



RF MEASUREMENT REPORT

FCC ID: YIY-ASMB0911
Applicant: Industrea Mining Technology Pty Ltd
Product: Mini Dual RF UHF Module SiLabs
Model No.: ASMB0911
Brand Name: Digital Mining Technology
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2024-11-01
Test Date: 2024-11-08 ~ 2024-11-12

Reviewed By:

Denise Zhou

Denise Zhou

Approved By:

Robin Wu

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
2411RSU001-U1	V01	Initial Report	2024-12-23	Valid

Note: The report is based on the original report (Report No.: 2401RSU009-U1) to revise the crystal oscillator. Output Power and Radiated Spurious Emission items were performed.

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1. General Information

1.1. Applicant

Industrea Mining Technology Pty Ltd
T/A Digital Mining Technology
3 Co-Wyn Close Fountaindale NSW 2258 Australia

1.2. Manufacturer

Industreea Mining Technology Pty Ltd
T/A Digital Mining Technology
3 Co-Wyn Close Fountaindale NSW 2258 Australia

1.3. Testing Facility

☒	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 FCC: CN1166 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
	CNAS: L10551 ISED: CN0001
☐	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 FCC: CN1284
	CNAS: L10551 ISED: CN0105
☐	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	Mini Dual RF UHF Module SiLabs
Model No.	ASMB0911
EUT Identification No.	20240105Sample#01
SRD Specification	902 ~ 928MHz
Antenna Information	Refer to Section 1.7
Module Voltage	3.3Vdc
Test Fixture Voltage	6 ~ 18Vdc, nominal 12Vdc
Operating Temperature	-40 ~ 85°C
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	902 ~ 928MHz
Channel Number	25
Type of modulation	4GFSK

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	920MHz	01	921MHz	02	922MHz
03	923MHz	04	924MHz	05	925MHz
06	926MHz	07	927MHz	08	903MHz
09	904MHz	10	905MHz	11	906MHz
12	907MHz	13	908MHz	14	909MHz
15	910MHz	16	911MHz	17	912MHz
18	913MHz	19	914MHz	20	915MHz
21	916MHz	22	917MHz	23	918MHz
24	919MHz	--	--	--	--

1.7. Antenna Details

Antenna Part No.	Antenna Type	Antenna Gain
EA2-0287-N01SP-050	Omni-directional	8.0dBi
PROD1196	Omni-directional	2.9dBi
MISC0607	Omni-directional	-2.4dBi
MISC1626	Monopole	2.0dBi

Note 1: All antenna information is provided by the manufacturer.

Note 2: For conducted test items, we chose the antenna “EA2-0287-N01SP-050” which has highest antenna gain to test.

Note 3: For radiated test items, the antenna “EA2-0287-N01SP-050”, “PROD1196” and “MISC0607” have the same antenna type, so we chose the antenna “EA2-0287-N01SP-050” which has higher antenna gain and “MISC1626” which has different antenna type to test.

2. Test Configuration

2.1. Test Mode

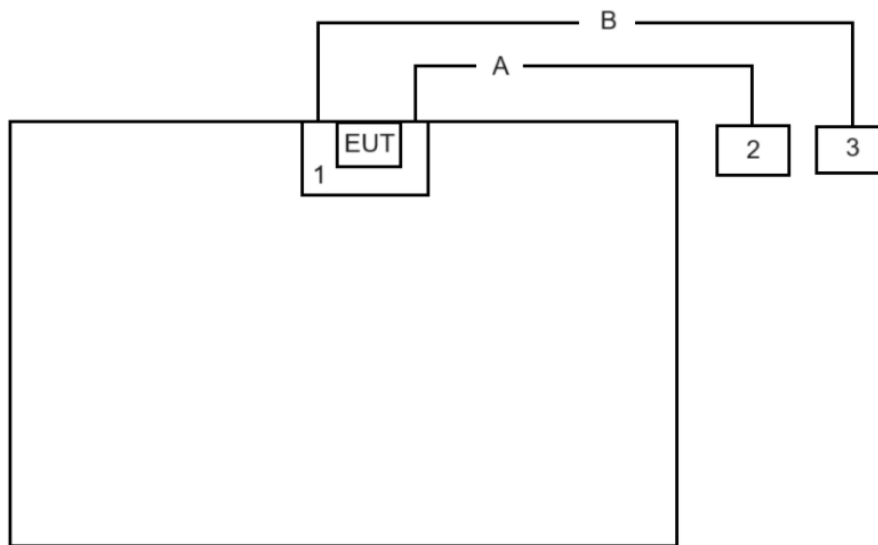
Mode 1: Transmit by Module A and Receive by Module B

Mode 2: Transmit by Module B and Receive by Module A

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.

