


RF MEASUREMENT REPORT

FCC ID: DD4ULXD6X52
Applicant: Shure Incorporated
Product: Wireless Boundary Transmitter
Model No.: ULXD6/C X52, ULXD6/O X52
ULXD6W/C X52, ULXD6W/O X52
Trademark: 
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2024-07-05
Test Date: 2024-07-25 ~ 2024-07-28

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2407RSU017-U7	V01	Initial Report	2024-08-17	Valid

CONTENTS

Description	Page
1. General Information	5
1.1. Applicant	5
1.2. Manufacturer	5
1.3. Testing Facility	5
1.4. Product Information.....	6
1.5. Radio Specification under Test	6
1.6. Working Frequencies	6
2. Test Configuration	7
2.1. Test Mode.....	7
2.2. Test Software	7
2.3. Applied Standards.....	7
2.4. Test Environment Condition	7
3. Antenna Requirements	8
4. Measuring Instrument	9
5. Decision Rules and Measurement Uncertainty	10
5.1. Decision Rules	10
5.2. Measurement Uncertainty	10
6. Test Result.....	11
6.1. Summary.....	11
6.2. 6dB Bandwidth Measurement.....	12
6.2.1. Test Limit	12
6.2.2. Test Procedure	12
6.2.3. Test Setting	12
6.2.4. Test Setup	12
6.2.5. Test Result	12
6.3. Output Power Measurement	13
6.3.1. Test Limit	13
6.3.2. Test Procedure	13
6.3.3. Test Setting	13
6.3.4. Test Setup	13
6.3.5. Test Result	13
6.4. Power Spectral Density Measurement	14
6.4.1. Test Limit	14
6.4.2. Test Procedure	14
6.4.3. Test Setting	14

6.4.4.	Test Setup	14
6.4.5.	Test Result	14
6.5.	Conducted Band Edge and Out-of-Band Emissions Measurement	15
6.5.1.	Test Limit	15
6.5.2.	Test Procedure	15
6.5.3.	Test Settintg	15
6.5.4.	Test Setup	15
6.5.5.	Test Result	16
6.6.	Radiated Spurious Emission Measurement.....	17
6.6.1.	Test Limit	17
6.6.2.	Test Procedure	17
6.6.3.	Test Setting	17
6.6.4.	Test Setup	19
6.6.5.	Test Result	20
6.7.	Radiated Restricted Band Edge Measurement	21
6.7.1.	Test Limit	21
6.7.2.	Test Procedure	22
6.7.3.	Test Setting	22
6.7.4.	Test Setup	23
6.7.5.	Test Result	24
6.8.	AC Conducted Emissions Measurement	25
6.8.1.	Test Limit	25
6.8.2.	Test Setup	25
6.8.3.	Test Result	25
Appendix A	- Test Result.....	26
A.1	Duty Cycle Test Result	26
A.2	6dB Bandwidth Test Result	27
A.3	Output Power Test Result	28
A.4	Power Spectral Density Test Result.....	29
A.5	Conducted Band Edge and Out-of-Band Emissions Test Result.....	30
A.6	Radiated Spurious Emission Test Result.....	32
A.7	Radiated Restricted Band Edge Test Result.....	33
A.8	AC Conducted Emissions Test Result	37
Appendix B	- Test Setup Photograph	38
Appendix C	- EUT Photograph	39

1. General Information

1.1. Applicant

Shure Incorporated
5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.2. Manufacturer

Shure Incorporated
5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.3. Testing Facility

<input checked="" type="checkbox"/>	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Location (Suzhou - Wujiang) Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: <input type="checkbox"/> R-20025 <input type="checkbox"/> G-20034 <input type="checkbox"/> C-20020 <input type="checkbox"/> T-20020 <input type="checkbox"/> R-20141 <input type="checkbox"/> G-20134 <input type="checkbox"/> C-20103 <input type="checkbox"/> T-20104
<input type="checkbox"/>	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
<input type="checkbox"/>	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Wireless Boundary Transmitter
Model No.	ULXD6/C X52, ULXD6/O X52, ULXD6W/C X52, ULXD6W/O X52
Serial No.	328Y33527
Frequency Range	902 ~ 928 MHz
Power Type	2 * AA alkaline batteries or Rechargeable Li-battery
Operating Temperature	-10 ~ 45°C
<p>Note 1: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.</p> <p>Note 2: The difference between ULXD6/C and ULXD6/O is that the EUT has different built-in MIC. And ULXD6 enclose color is black and ULXD6W enclose color is white.</p> <p>Note 3: The EUT has two working modes (STD Mode & HD Mode) and two modes can be switched from the digital wireless receiver.</p>	

1.5. Radio Specification under Test

STD Mode	
Frequency Range	902 ~ 928 MHz
Declared Power Level	0.25mW & 10mW & 20mW
Type of Modulation	8PSK
Channel Spacing	25kHz
Antenna Type	PIFA
Antenna Gain	0.97 dBi

1.6. Working Frequencies

Bottom Channel (MHz)	Middle Channel (MHz)	Top Channel (MHz)
902.400	915.000	927.600

2. Test Configuration

2.1. Test Mode

Mode 1: Transmit at X52 Band by STD Mode (20mW)

2.2. Test Software

The test utility software used during testing was “teraterm”, and the version was V4.103, all test commands were provided by the manufacturer.

2.3. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.247
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.4. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
USB Power Sensor	Keysight	U2021XA	MRTSUE06447	1 year	2025-05-08	WZ-SR5
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2025-05-12	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
dSignal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2025-05-08	WZ-SR5
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2024-08-09	WZ-AC1
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2024-11-09	WZ-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2025-05-15	WZ-AC1
Anechoic Chamber	TDK	WZ-AC1	MRTSUE06212	1 year	2025-04-19	WZ-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2024-10-23	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2024-10-25	WZ-AC1

Software	Version	Function
e3	19910a	RE & CE
Controller_MF 7802	2.03C	RE Antenna & Turntable
BenchVue Power Meter	2018.1	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.4dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.7%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	N/A

Notes:

- The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- For radiated emission tests, every axis (X, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
- “N/A” means that this item is not applicable, and the detail information refer to relevant section.

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

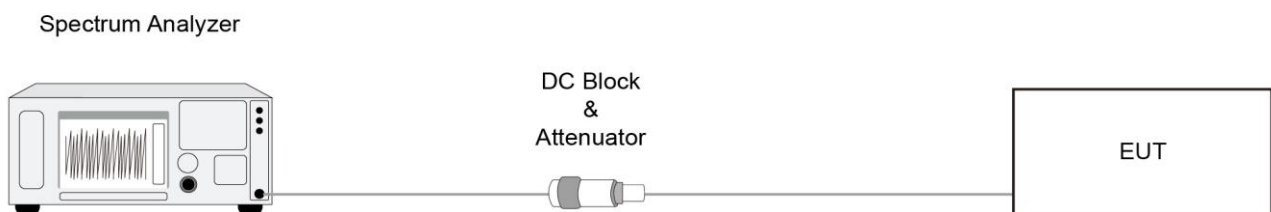
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

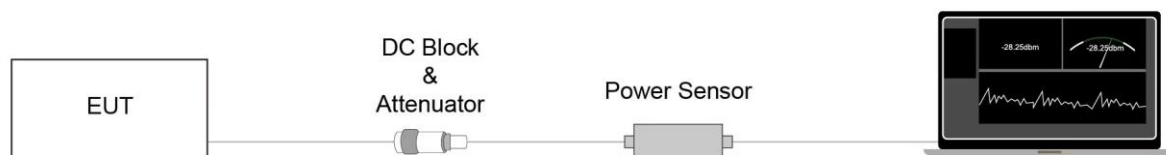
Method PKPM1 (Peak Power Measurement of Signals with DTS BW \leq 50MHz)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

