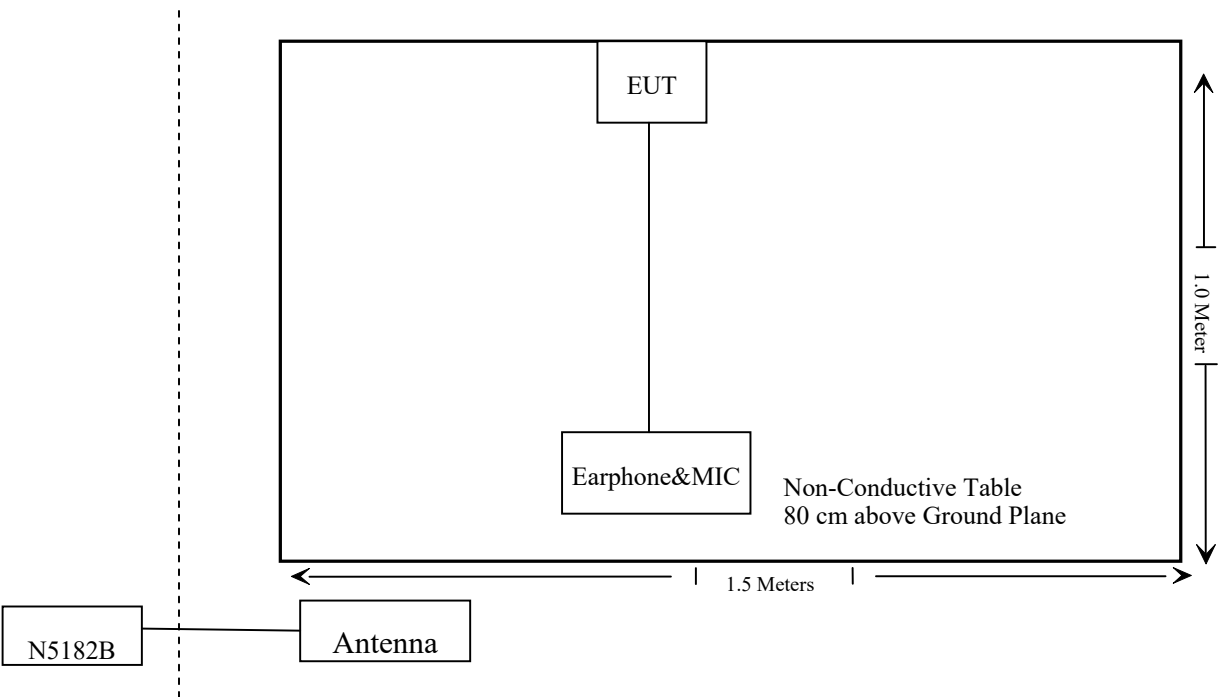
Test Mode 2&3



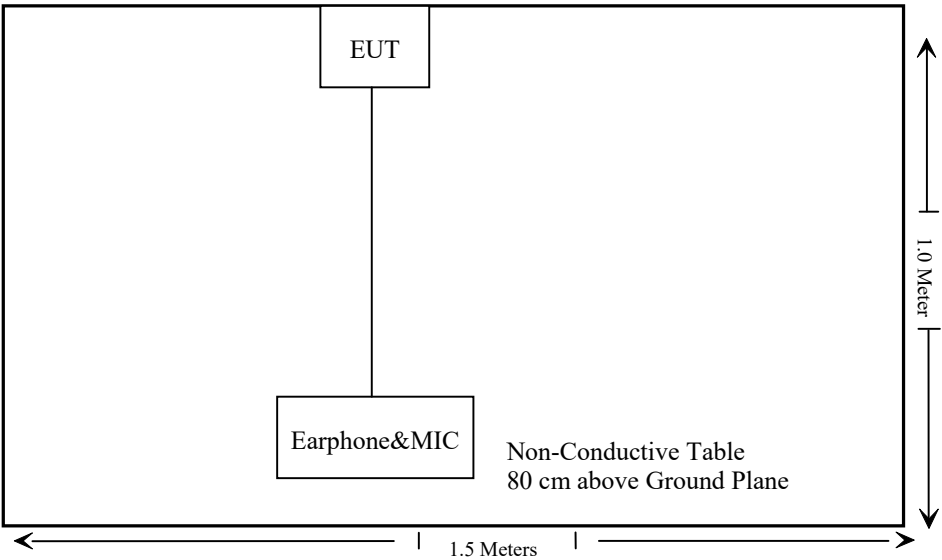
Test Mode 4



Test Mode 5&6



Test Mode 7



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant
§15.111	Antenna Power Conduction Limits for Receivers	Compliant
§15.121(b)	Scanning receivers and frequency converters used with scanning receivers	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
AC Line Conducted Emission 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(V9)	NCR	NCR
Radiated Emission 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	2026/07/19
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	2024/03/27	2025/03/26
COM-POWER	Pre-amplifier	PA-122	181919	2023/06/29	2024/06/28
Schwarzbeck	Horn Antenna	BBHA9120D(1201)	1143	2023/07/26	2026/07/25
Unknown	RF Cable	KMSE	0735	2023/10/08	2024/10/07
Unknown	RF Cable	UFA147	219661	2023/10/08	2024/10/07
Audix	EMI Test software	E3	191218(V9)	NCR	NCR

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Antenna Power Conduction Limits for Receivers					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200982	2023/12/18	2024/12/17
Micro-Tronics	RF Cable	8082176	W6111	2023/07/04	2024/07/03
MARCONI	10dB Attenuator	6534/3	2942	2023/07/04	2024/07/03
Scanning Receivers					
Micro-Tronics	RF Cable	8082135	W1113	2023/07/04	2024/07/03
Micro-Tronics	RF Cable	8082176	W6102	2023/07/04	2024/07/03
Micro-Tronics	RF Cable	8082176	W6111	2023/07/04	2024/07/03
Agilent	MXG Vector Signal Generator	N5182B	MY53051503	2024/01/08	2025/01/07
HP	RF Communications Test Set	8920B	US36141849	2024/01/16	2025/01/15
WEINSCHEL	Power Splitter	1515	RH476	2023/07/04	2024/07/03

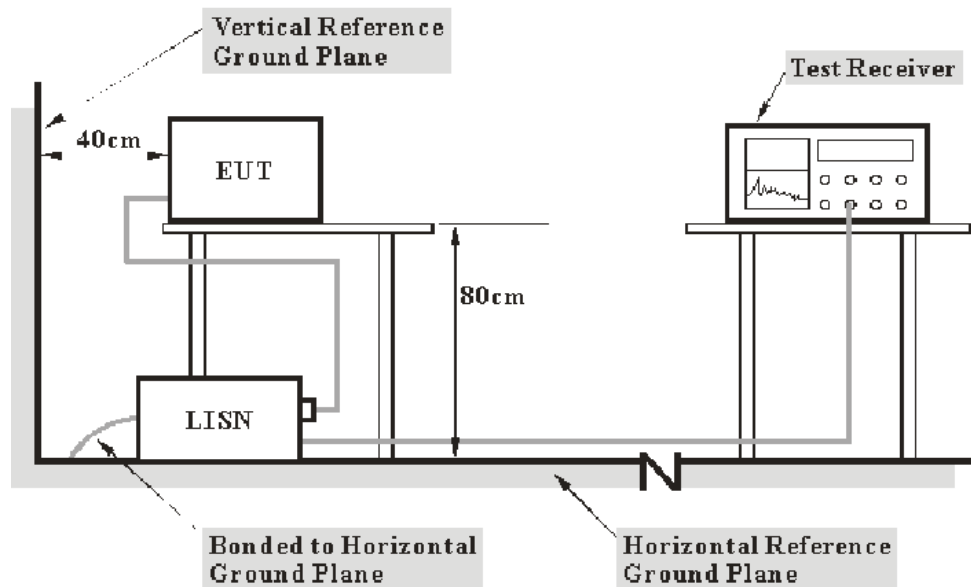
* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.107 - AC LINE CONDUCTED EMISSIONS

Applicable Standard

According to FCC§15.107

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 C63.4-2014. The related limit was specified in FCC Part 15.107.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

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

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.

Level & Over Limit Calculation

The Level is calculated by adding the LISN Factor, Cable Loss and the Read Level. The basic equation is as follows:

$$\text{Level (dBuV)} = \text{Read Level (dBuV)} + \text{LISN Factor} + \text{Cable Loss}$$

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit.

$$\text{Over Limit (dB)} = \text{Level (dBuV)} - \text{Limit Line (dBuV)}$$

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

Test Data

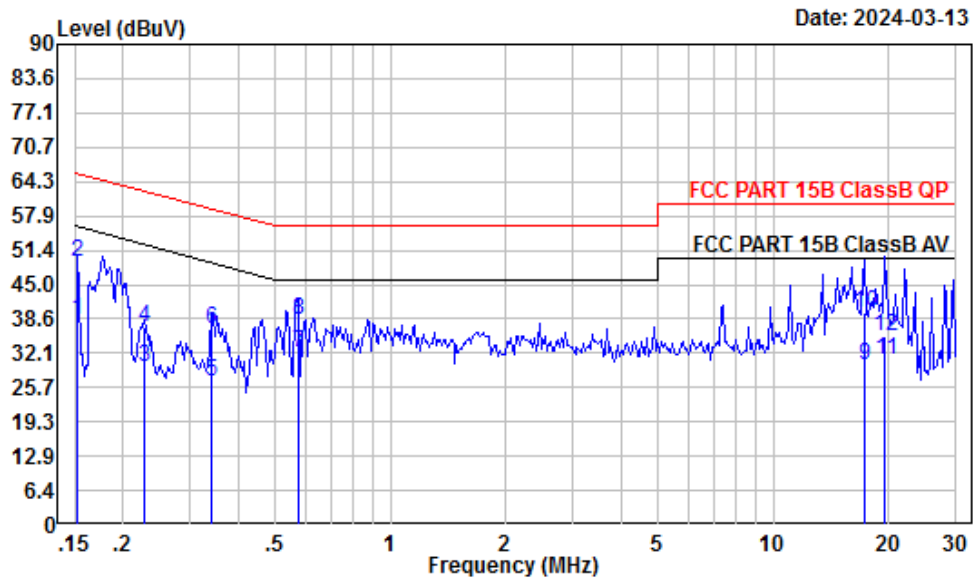
Environmental Conditions

Temperature:	23 °C
Relative Humidity:	45 %
ATM Pressure:	101 kPa

The testing was performed by Macy Shi on 2024-03-13.