Connection Diagram



Cable Type		Cable Description	Length
A	USB Cable	Shielded	>10.0m
B	DC Cable	Non-Shielded	>10.0m
Product		Manufacturer	Model No.
1	Test Fixture	Wabtec	ASMB0885
2	Notebook	Lenovo	ThinkPad E495
3	DC Power Supply	MESTEK	DP3010B

2.3. Test Software

The test utility software used during testing was “CASFW_Manager.exe” and the version was 200.0.4.

2.4. 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

2.5. 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 that uses a **unique coupling**.

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
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2025-04-17	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2025-05-08	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2025-09-23	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2025-05-06	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2025-04-18	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11263	1 year	2025-10-16	WZ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2024-12-04	WZ-AC2
Attenuator	MVE	MVE2213	MRTSUE11080	1 year	2025-06-05	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
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2025-05-08	WZ-SR5
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2025-05-08	WZ-SR5

Software	Version	Function
e3	230711	RE & CE
Controller_MF 7802	1.02	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 $k = 2$.

Radiated Emission Measurement	
The maximum measurement uncertainty is evaluated as:	
Coaxial:	9kHz~30MHz: 2.35dB
Coplanar:	9kHz~30MHz: 2.37dB
Horizontal:	30MHz~200MHz: 3.46dB
	200MHz~1GHz: 3.78dB
	1GHz~10GHz: 4.97dB
Vertical:	30MHz~200MHz: 4.07dB
	200MHz~1GHz: 5.28dB
	1GHz~10GHz: 4.78dB
Output Power	
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):	
1.3dB	

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(b)(3)	Output Power	Conducted	Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass

Notes:

1. 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.
2. For radiated emission test, every axis (X, Y, Z) was also verified.

6.2. Output Power Measurement

6.2.1. 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.

6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.1.3

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.2.3. Test Setting

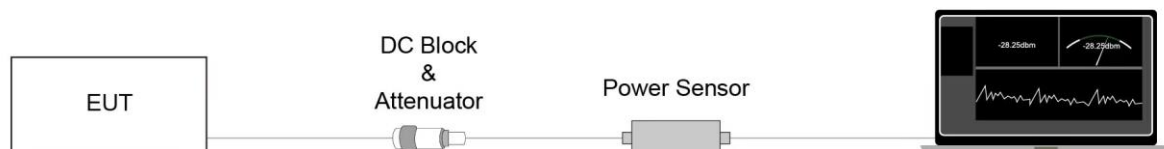
Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50MHz)

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.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Radiated Spurious Emission Measurement

6.3.1. 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 [$\mu\text{V/m}$]	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

6.3.2. 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)

6.3.3. 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

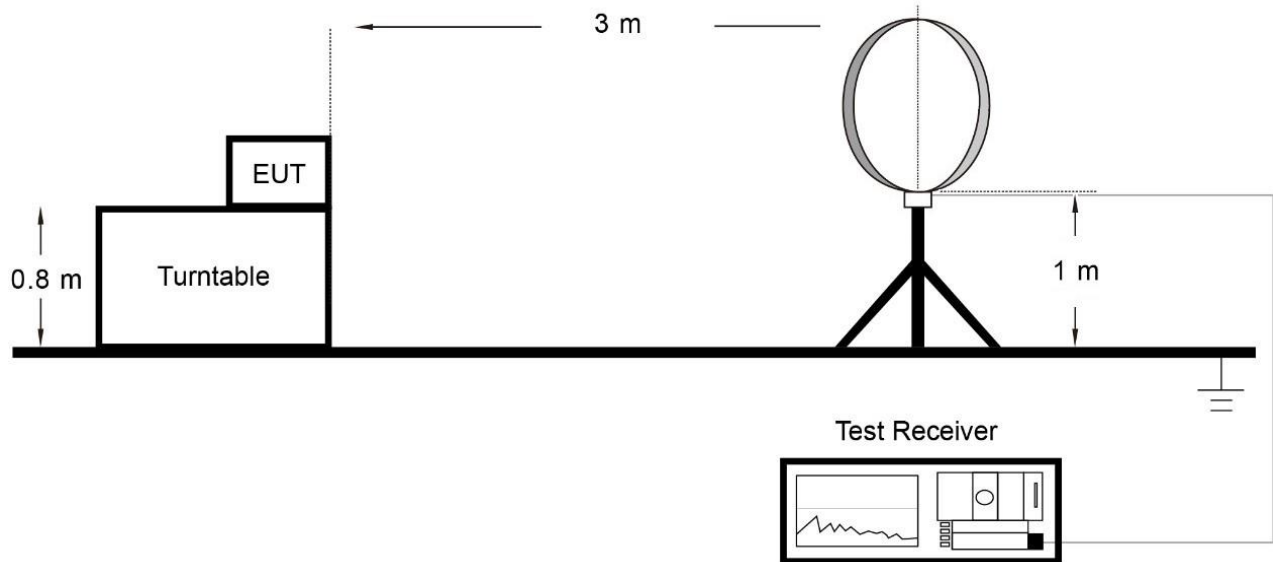
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