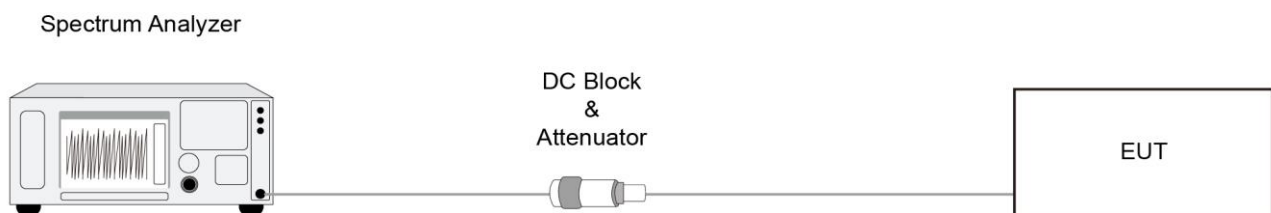
6.4.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.10.2

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Setting

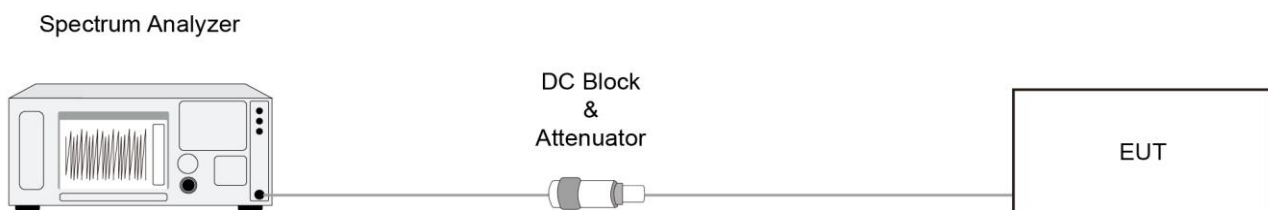
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

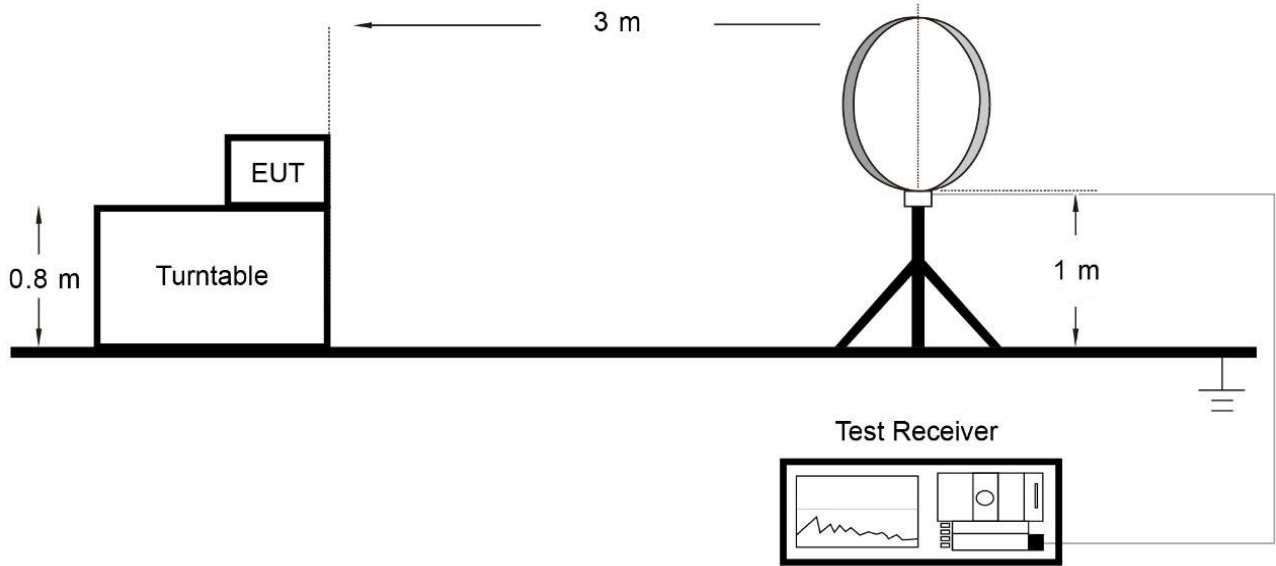
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

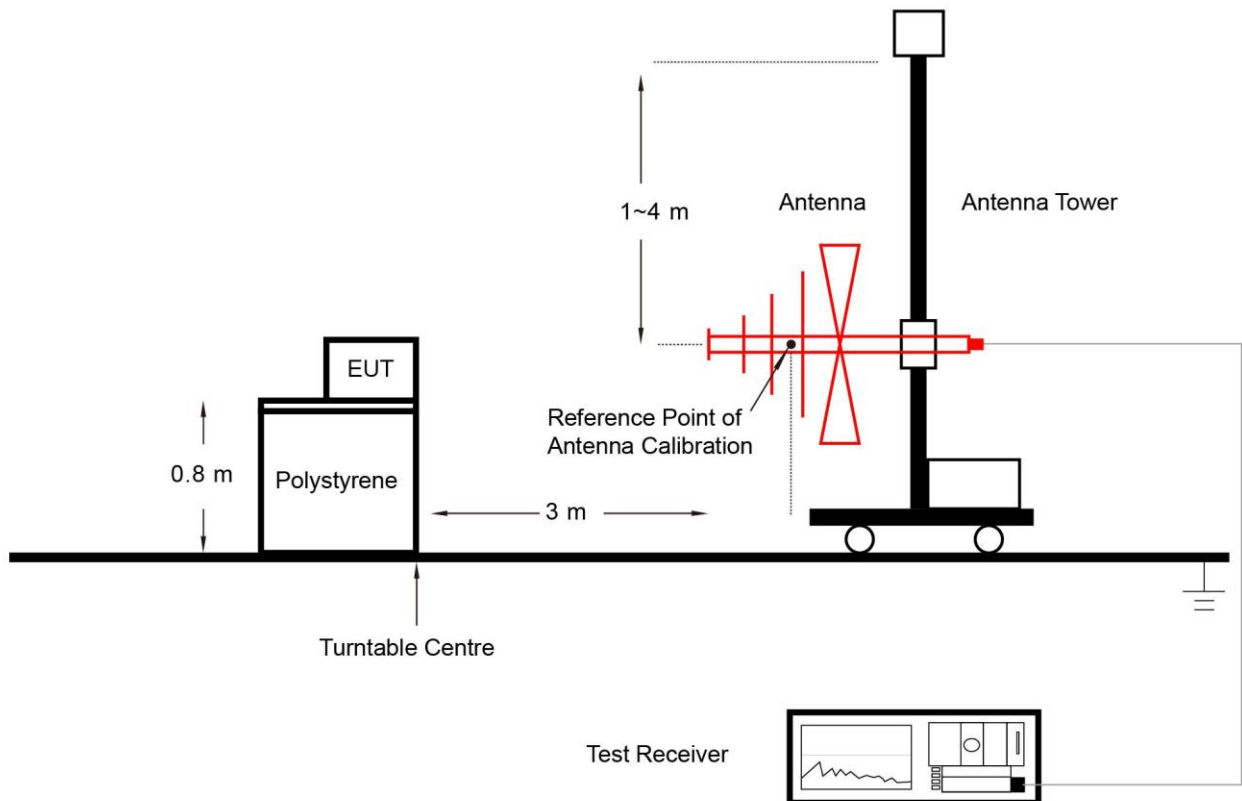
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; if the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10Hz
If the EUT duty cycle is $< 98\%$, set $VBW \geq 1/T$. T is the minimum transmission duration.
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = Auto
7. Trace mode = Max hold
8. Trace was allowed to stabilize