Test Mode 1

AC 120V/60 Hz, Line



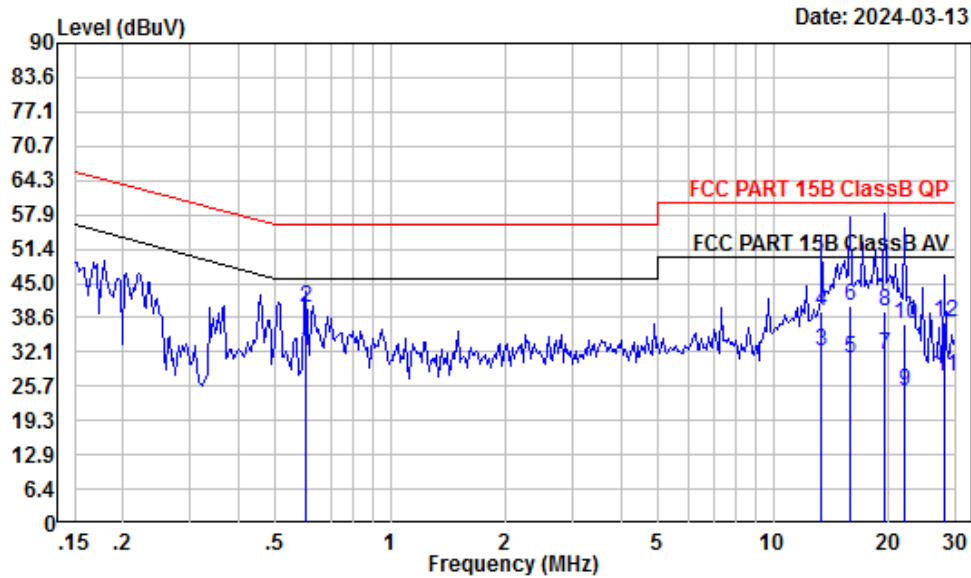
Condition: Line

Project : SZ4240130-07027E-EM

Test Mode: Charging

	Freq	Read Level	LISN Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.15	17.70	38.45	10.60	10.15	55.91	-17.46	Average
2	0.15	28.50	49.25	10.60	10.15	65.91	-16.66	QP
3	0.23	8.81	29.57	10.61	10.15	52.57	-23.00	Average
4	0.23	16.18	36.94	10.61	10.15	62.57	-25.63	QP
5	0.34	5.87	26.68	10.66	10.15	49.13	-22.45	Average
6	0.34	15.90	36.71	10.66	10.15	59.13	-22.42	QP
7	0.58	11.40	32.30	10.70	10.20	46.00	-13.70	Average
8	0.58	17.46	38.36	10.70	10.20	56.00	-17.64	QP
9	17.29	9.10	29.75	10.55	10.10	50.00	-20.25	Average
10	17.29	19.10	39.75	10.55	10.10	60.00	-20.25	QP
11	19.64	9.97	30.76	10.68	10.11	50.00	-19.24	Average
12	19.64	14.50	35.29	10.68	10.11	60.00	-24.71	QP

AC 120V/60 Hz, Neutral



Condition: Neutral

Project : SZ4240130-07027E-EM

Test Mode: Charging

	Freq	Read Level	LISN Level	LISN Factor	Cable Loss	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dB	dBuV	dB	
1	0.60	11.29	32.21	10.70	10.22	46.00	-13.79	Average
2	0.60	19.63	40.55	10.70	10.22	56.00	-15.45	QP
3	13.41	11.30	32.25	10.80	10.15	50.00	-17.75	Average
4	13.41	18.70	39.65	10.80	10.15	60.00	-20.35	QP
5	15.89	10.10	30.98	10.78	10.10	50.00	-19.02	Average
6	15.89	19.80	40.68	10.78	10.10	60.00	-19.32	QP
7	19.64	10.64	31.46	10.71	10.11	50.00	-18.54	Average
8	19.64	18.85	39.67	10.71	10.11	60.00	-20.33	QP
9	22.06	4.11	24.92	10.65	10.16	50.00	-25.08	Average
10	22.06	16.71	37.52	10.65	10.16	60.00	-22.48	QP
11	28.15	6.60	27.38	10.53	10.25	50.00	-22.62	Average
12	28.15	16.90	37.68	10.53	10.25	60.00	-22.32	QP