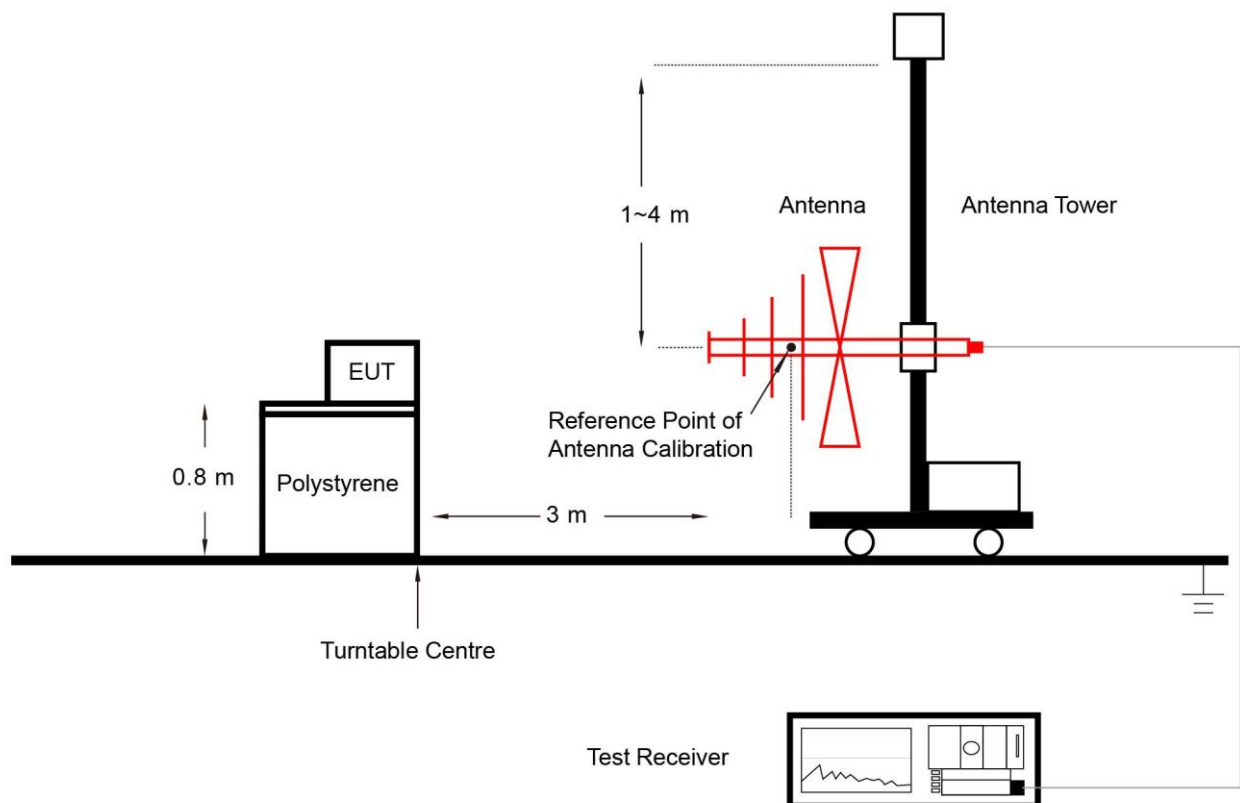
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set $\text{VBW} \geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.3.4. Test Setup