6.6.4. Test Setup

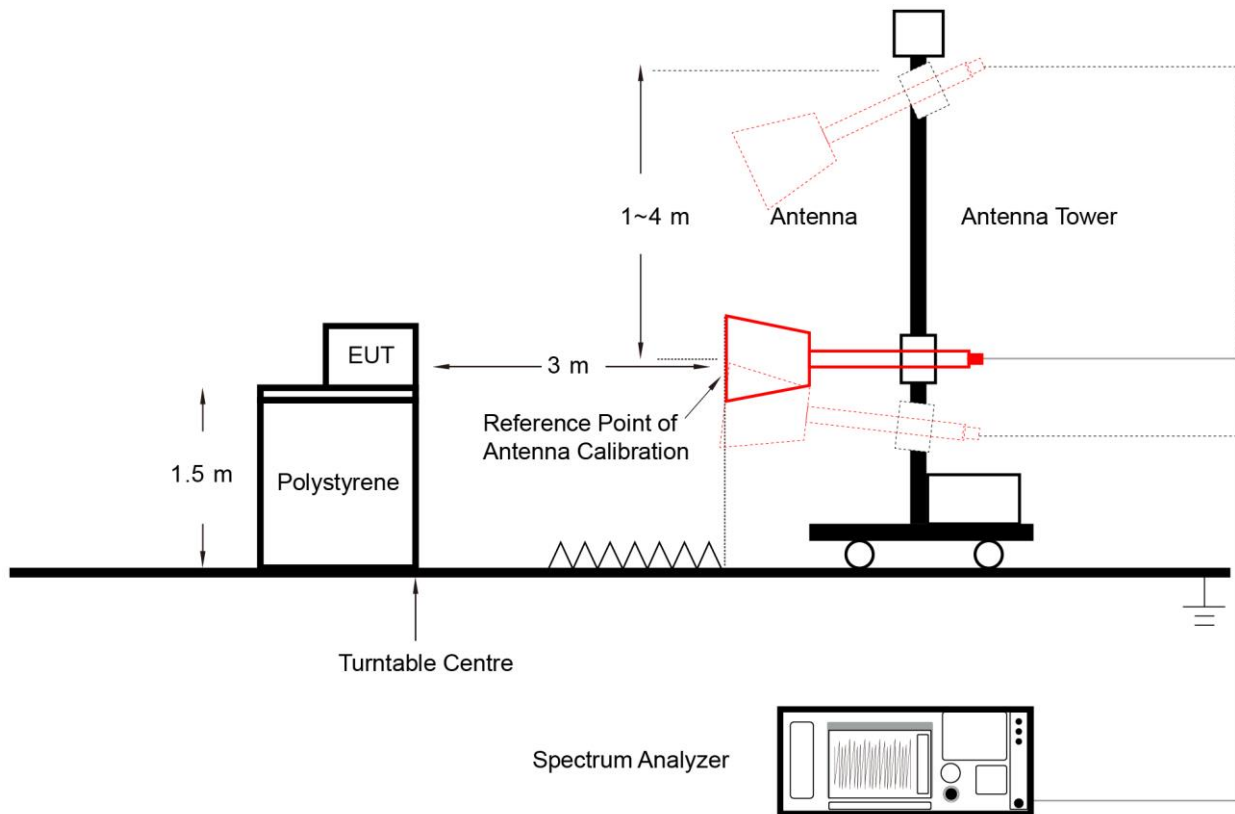
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2. Test Procedure

ANSI C63.10-2013 Section 6.3 & 6.6 & 11.13

6.7.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

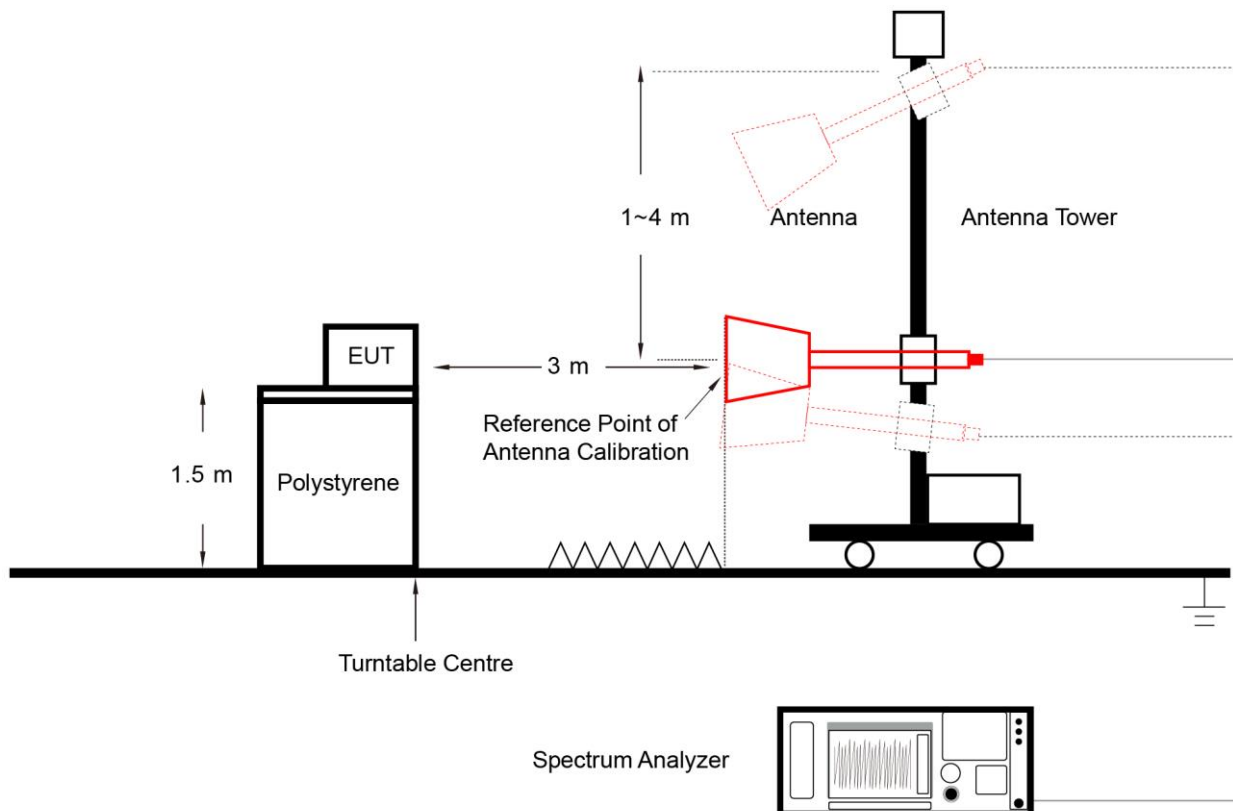
Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.

If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.