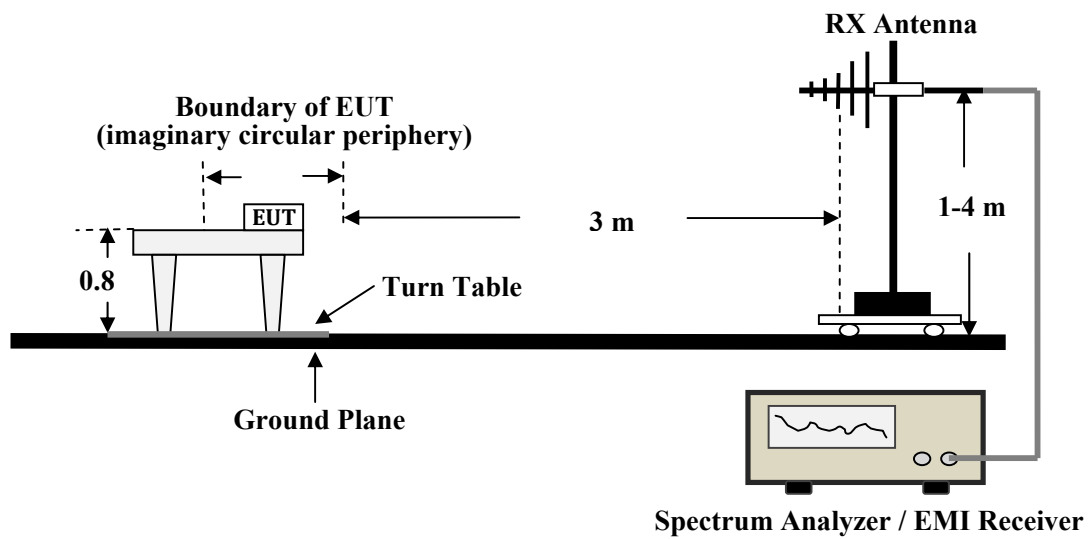
FCC §15.109 - RADIATED EMISSIONS

Applicable Standard

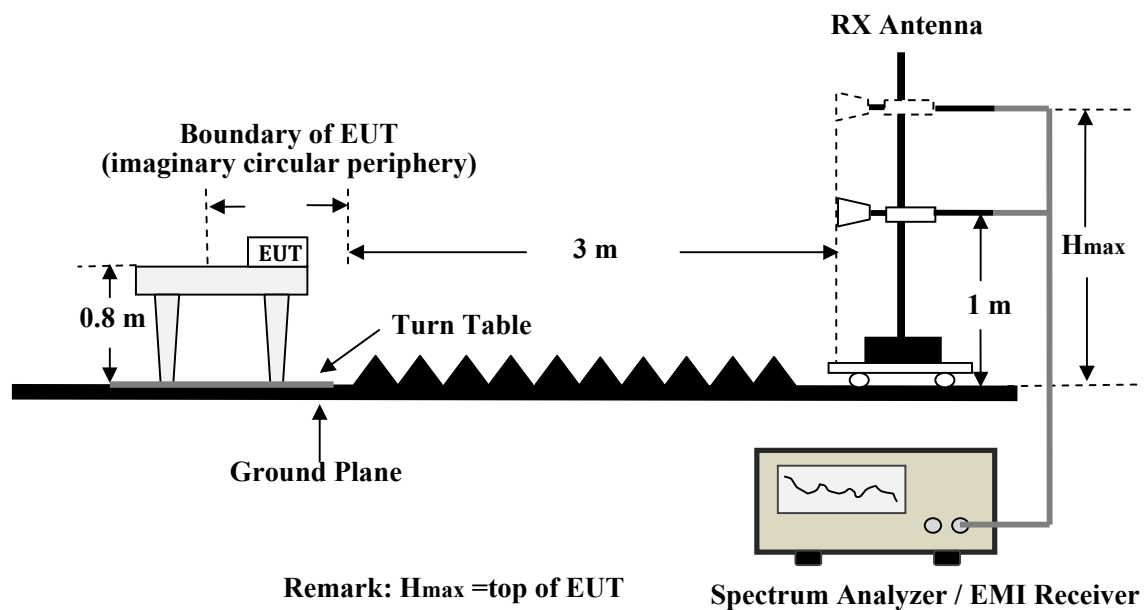
FCC §15.109

EUT Setup

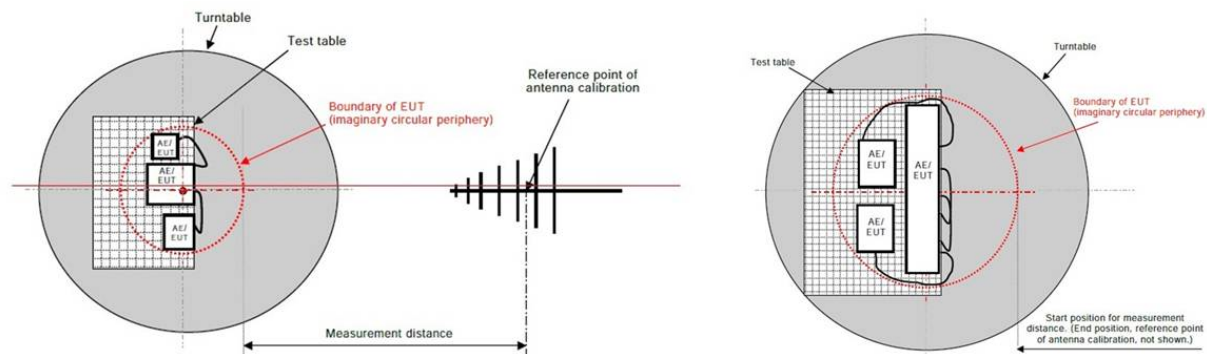
Below 1GHz for Radiated Emissions



Above 1GHz for Radiated Emissions



Radiated Emissions Setup Configuration



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The related limit was specified in FCC Part 15B.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver and Spectrum analyzer Setup

During the radiated emission test, the EMI test receiver and spectrum analyzer setup was set with the following configurations:

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

Test Procedure

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

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

Level & Over Limit Calculation

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

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

$$\text{Level} = \text{Read Level} + \text{Factor}$$

The “Over limit” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -6 dB means the emission is 6dB below the limit for Class B. The equation for Over Limit calculation is as follows:

$$\text{Over limit} = \text{Level} - \text{Limit}$$

Test Data

Environmental Conditions

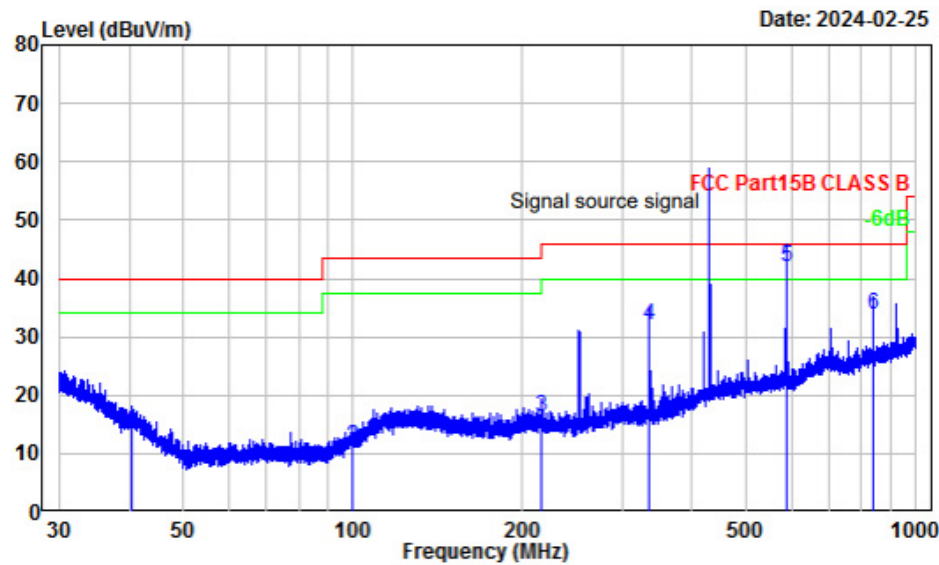
Temperature:	24~25.3 °C
Relative Humidity:	50~56 %
ATM Pressure:	101 kPa

The testing was performed by Anson Su on 2024-02-25 for below 1GHz and Tyler Wu on 2024-03-15 for above 1GHz.

Test Mode 2 (430.000MHz) (worst case)

30 MHz~1 GHz

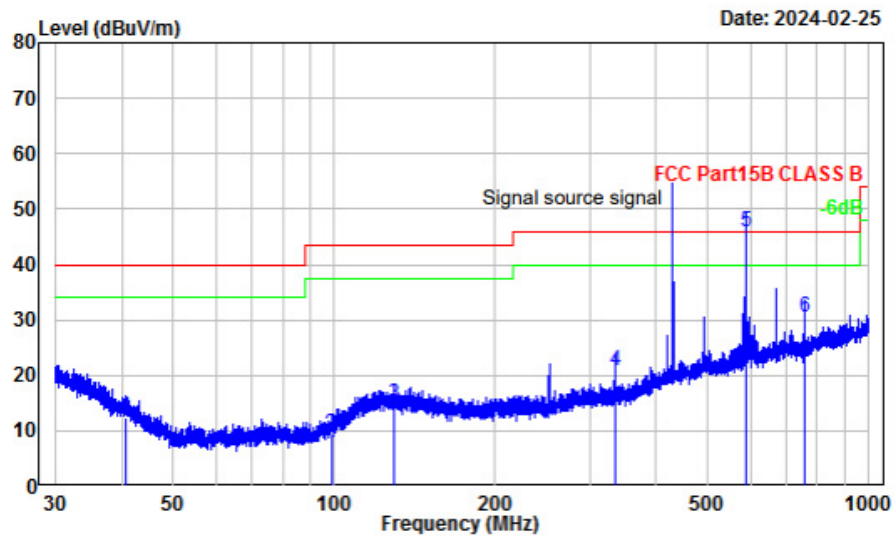
Horizontal



Site : chamber
Condition : 3m Horizontal
Project Number: SZ4240130-07027E-EM
Test Mode : Receiving (UHF)

Freq Factor		Read Level		Limit	Over	Remark
MHz	dB/m	dBuV	dBuV/m	Line	Limit	
1	40.29 -10.57	24.57	14.00	40.00	-26.00	QP
2	99.66 -13.82	25.13	11.31	43.50	-32.19	QP
3	215.27 -11.29	27.52	16.23	43.50	-27.27	QP
4	336.04 -9.89	41.92	32.03	46.00	-13.97	QP
5	587.87 -4.49	46.40	41.91	46.00	-4.09	QP
6	840.29 0.04	33.78	33.82	46.00	-12.18	QP

Vertical

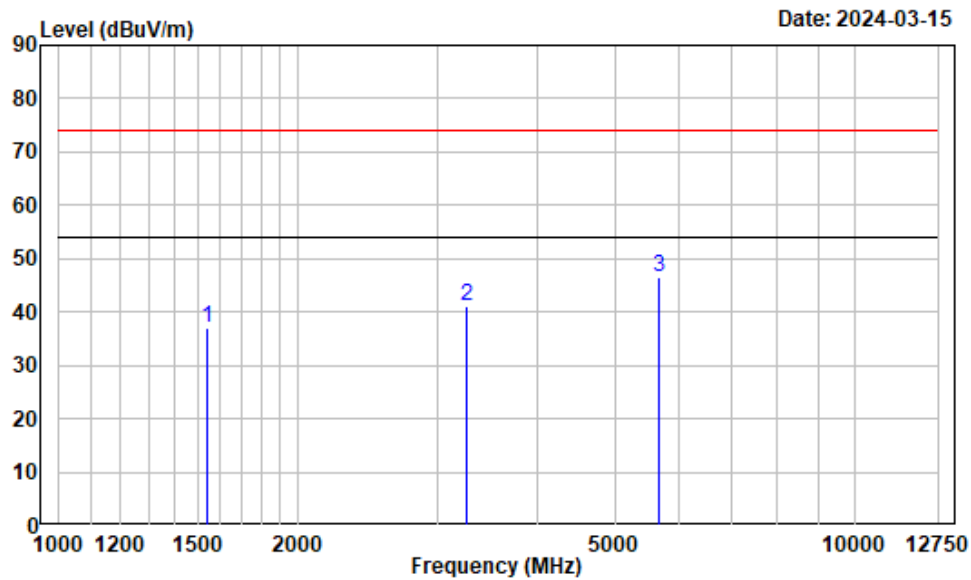


Site : chamber
Condition : 3m Vertical
Project Number: SZ4240130-07027E-EM
Test Mode : Receiving (UHF)

	Freq Factor		Read Level		Limit	Over	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.79	-12.34	24.69	12.35	40.00	-27.65	QP
2	98.62	-15.53	25.00	9.47	43.50	-34.03	QP
3	129.41	-10.78	25.65	14.87	43.50	-28.63	QP
4	336.04	-10.21	31.11	20.90	46.00	-25.10	QP
5	587.87	-4.56	50.50	45.94	46.00	-0.06	QP
6	756.05	-1.99	32.54	30.55	46.00	-15.45	QP