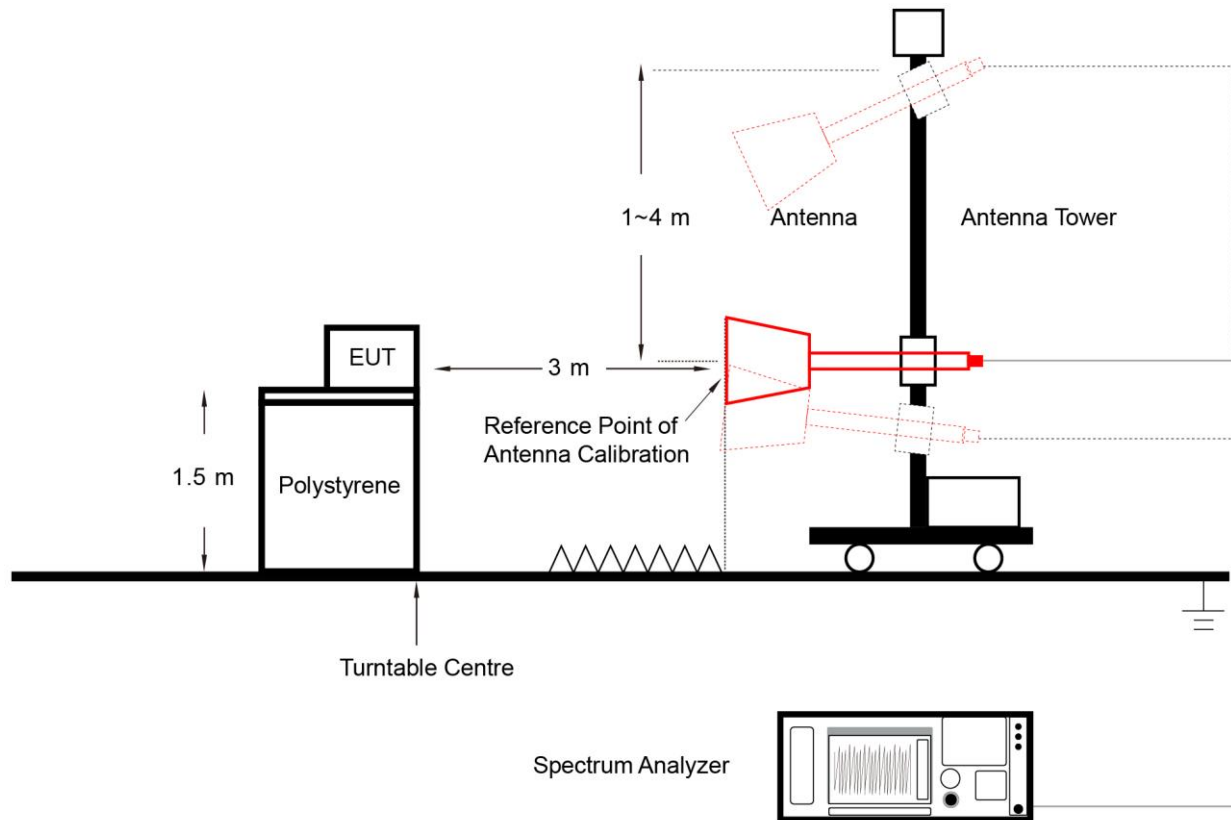
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.3.5. Test Result

Refer to Appendix A.2.

Appendix A - Test Result

A.1 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2024-11-08		

Test Result of Peak Output Power

Test Mode	Channel No.	Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	Result
1	08	903	20.28	≤ 28.00	Pass
	20	915	19.68	≤ 28.00	Pass
	07	927	19.70	≤ 28.00	Pass
2	08	903	20.05	≤ 28.00	Pass
	20	915	19.87	≤ 28.00	Pass
	07	927	19.50	≤ 28.00	Pass

Note: Peak Power Limit (dBm) = 30dBm - (Antenna Gain (dBi) - 6dB) = 30dBm - (8dBi - 6dB) = 28dBm

Test Result of Average Output Power (Reporting Only)