4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

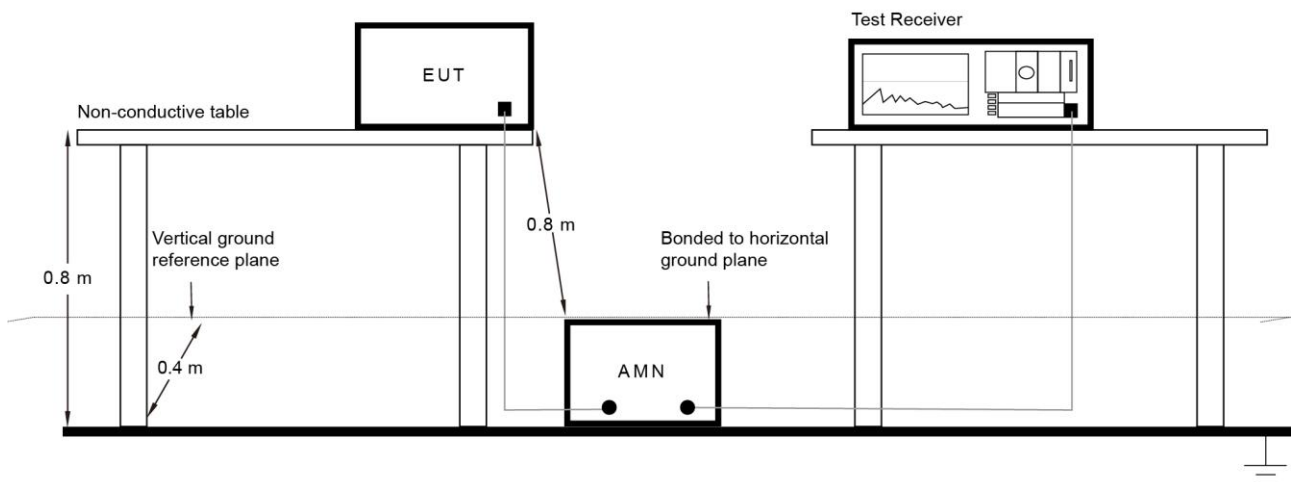
6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.8.2. Test Setup



6.8.3. Test Result

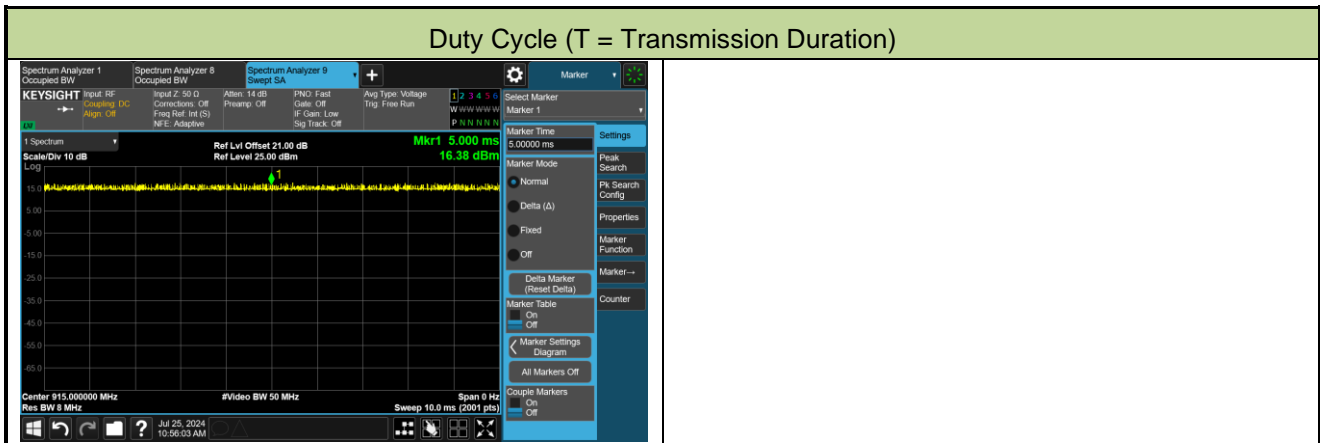
Refer to Appendix A.8.

Appendix A – Test Result

A.1 Duty Cycle Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2024-07-25		

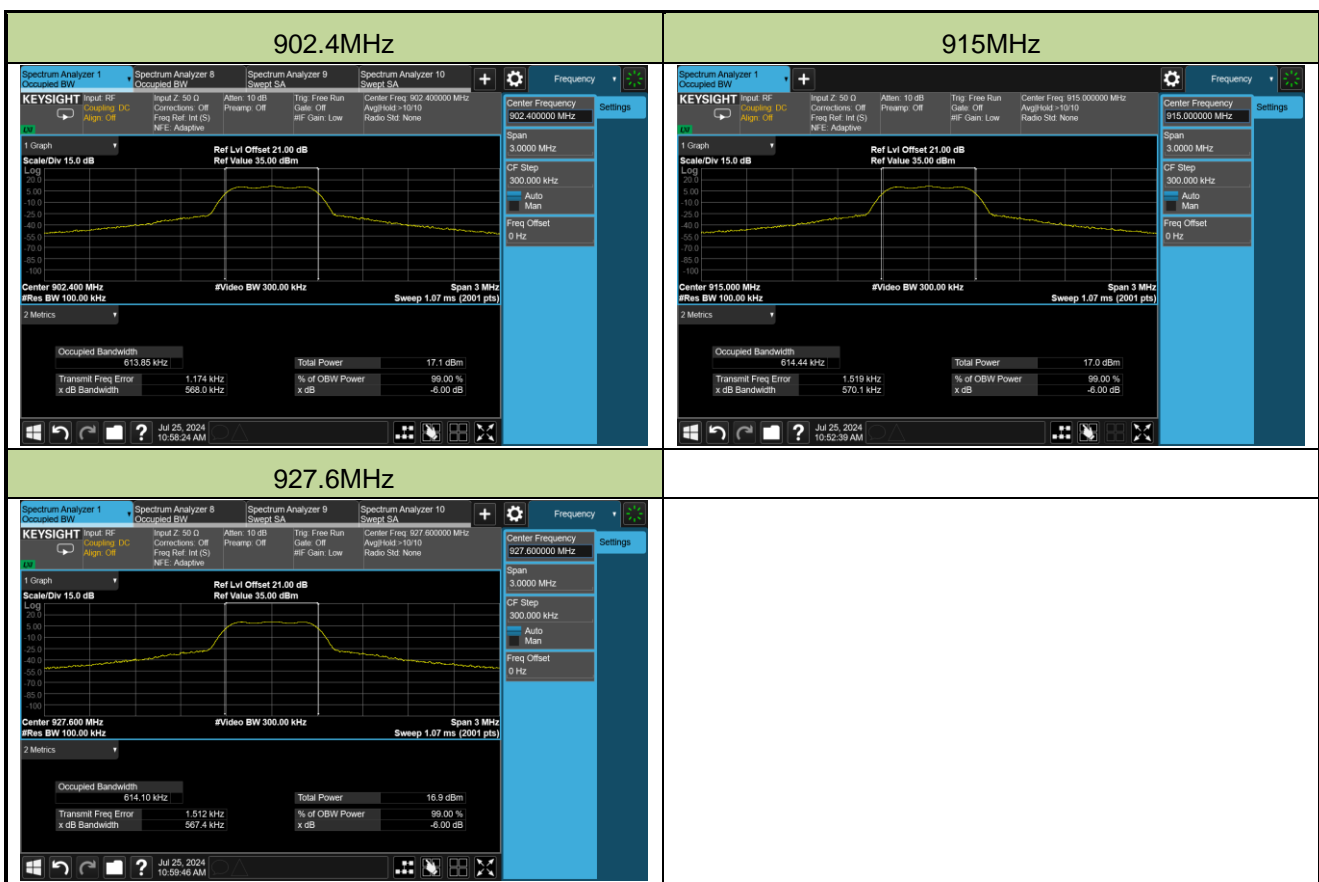
Test Mode	Duty Cycle
X52	100%



A.2 6dB Bandwidth Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2024-07-25		

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
STD (20mW)	902.4	0.5680	≥ 0.5	Pass
	915	0.5701	≥ 0.5	Pass
	927.6	0.5674	≥ 0.5	Pass