1 ~ 12.75 GHz

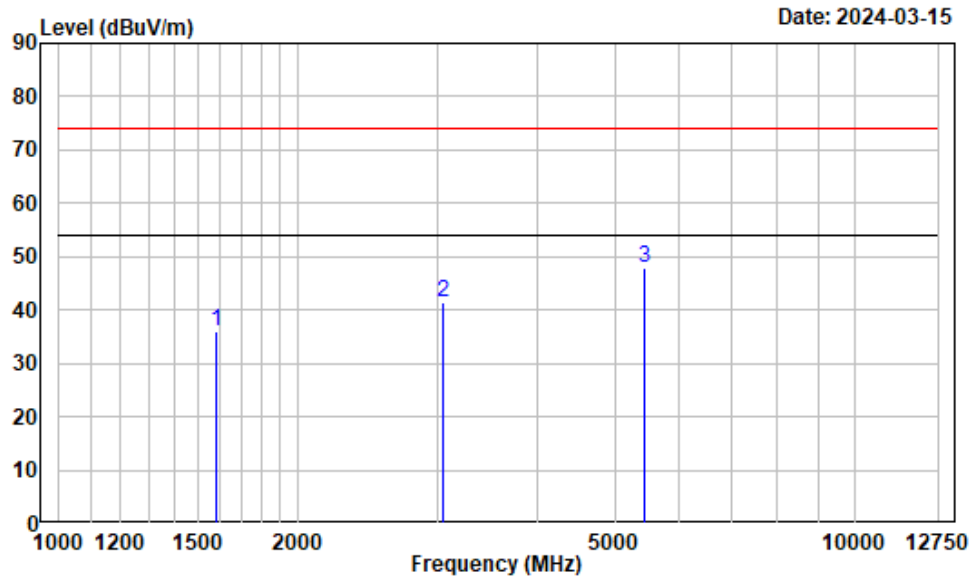
Horizontal



Site : chamber B
Condition : Horizontal
Project Number: SZ4240130-07027E-EM
Test Mode : Receiving (UHF)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1540.500	-7.03	44.18	37.15	74.00	-36.85	Peak
2	3264.813	-2.64	43.90	41.26	74.00	-32.74	Peak
3	5672.094	3.35	43.32	46.67	74.00	-27.33	Peak

Vertical



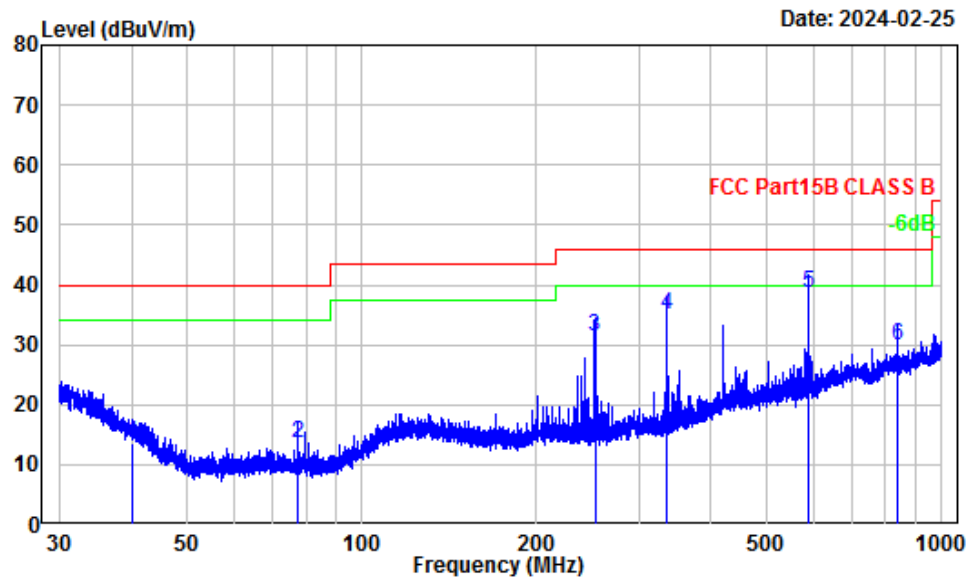
Site : chamber B
Condition : Vertical
Project Number: SZ4240130-07027E-EM
Test Mode : Receiving (UHF)

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1581.625	-7.12	42.98	35.86	74.00	-38.14	Peak
2	3050.375	-2.30	43.78	41.48	74.00	-32.52	Peak
3	5451.781	3.06	44.72	47.78	74.00	-26.22	Peak

Test Mode 7

30 MHz~1 GHz

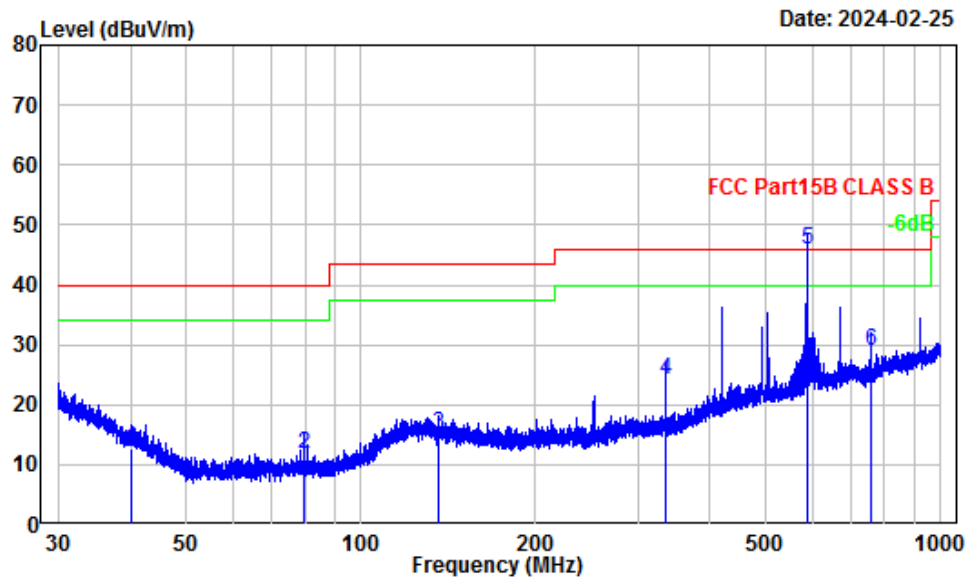
Horizontal



Site : chamber
Condition : 3m Horizontal
Project Number: SZ4240130-07027E-EM
Test Mode : Scanning

	Freq Factor		Read Level	Limit Level	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	40.17	-10.50	24.13	13.63	40.00	-26.37 QP
2	77.52	-16.59	30.13	13.54	40.00	-26.46 QP
3	252.17	-11.77	43.30	31.53	46.00	-14.47 QP
4	336.04	-9.89	44.91	35.02	46.00	-10.98 QP
5	587.87	-4.49	43.23	38.74	46.00	-7.26 QP
6	840.29	0.04	29.98	30.02	46.00	-15.98 QP

Vertical

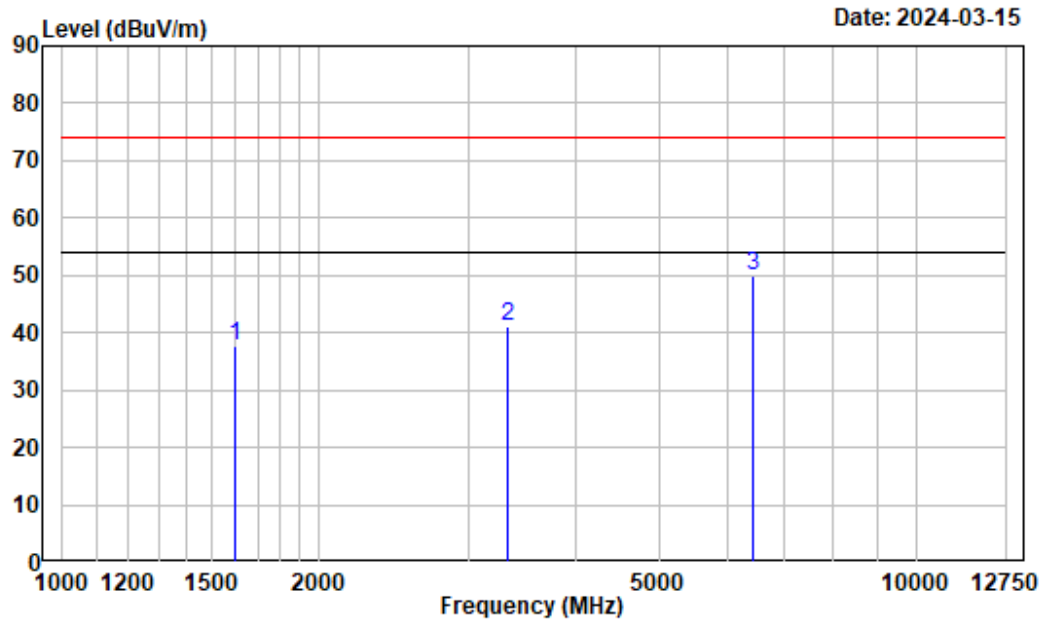


Site : chamber
Condition : 3m Vertical
Project Number: SZ4240130-07027E-EM
Test Mode : Scanning

	Freq Factor		Read	Limit	Over	Remark
	MHz	dB/m	Level	Level	Limit	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	40.10	-11.95	24.49	12.54	40.00	-27.46 QP
2	79.70	-17.23	29.15	11.92	40.00	-28.08 QP
3	136.40	-11.13	26.15	15.02	43.50	-28.48 QP
4	336.04	-10.21	34.42	24.21	46.00	-21.79 QP
5	588.13	-4.56	50.44	45.88	46.00	-0.12 QP
6	756.38	-1.98	31.06	29.08	46.00	-16.92 QP