A.3 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2024-07-25		

Test Result of Peak Output Power

Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Test Result
20mW Power Level			
902.4	12.87	≤ 30.00	Pass
915	12.74	≤ 30.00	Pass
927.6	12.60	≤ 30.00	Pass

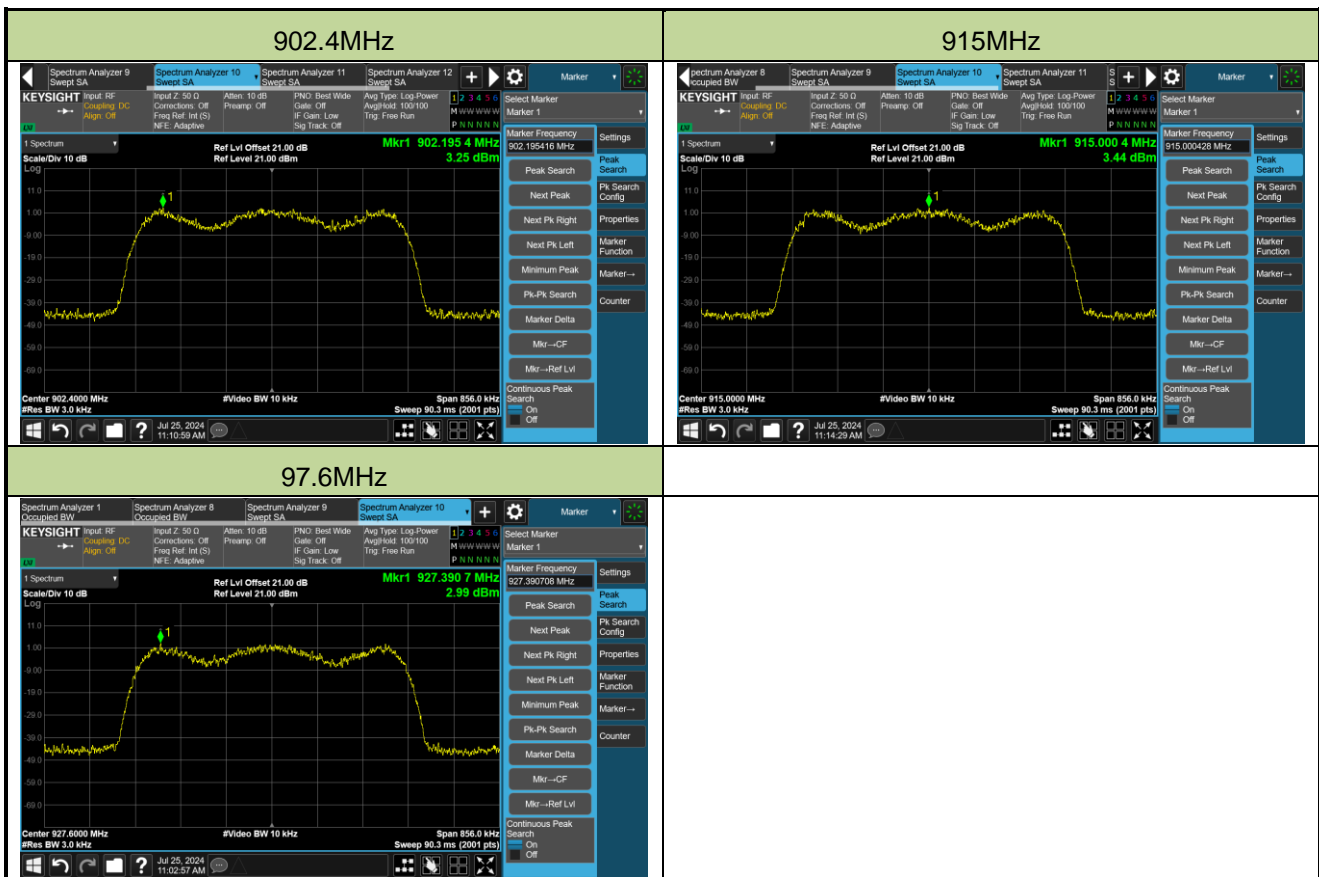
Test Result of Average Output Power (Reporting Only)

Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Test Result
20mW Power Level			
902.4	12.84	≤ 30.00	Pass
915	12.69	≤ 30.00	Pass
927.6	12.54	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2024-07-25		

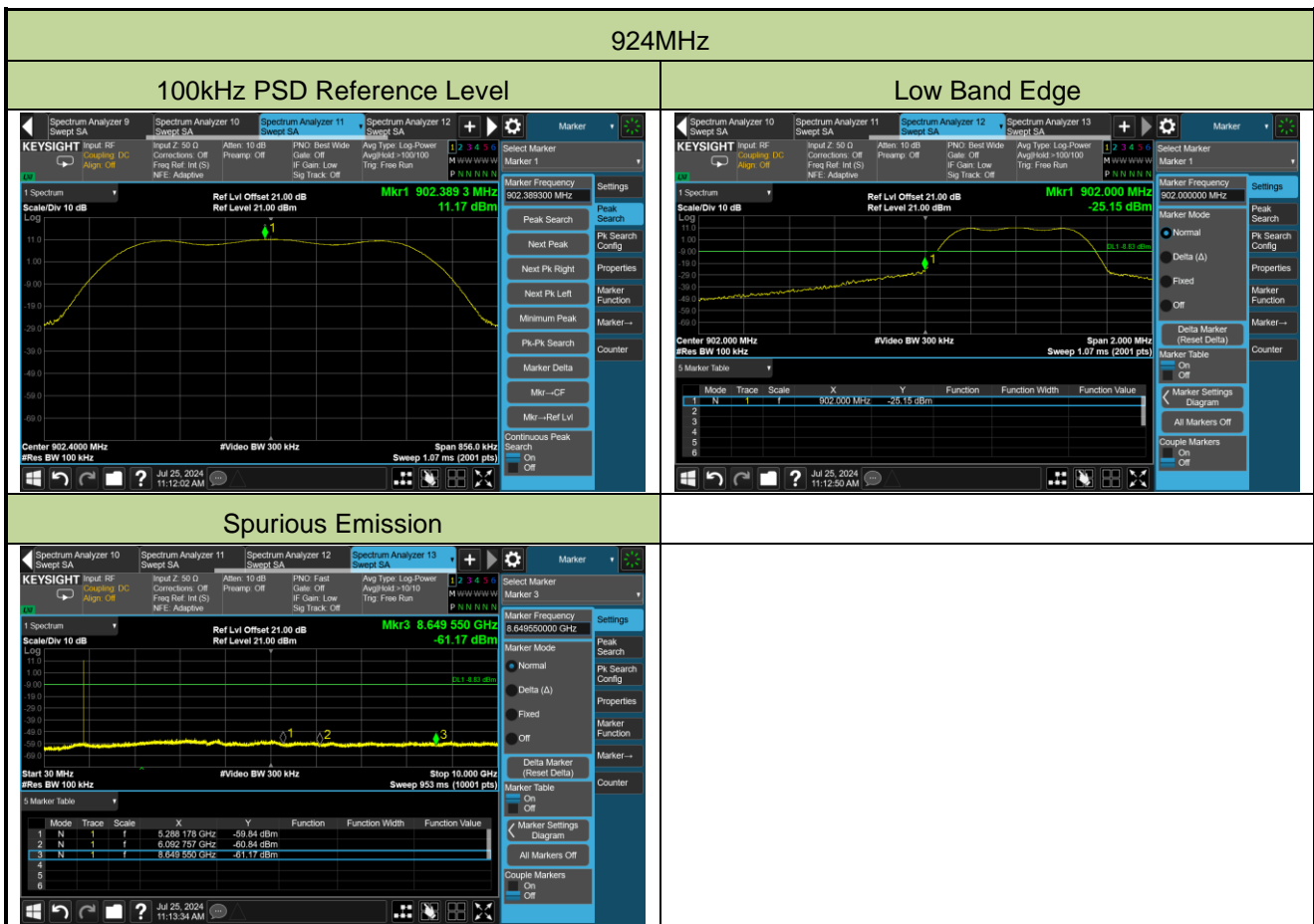
Frequency (MHz)	PK PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Test Result
20mW Power Level			
902.4	3.25	≤ 8.00	Pass
915	3.44	≤ 8.00	Pass
927.6	2.99	≤ 8.00	Pass



A.5 Conducted Band Edge and Out-of-Band Emissions Test Result

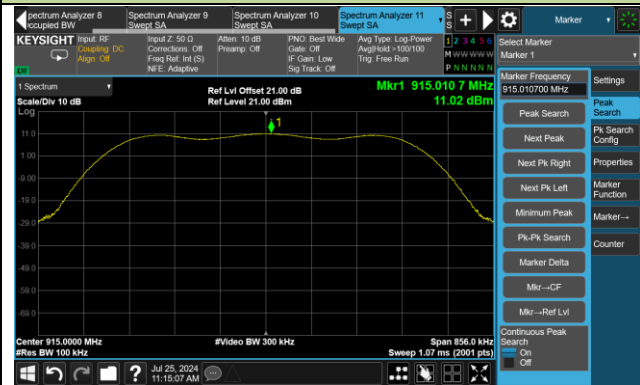
Test Site	WZ-SR5	Test Engineer	Lynn Yang
Test Date	2024-07-25		

Frequency (MHz)	Limit (dBc)	Test Result
20mW Power Level		
902.4	20	Pass
915.0	20	Pass
927.6	20	Pass

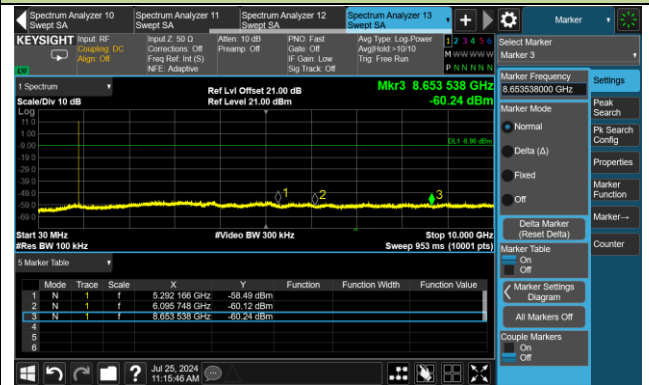


915MHz

100kHz PSD Reference Level

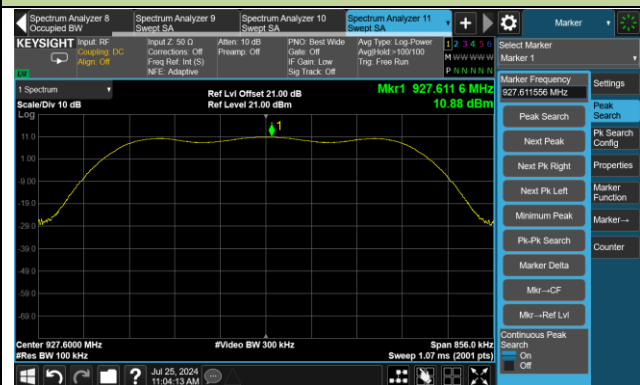


Spurious Emission

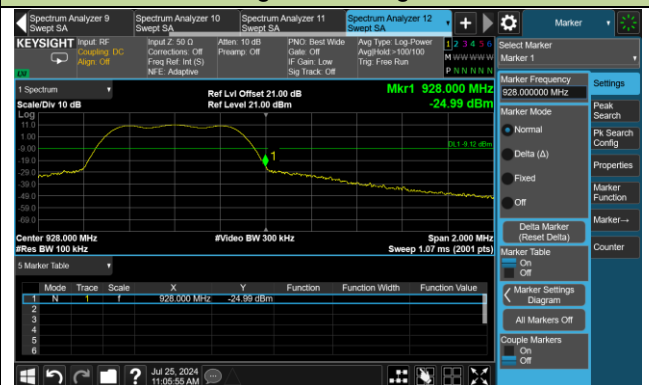


927.6MHz

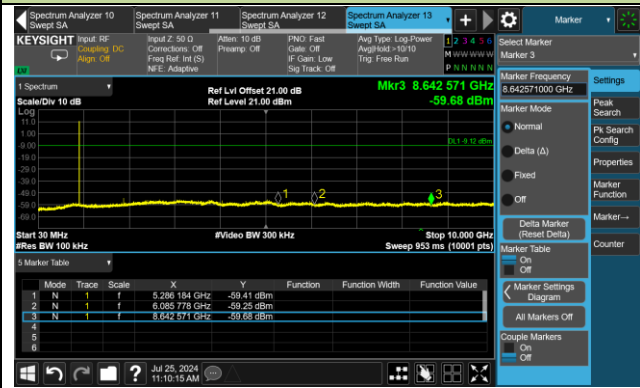
100kHz PSD Reference Level



High Band Edge



Spurious Emission



A.6 Radiated Spurious Emission Test Result

Test Site	WZ-AC1	Test Engineer	Frank Xue
Test Date	2024-07-28		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