1 ~ 12.75 GHz

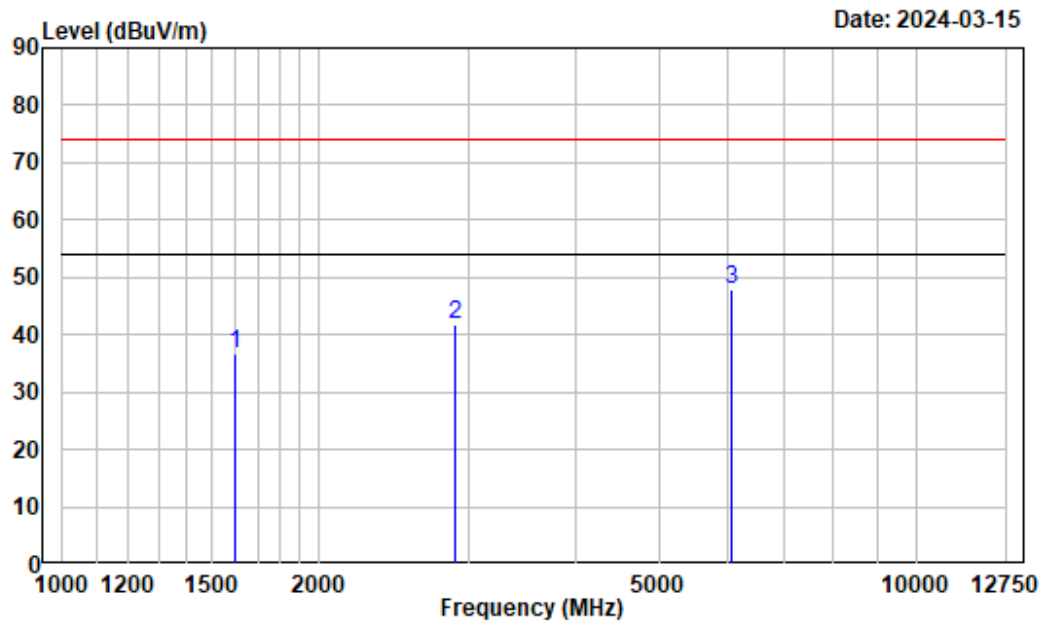
Horizontal



Site : chamber B
Condition : Horizontal
Project Number: SZ4240130-07027E-EM
Test Mode : Scanning

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1596.313	-7.18	44.85	37.67	74.00	-36.33	Peak
2	3320.625	-2.60	43.57	40.97	74.00	-33.03	Peak
3	6441.719	6.27	43.81	50.08	74.00	-23.92	Peak

Vertical



Site : chamber B
Condition : Vertical
Project Number: SZ4240130-07027E-EM
Test Mode : Scanning

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1594.844	-7.17	43.74	36.57	74.00	-37.43	Peak
2	2882.938	-2.78	44.63	41.85	74.00	-32.15	Peak
3	6089.219	4.15	43.90	48.05	74.00	-25.95	Peak

FCC §15.111 ANTENNA POWER CONDUCTION LIMITS FOR RECEIVERS

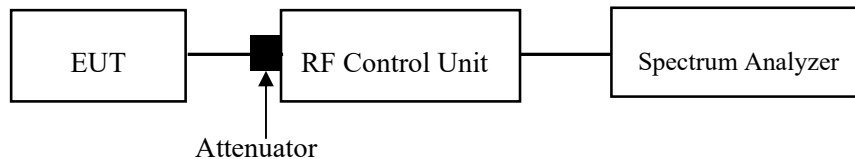
Applicable Standard

FCC§15.111.

(a) In addition to the radiated emission limits, receivers that operate (tune) in the frequency range 30 to 960 MHz and CB receivers that provide terminals for the connection of an external receiving antenna may be tested to demonstrate compliance with the provisions of § 15.109 with the antenna terminals shielded and terminated with a resistive termination equal to the impedance specified for the antenna, provided these receivers also comply with the following: With the receiver antenna terminal connected to a resistive termination equal to the impedance specified or employed for the antenna, the power at the antenna terminal at any frequency within the range of measurements specified in § 15.33 shall not exceed 2.0 nanowatts.

Test Procedure

EUT antenna port connected to a spectrum analyzer, the traces were recorded as shown on the data pages.



Test Data

Environmental Conditions

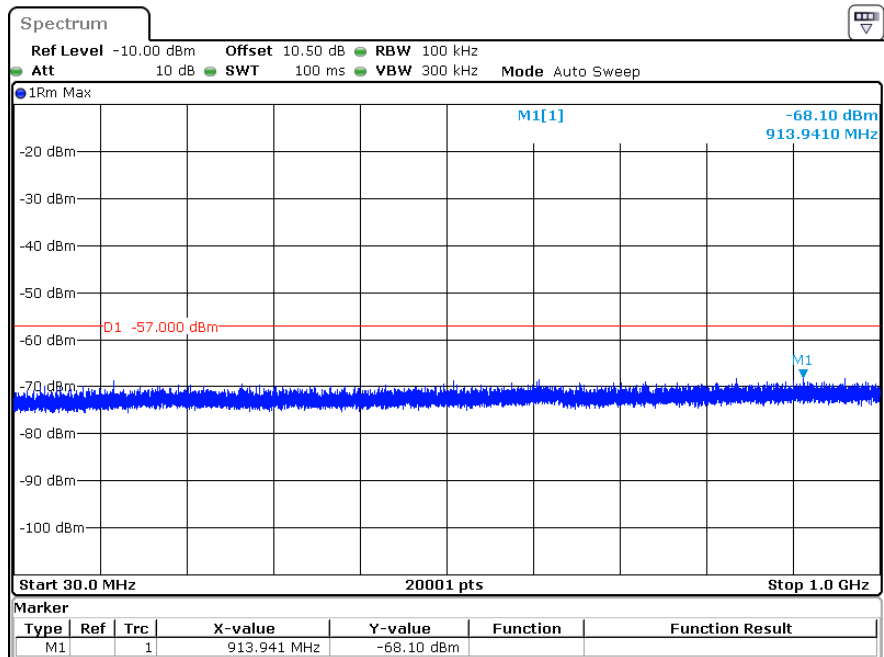
Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	101 kPa

The testing was performed by Jim Cheng from 2024-05-11 to 2024-05-14.

Test Mode 7

136 MHz:

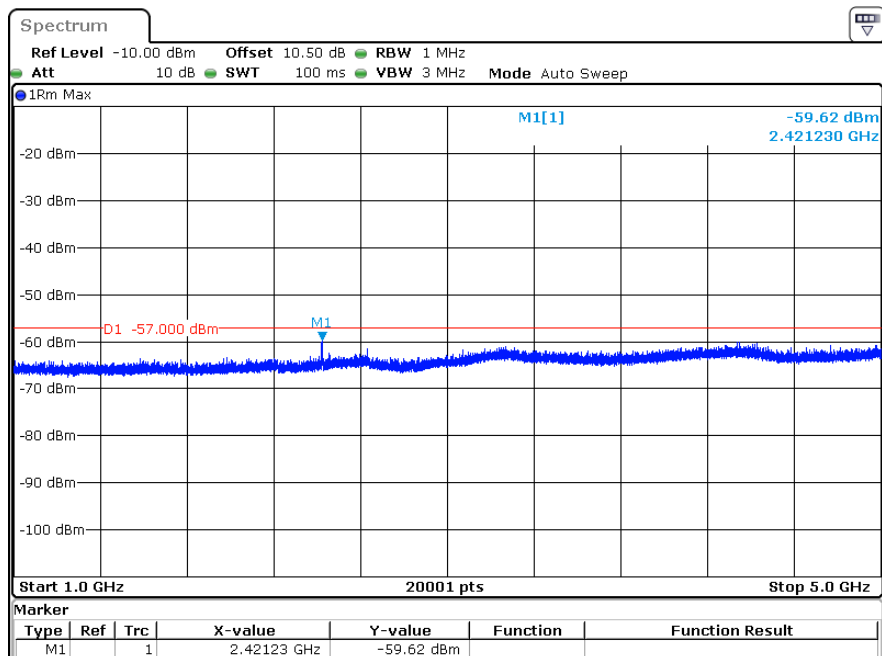
30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 11.MAY.2024 20:29:08