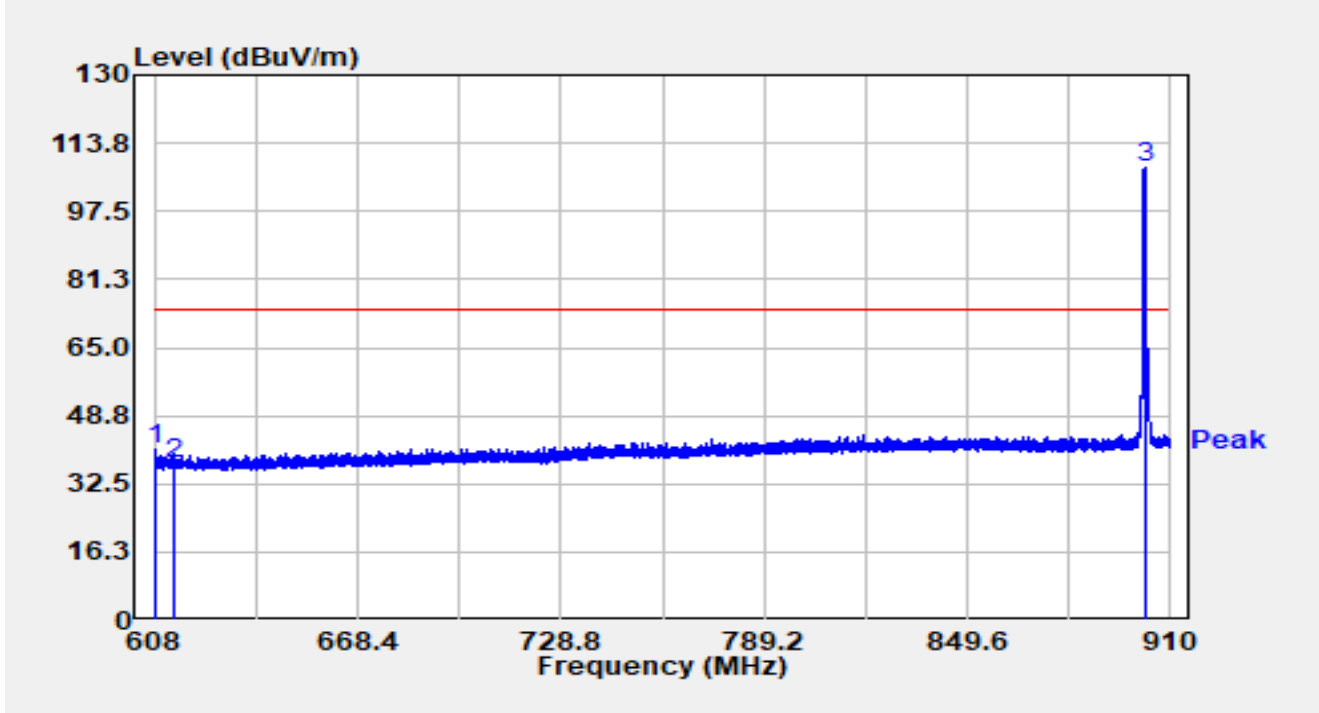
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
902.4	4128.000	38.8	2.1	40.9	74.0	-33.1	Peak	Horizontal
	4806.300	38.8	4.2	43.0	74.0	-31.0	Peak	Horizontal
	11014.700	36.2	14.6	50.8	74.0	-23.2	Peak	Horizontal
	4058.300	38.2	2.0	40.2	74.0	-33.8	Peak	Vertical
	4813.100	37.8	4.1	41.9	74.0	-32.1	Peak	Vertical
	11971.800	37.5	13.6	51.1	74.0	-22.9	Peak	Vertical
915	3993.700	38.4	1.7	40.1	74.0	-33.9	Peak	Horizontal
	4908.300	38.1	4.3	42.4	74.0	-31.6	Peak	Horizontal
	10979.000	35.8	14.7	50.5	74.0	-23.5	Peak	Horizontal
	4048.100	38.6	2.0	40.6	74.0	-33.4	Peak	Vertical
	4818.200	38.5	4.1	42.6	74.0	-31.4	Peak	Vertical
	11062.300	35.6	14.6	50.2	74.0	-23.8	Peak	Vertical
927.6	4078.700	39.3	1.9	41.2	74.0	-32.8	Peak	Horizontal
	4825.000	39.1	4.0	43.1	74.0	-30.9	Peak	Horizontal
	11121.800	37.0	14.1	51.1	74.0	-22.9	Peak	Horizontal
	4031.100	39.1	1.7	40.8	74.0	-33.2	Peak	Vertical
	4986.500	37.9	4.4	42.3	74.0	-31.7	Peak	Vertical
	10848.100	36.4	14.5	50.9	74.0	-23.1	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

A.7 Radiated Restricted Band Edge Test Result

Site	WZ-AC1	Test Date	2024-07-26
Test Engineer	Frank Xue	Temp./Humidity	24.5°C/55.4%
Factor	VULB 9168_25-1000MHz	Polarity	Horizontal
EUT	ULXD6	Test Voltage	By Battery
Test Mode	Transmit by X52 STD at 902.4MHz		

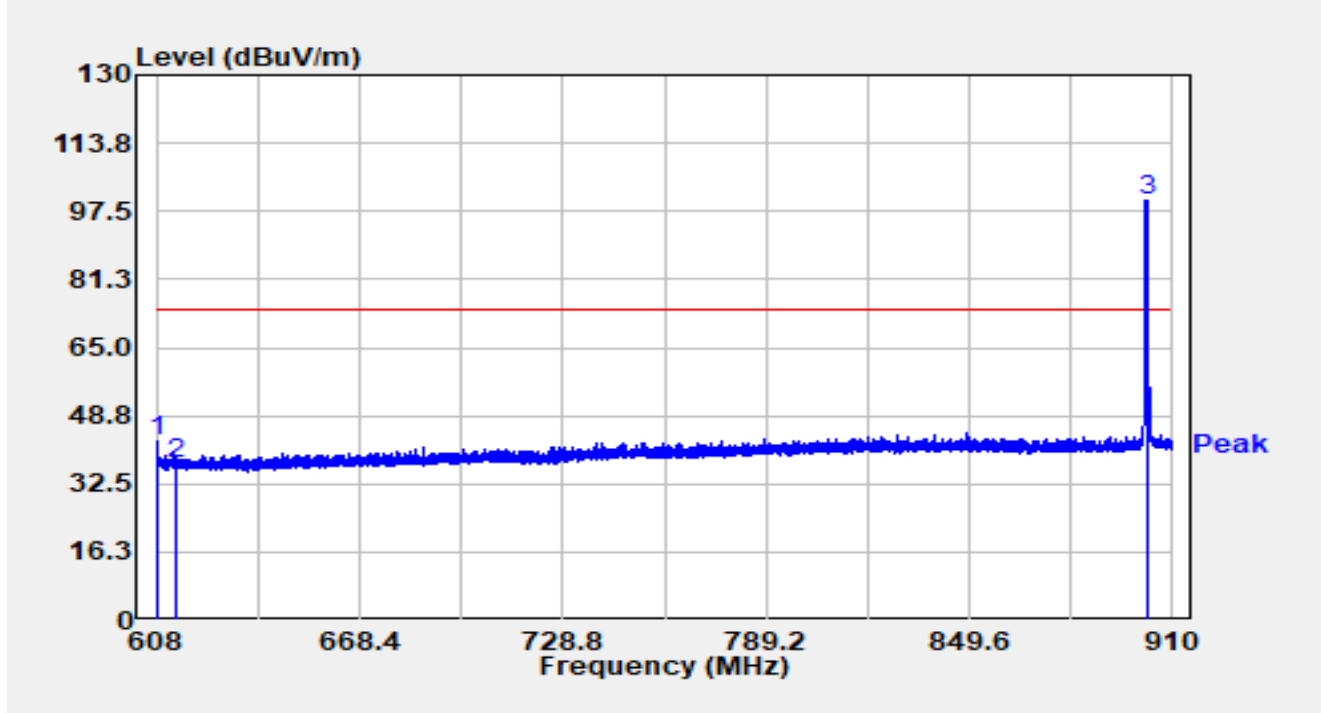


No	Mark	Frequency (MHz)	Reading (dB μ V)	C.F (dB/m)	Measurement (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Detector
1	*	608.574	14.06	26.45	40.51	-33.49	74.00	Peak
2		614.000	10.58	26.49	37.08	-36.92	74.00	Peak
3		902.390	78.28	29.85	108.13	N/A	N/A	Peak

Notes:

1. "*" , means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement(dB μ V/m) = Reading(dB μ V) + C.F (dB/m).

Site	WZ-AC1	Test Date	2024-07-26
Test Engineer	Frank Xue	Temp./Humidity	24.5°C/55.4%
Factor	VULB 9168_25-1000MHz	Polarity	Vertical
EUT	ULXD6	Test Voltage	By Battery
Test Mode	Transmit by X52 STD at 902.4MHz		

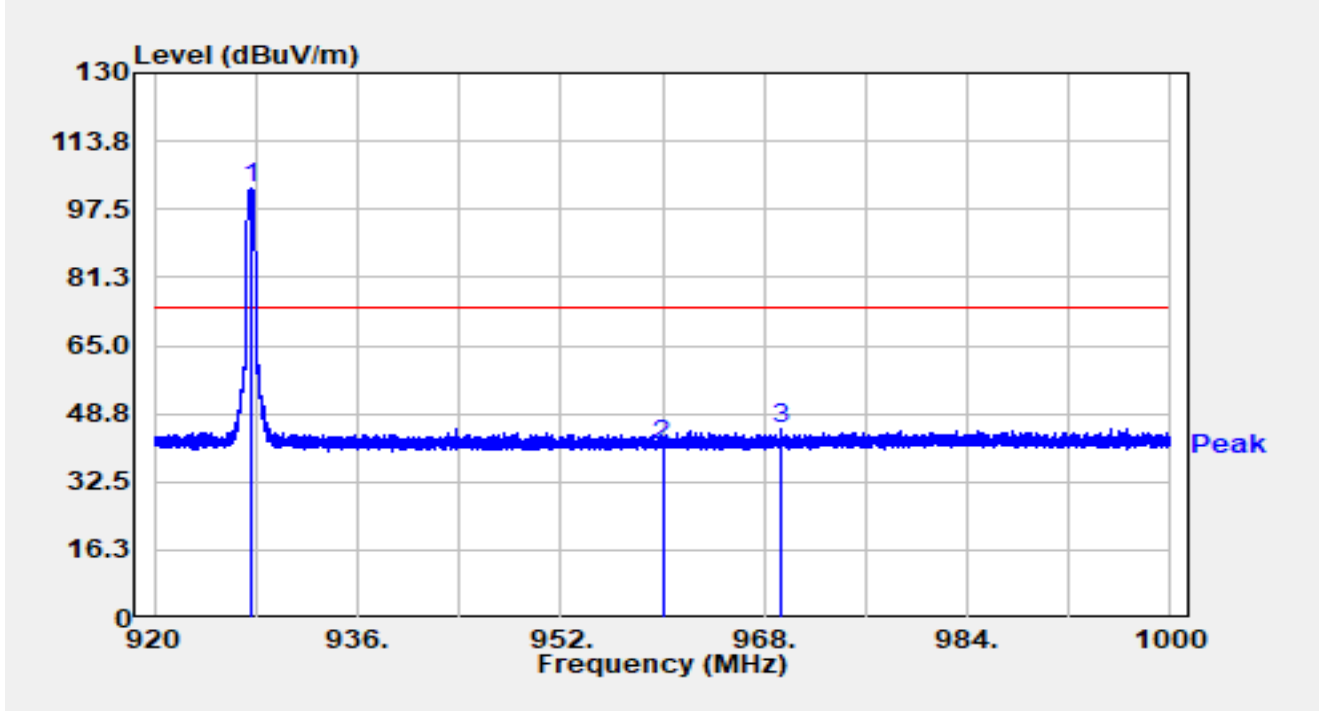


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		608.483	16.32	26.45	42.77	-31.23	74.00	Peak
2	*	614.000	10.77	26.49	37.26	-36.74	74.00	Peak
3		902.359	70.35	29.85	100.19	N/A	N/A	Peak

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement(dBμV/m) = Reading(dBμV) + C.F (dB/m).

Site	WZ-AC1	Test Date	2024-07-26
Test Engineer	Frank Xue	Temp./Humidity	24.5°C/55.4%
Factor	VULB 9168_25-1000MHz	Polarity	Horizontal
EUT	ULXD6	Test Voltage	By Battery
Test Mode	Transmit by X52 STD at 927.6MHz		

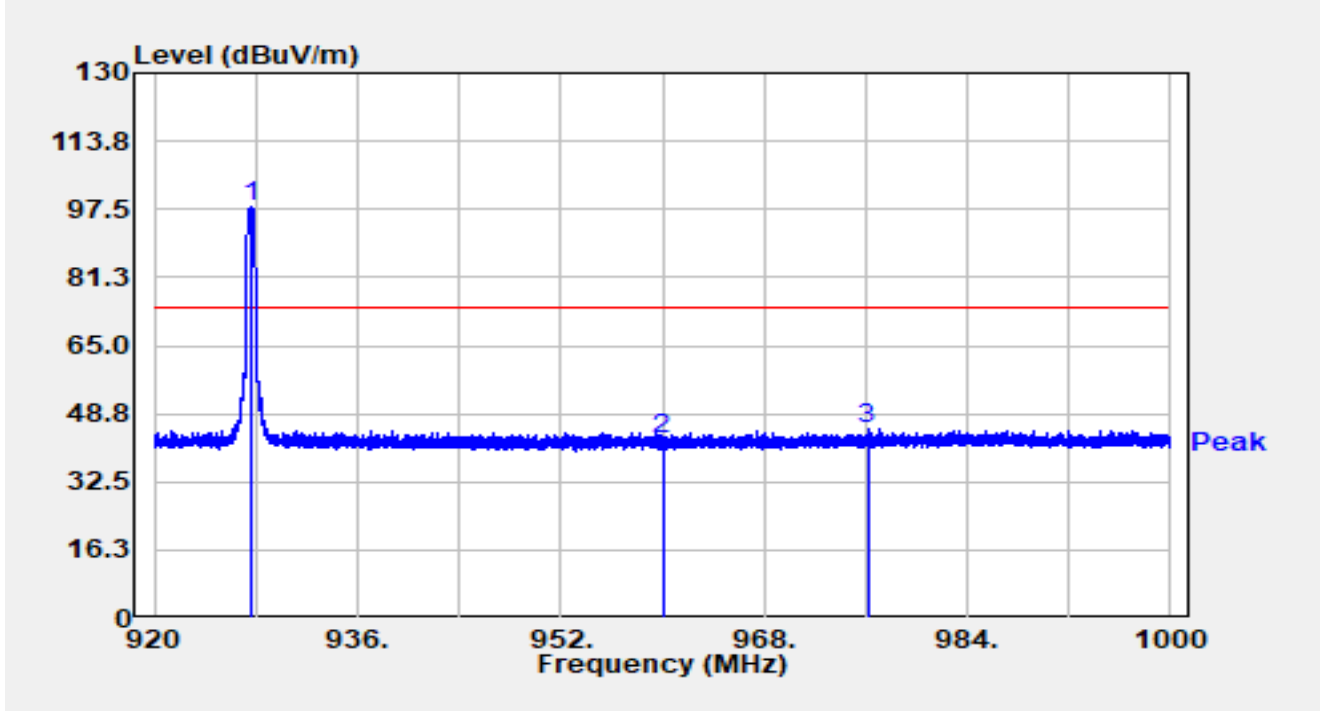


No	Mark	Frequency (MHz)	Reading (dB μ V)	C.F (dB/m)	Measurement (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Detector
1		927.608	72.12	30.61	102.73	N/A	N/A	Peak
2	*	960.000	10.49	30.82	41.31	-32.69	74.00	Peak
3		969.376	13.92	30.97	44.90	-29.10	74.00	Peak

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement(dB μ V/m) = Reading(dB μ V) + C.F (dB/m).

Site	WZ-AC1	Test Date	2024-07-26
Test Engineer	Frank Xue	Temp./Humidity	24.5°C/55.4%
Factor	VULB 9168_25-1000MHz	Polarity	Vertical
EUT	ULXD6	Test Voltage	By Battery
Test Mode	Transmit by X52 STD at 927.6MHz		



No	Mark	Frequency (MHz)	Reading (dB μ V)	C.F (dB/m)	Measurement (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Detector
1		927.608	67.53	30.61	98.15	N/A	N/A	Peak
2	*	960.000	11.63	30.82	42.45	-31.55	74.00	Peak
3		976.144	13.97	31.14	45.11	-28.89	74.00	Peak

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m)+ Cable Loss (dB).
3. Measurement(dB μ V/m) = Reading(dB μ V) + C.F (dB/m).

A.8 AC Conducted Emissions Test Result

The EUT is powered by battery, so this item is not applicable.

Appendix B – Test Setup Photograph

Refer to “2407RSU017-UT” file.

Appendix C – EUT Photograph

Refer to “2407RSU017-UE” file.

_____ The End _____