1~5 GHz

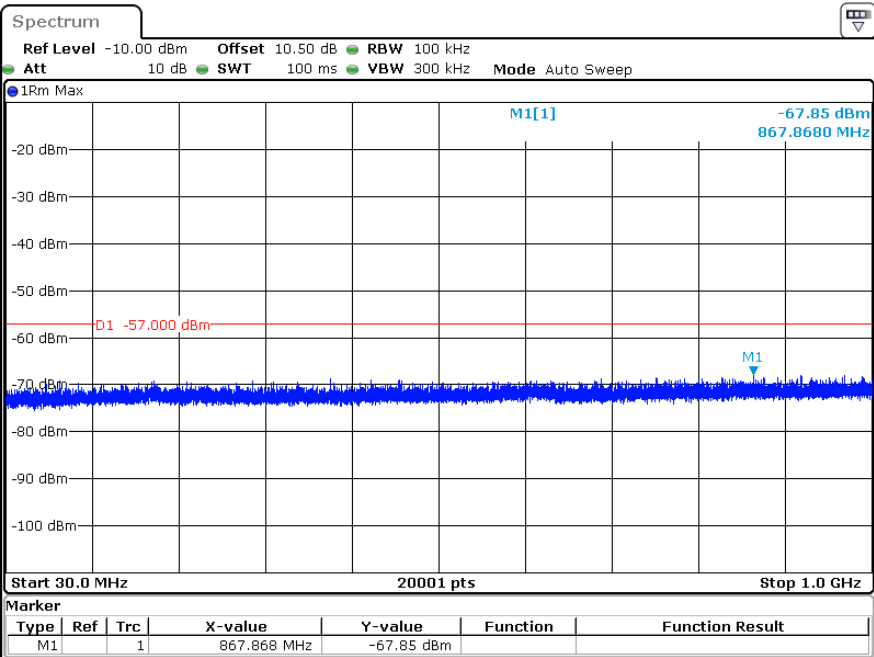


ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 11.MAY.2024 20:22:45

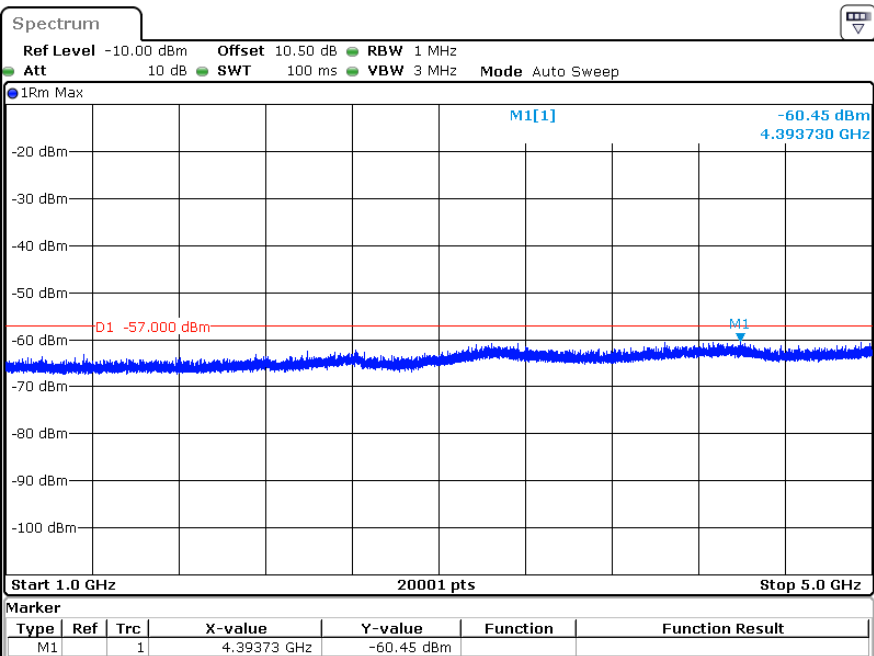
155 MHz:

30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:30:06

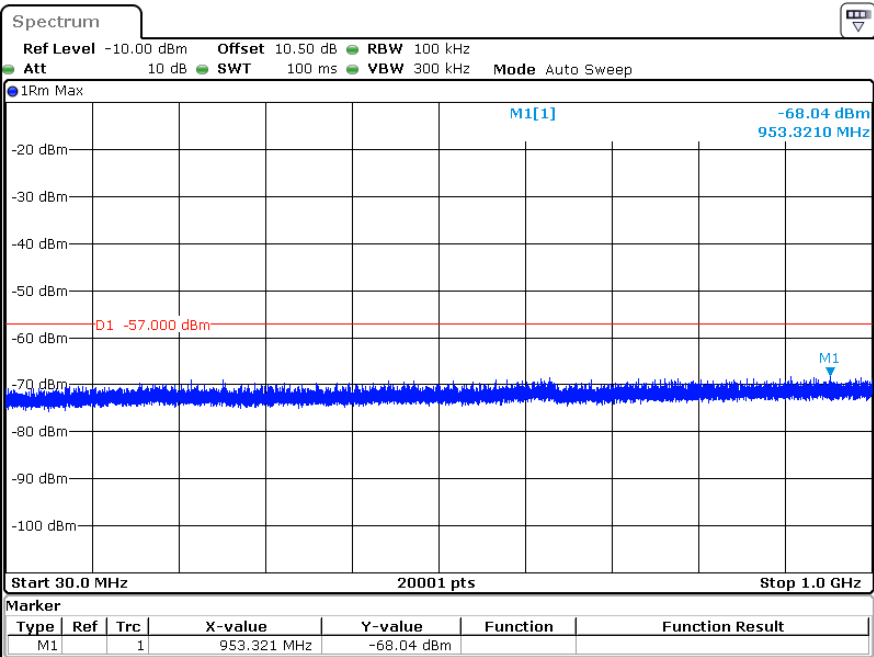
1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:26:32

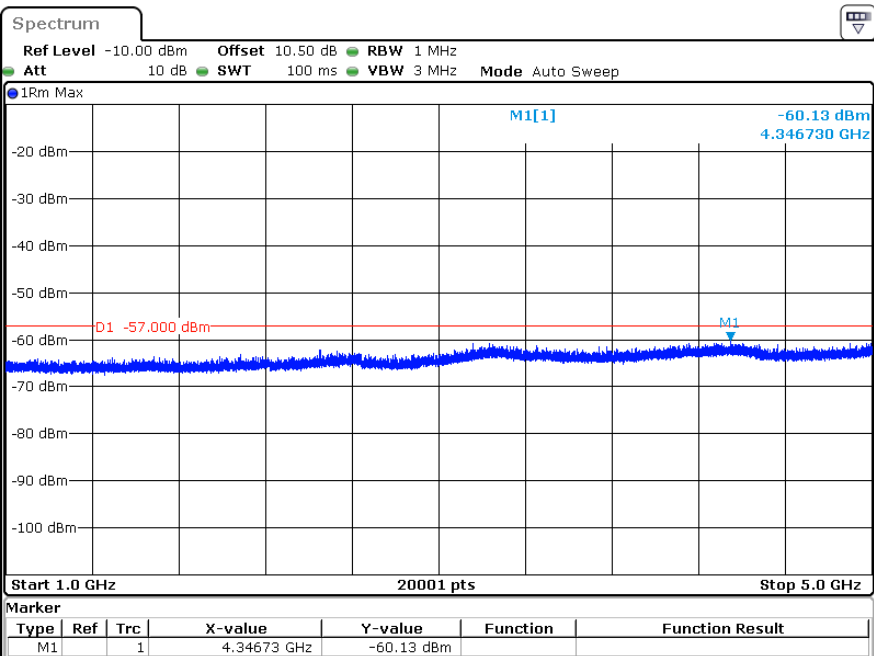
174 MHz:

30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:30:54

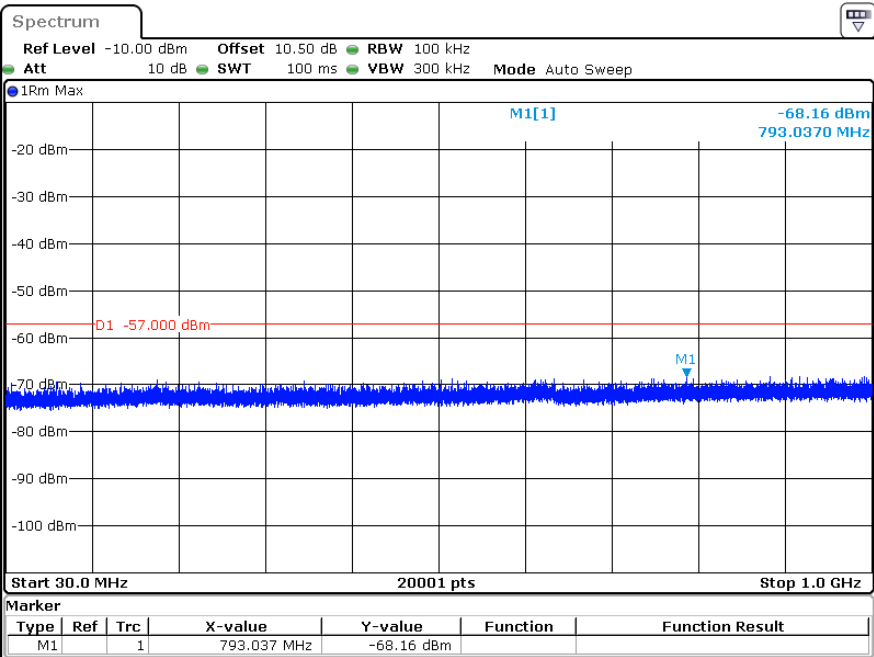
1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:23:50

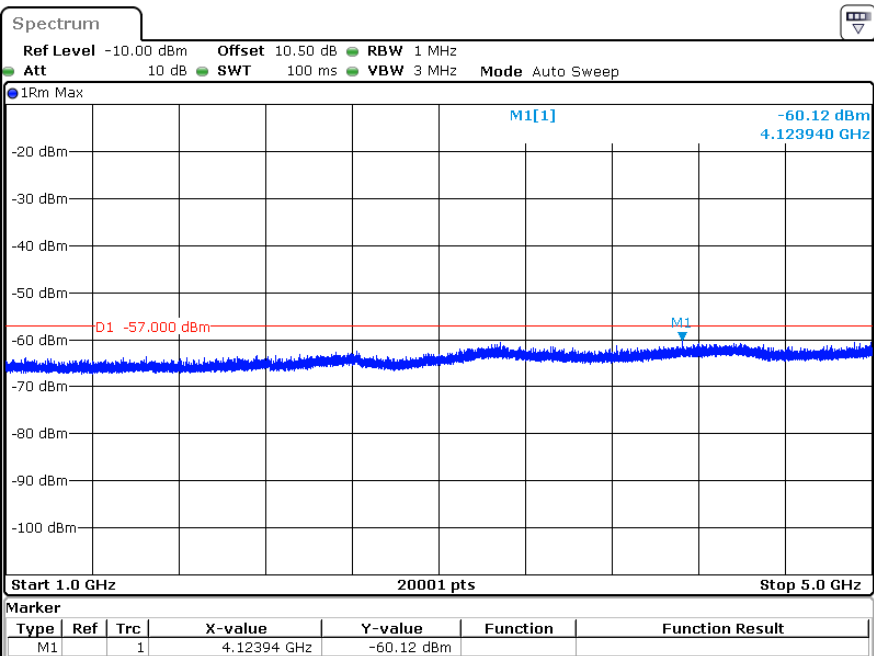
400 MHz:

30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:31:36

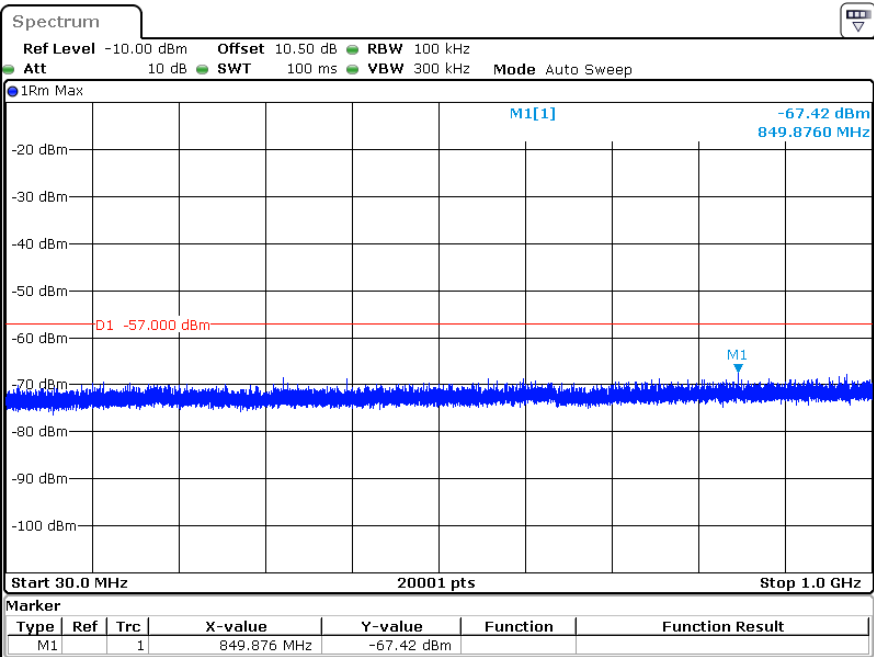
1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:24:17

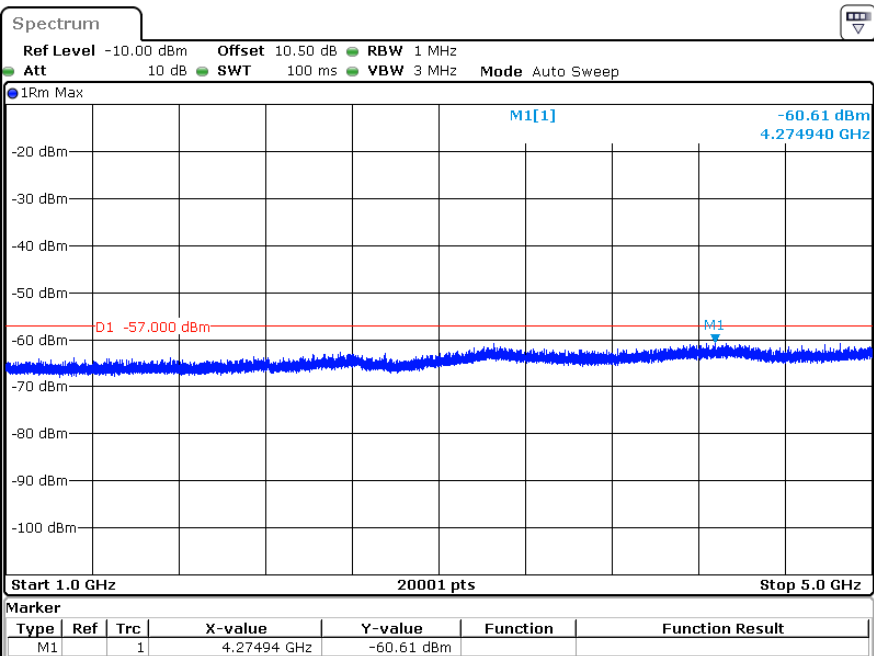
460 MHz:

30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:32:10

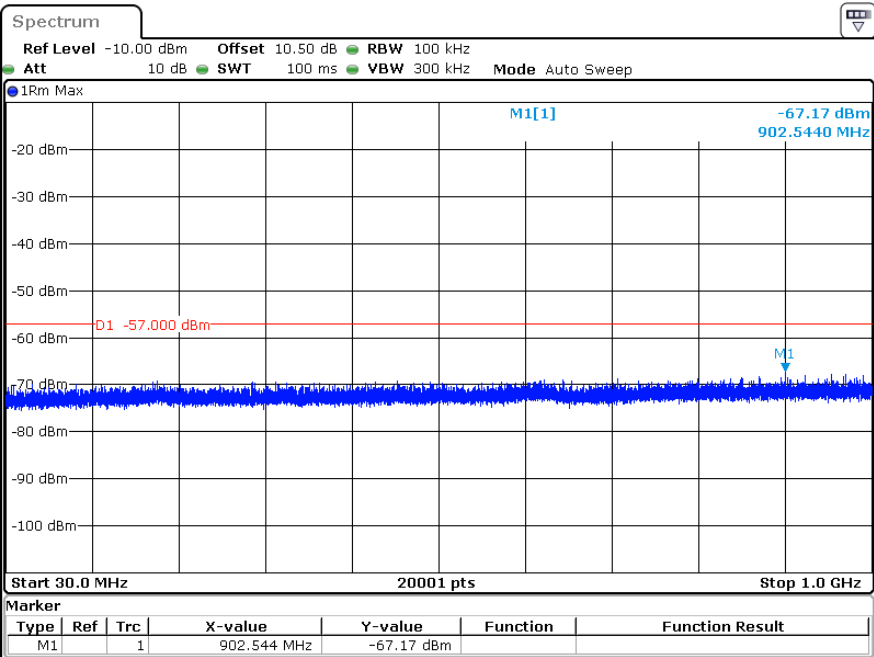
1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:24:53

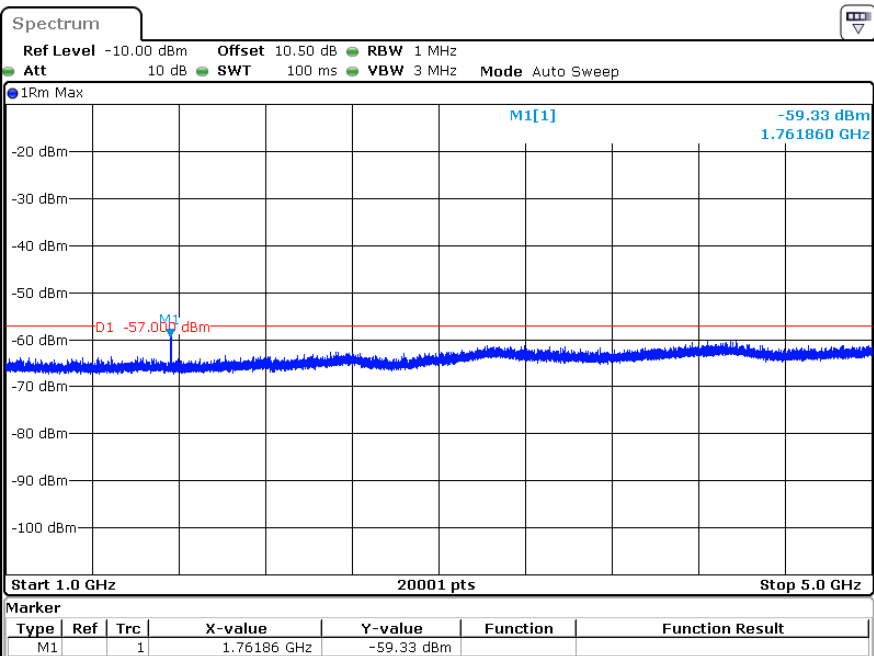
520 MHz:

30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:32:56

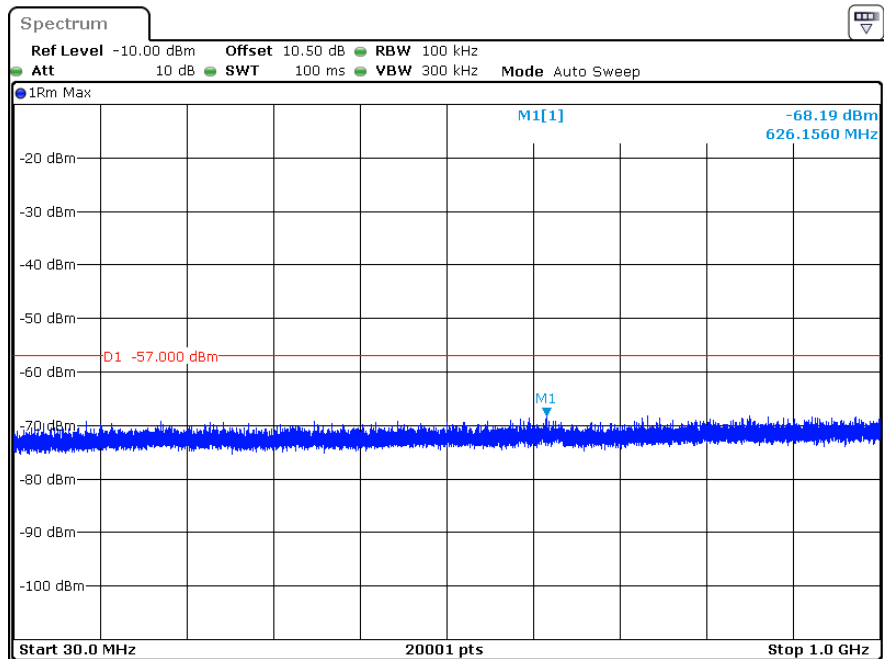
1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng
Date: 11.MAY.2024 20:25:20

136-174 MHz:

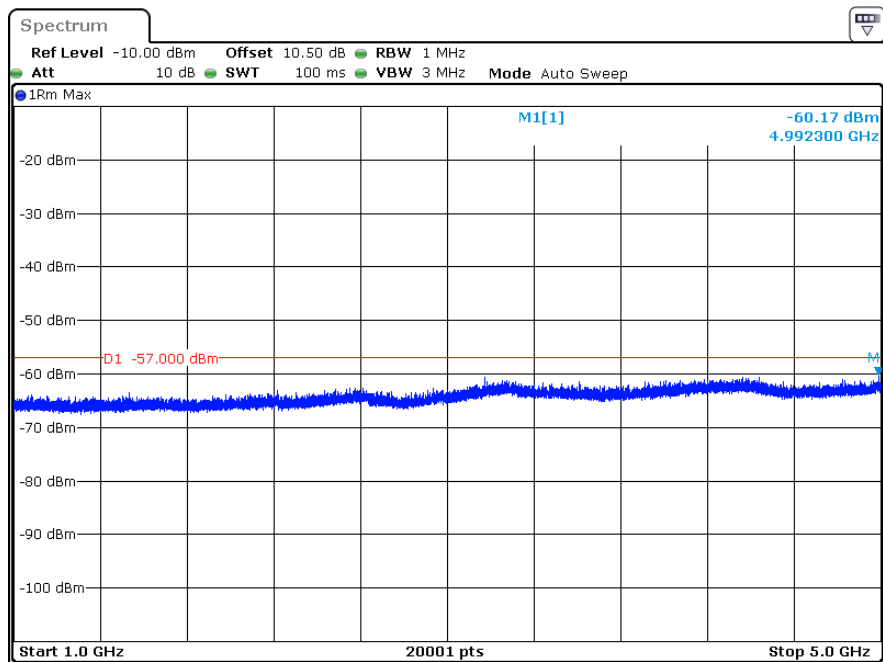
30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 14.MAY.2024 18:37:40

1~5 GHz

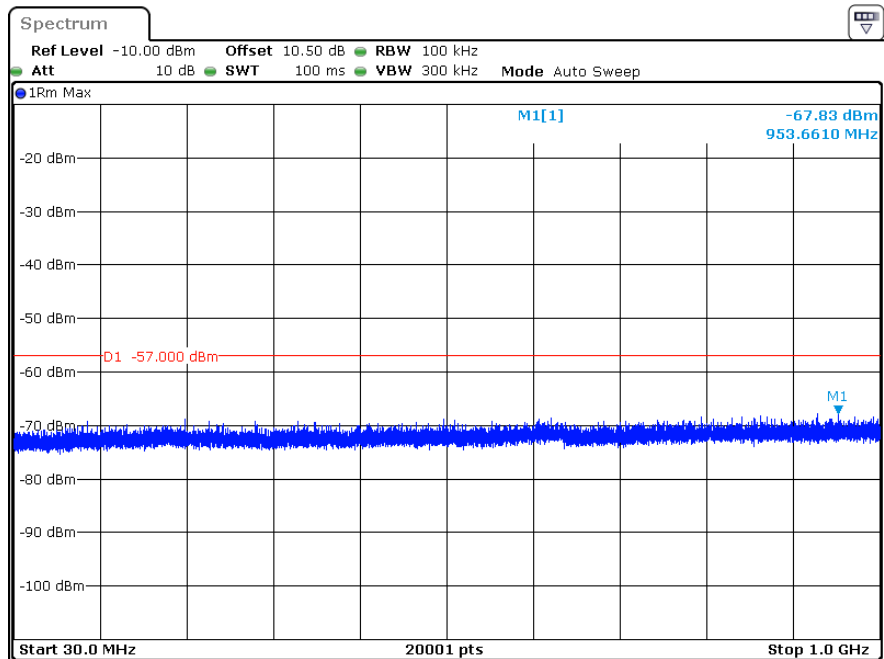


ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 14.MAY.2024 18:41:26

400-520 MHz:

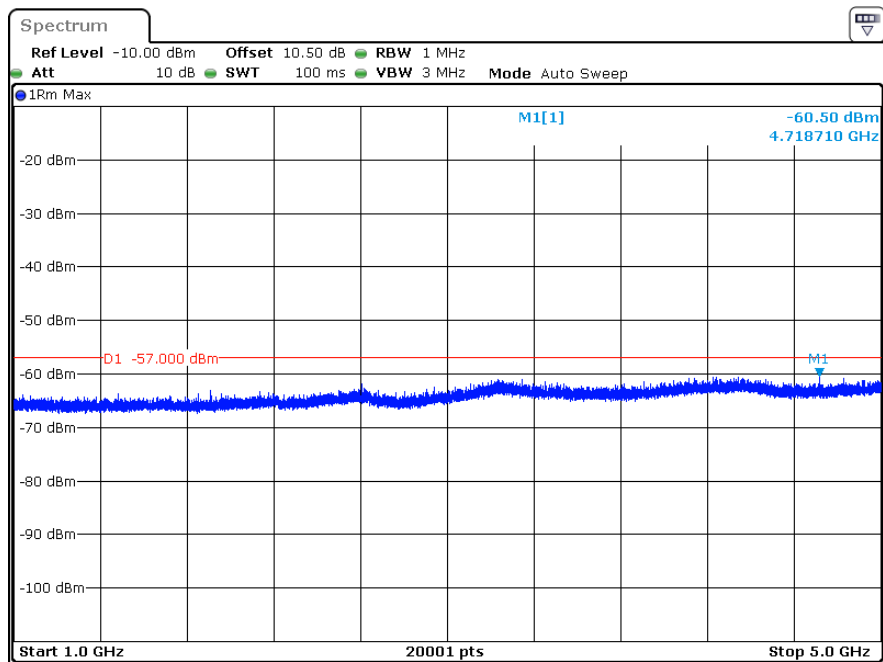
30 MHz~1 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 14.MAY.2024 18:38:38

1~5 GHz



ProjectNo.:SZ4240130-07027E Tester:Jim Cheng

Date: 14.MAY.2024 18:41:53

FCC §15.121(b) - SCANNING RECEIVERS AND FREQUENCY CONVERTERS USED WITH SCANNING RECEIVERS

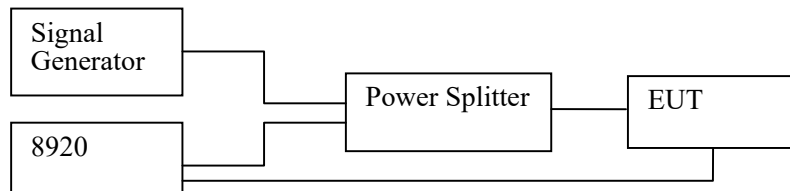
Applicable Standard

FCC §15.121(b).

(b) Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

Test Procedure

1. Connected the EUT as the below block diagram;



2. Apply a signal to the EUT antenna port at lowest, middle, highest channel frequencies of the operating band;
3. Adjust the audio output level of the EUT to it's rated value with the distortion less than 10%;
4. Adjust the 8920 output power to produce 12 dB SINAD without the audio output power dropping by more than 3 dB; These output level of the 8920 at each channel frequency is the sensitivity of the EUT;
5. Select the lowest or worst case sensitivity level for all of the bands as the reference sensitivity;
6. Adjust the Signal Generator output to a level of +60 dB above the reference sensitivity obtained in step 5 and its frequency to the frequency point in the Cellular Band;
7. Set the EUT squelch to threshold, the signal required to open the squelch must be lower than the reference sensitivity level;
8. Set the EUT in a scanning mode and allow it to scan through it's complete receiving range;
9. If the EUT un-squelched or stopped on any frequency, receiving at this frequency, then adjust the signal generator output level until 12 dB SINAD is produced, this level is the spurious value and the difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38 dB;
10. Repeat above procedure at the frequencies 824, 836, 849 MHz for the mobile band, and 869, 881.5 and 894 MHz for the Cellular Base Band.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	101 kPa

The testing was performed by Cheeb.huang on 2024-03-15.

Test Mode 7

Scanning Frequency Range (MHz)	Test Frequency (MHz)	Measurement Result (Worst Case) (dB)	Limit (dB)
136-174 400-520	824, 836, 849; 869,881.5, 894	40	>38

EUT PHOTOGRAPHS

Please refer to the attachment SZ4240130-07027E-RF External photo and SZ4240130-07027E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment SZ4240130-07027E-EM Test Setup photo.

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