Test Mode	Channel No.	Frequency (MHz)	Average Power (dBm)	AV Power Limit (dBm)	Result
1	08	903	20.26	≤ 28.00	Pass
	20	915	19.61	≤ 28.00	Pass
	07	927	19.64	≤ 28.00	Pass
2	08	903	19.99	≤ 28.00	Pass
	20	915	19.84	≤ 28.00	Pass
	07	927	19.47	≤ 28.00	Pass

Note: AV Power Limit (dBm) = 30dBm - (Antenna Gain (dBi) - 6dB) = 30 dBm - (8dBi - 6dB) = 28dBm

A.2 Radiated Spurious Emission Test Result

Antenna EA2-0287-N01SP-050

Test Site	WZ-AC2	Test Engineer	Ajin Fan
Test Date	2024-11-11	Test Mode	Mode 1
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line, 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
08	2708.0	55.9	-2.6	53.3	54.0	-0.7	Average	Horizontal
	2708.0	62.8	-2.6	60.2	74.0	-13.8	Peak	Horizontal
	3610.4	41.3	-1.2	40.1	74.0	-33.9	Peak	Horizontal
	5418.4	40.9	2.9	43.8	74.0	-30.2	Peak	Horizontal
	2708.8	51.0	-2.6	48.4	74.0	-25.6	Peak	Vertical
	4516.8	40.8	1.9	42.7	74.0	-31.3	Peak	Vertical
	5417.6	36.8	2.9	39.7	74.0	-34.3	Peak	Vertical
20	2745.6	53.8	-2.8	51.0	54.0	-3.0	Average	Horizontal
	2745.6	60.7	-2.8	57.9	74.0	-16.1	Peak	Horizontal
	3660.8	41.9	-1.0	40.9	74.0	-33.1	Peak	Horizontal
	4574.4	40.9	1.7	42.6	74.0	-31.4	Peak	Horizontal
	2744.0	49.7	-2.8	46.9	74.0	-27.1	Peak	Vertical
	3938.4	38.4	-0.7	37.7	74.0	-36.3	Peak	Vertical
	4576.0	41.3	1.7	43.0	74.0	-31.0	Peak	Vertical
07	2780.8	52.8	-2.7	50.1	54.0	-3.9	Average	Horizontal
	2780.8	52.0	-2.7	49.3	74.0	-24.7	Peak	Horizontal
	3706.4	43.0	-0.8	42.2	74.0	-31.8	Peak	Horizontal
	4634.4	39.2	2.2	41.4	74.0	-32.6	Peak	Horizontal
	2781.6	49.6	-2.7	46.9	74.0	-27.1	Peak	Vertical
	3836.8	37.8	-0.6	37.2	74.0	-36.8	Peak	Vertical
	4634.4	42.9	2.2	45.1	74.0	-28.9	Peak	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Note 2: For emission below 1GHz:

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

For emission above 1GHz:

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

Test Site	WZ-AC2	Test Engineer	Ajin Fan
Test Date	2024-11-11	Test Mode	Mode 2
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line, 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
08	2708.0	52.7	-2.6	50.1	54.0	-3.9	Average	Horizontal
	2708.0	60.2	-2.6	57.6	74.0	-16.4	Peak	Horizontal
	4514.4	40.2	1.9	42.1	74.0	-31.9	Peak	Horizontal
	5416.8	41.6	2.9	44.5	74.0	-29.5	Peak	Horizontal
	2707.2	48.3	-2.6	45.7	74.0	-28.3	Peak	Vertical
	4516.8	38.5	1.9	40.4	74.0	-33.6	Peak	Vertical
	5416.8	44.0	2.9	46.9	74.0	-27.1	Peak	Vertical
20	2745.6	52.0	-2.8	49.2	54.0	-4.8	Average	Horizontal
	2745.6	58.6	-2.8	55.8	74.0	-18.2	Peak	Horizontal
	3658.4	39.7	-1.0	38.7	74.0	-35.3	Peak	Horizontal
	4576.0	43.8	1.7	45.5	74.0	-28.5	Peak	Horizontal
	2744.8	45.8	-2.8	43.0	74.0	-31.0	Peak	Vertical
	4079.2	37.2	-0.2	37.0	74.0	-37.0	Peak	Vertical
	4574.4	39.9	1.7	41.6	74.0	-32.4	Peak	Vertical
07	2781.6	52.0	-2.7	49.3	54.0	-4.7	Average	Horizontal
	2781.6	57.8	-2.7	55.1	74.0	-18.9	Peak	Horizontal
	3708.8	46.1	-0.8	45.3	74.0	-28.7	Peak	Horizontal
	4635.2	40.7	2.2	42.9	74.0	-31.1	Peak	Horizontal
	2780.8	45.2	-2.7	42.5	74.0	-31.5	Peak	Vertical
	3708.0	39.0	-0.8	38.2	74.0	-35.8	Peak	Vertical
	4635.2	41.1	2.2	43.3	74.0	-30.7	Peak	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Note 2: For emission below 1GHz:

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

For emission above 1GHz:

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

Antenna MISC1626

Test Site	WZ-AC2	Test Engineer	Ajin Fan
Test Date	2024-11-11	Test Mode	Mode 1
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line, 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
08	2709.1	46.8	-2.6	44.2	74.0	-29.8	Peak	Horizontal
	4515.4	42.0	1.9	43.9	74.0	-30.1	Peak	Horizontal
	5417.2	40.6	2.9	43.5	74.0	-30.5	Peak	Horizontal
	2710.0	42.4	-2.6	39.8	74.0	-34.2	Peak	Vertical
	4517.2	42.3	1.9	44.2	74.0	-29.8	Peak	Vertical
	5419.9	39.2	2.9	42.1	74.0	-31.9	Peak	Vertical
20	2746.0	45.0	-2.8	42.2	74.0	-31.8	Peak	Horizontal
	3658.6	45.6	-1.0	44.6	74.0	-29.4	Peak	Horizontal
	4573.9	42.8	1.7	44.5	74.0	-29.5	Peak	Horizontal
	2744.2	42.3	-2.8	39.5	74.0	-34.5	Peak	Vertical
	3658.6	40.9	-1.0	39.9	74.0	-34.1	Peak	Vertical
	4575.7	41.7	1.7	43.4	74.0	-30.6	Peak	Vertical
07	2782.0	44.9	-2.7	42.2	74.0	-31.8	Peak	Horizontal
	3706.3	42.5	-0.8	41.7	74.0	-32.3	Peak	Horizontal
	4634.2	42.3	2.2	44.5	74.0	-29.5	Peak	Horizontal
	2269.0	38.8	-2.0	36.8	74.0	-37.2	Peak	Vertical
	2780.2	41.1	-2.7	38.4	74.0	-35.6	Peak	Vertical
	4634.2	41.2	2.2	43.4	74.0	-30.6	Peak	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Note 2: For emission below 1GHz:

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

For emission above 1GHz:

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

Test Site	WZ-AC2	Test Engineer	Ajin Fan
Test Date	2024-11-11	Test Mode	Mode 2
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line, 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
08	2710.0	48.9	-2.6	46.3	74.0	-27.7	Peak	Horizontal
	3610.9	45.2	-1.2	44.0	74.0	-30.0	Peak	Horizontal
	5416.3	43.9	2.9	46.8	74.0	-27.2	Peak	Horizontal
	2709.1	43.5	-2.6	40.9	74.0	-33.1	Peak	Vertical
	3610.0	43.7	-1.2	42.5	74.0	-31.5	Peak	Vertical
	5419.9	45.6	2.9	48.5	74.0	-25.5	Peak	Vertical
20	2746.0	49.4	-2.8	46.6	74.0	-27.4	Peak	Horizontal
	3661.3	42.0	-1.0	41.0	74.0	-33.0	Peak	Horizontal
	4573.0	41.7	1.7	43.4	74.0	-30.6	Peak	Horizontal
	2744.2	46.0	-2.8	43.2	74.0	-30.8	Peak	Vertical
	4575.7	38.5	1.7	40.2	74.0	-33.8	Peak	Vertical
	4988.8	37.3	3.0	40.3	74.0	-33.7	Peak	Vertical
07	2781.1	48.5	-2.7	45.8	74.0	-28.2	Peak	Horizontal
	3709.0	46.4	-0.8	45.6	74.0	-28.4	Peak	Horizontal
	4635.1	42.8	2.2	45.0	74.0	-29.0	Peak	Horizontal
	2782.0	46.5	-2.7	43.8	74.0	-30.2	Peak	Vertical
	3708.1	40.4	-0.8	39.6	74.0	-34.4	Peak	Vertical
	4635.1	44.2	2.2	46.4	74.0	-27.6	Peak	Vertical

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Note 2: For emission below 1GHz:

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

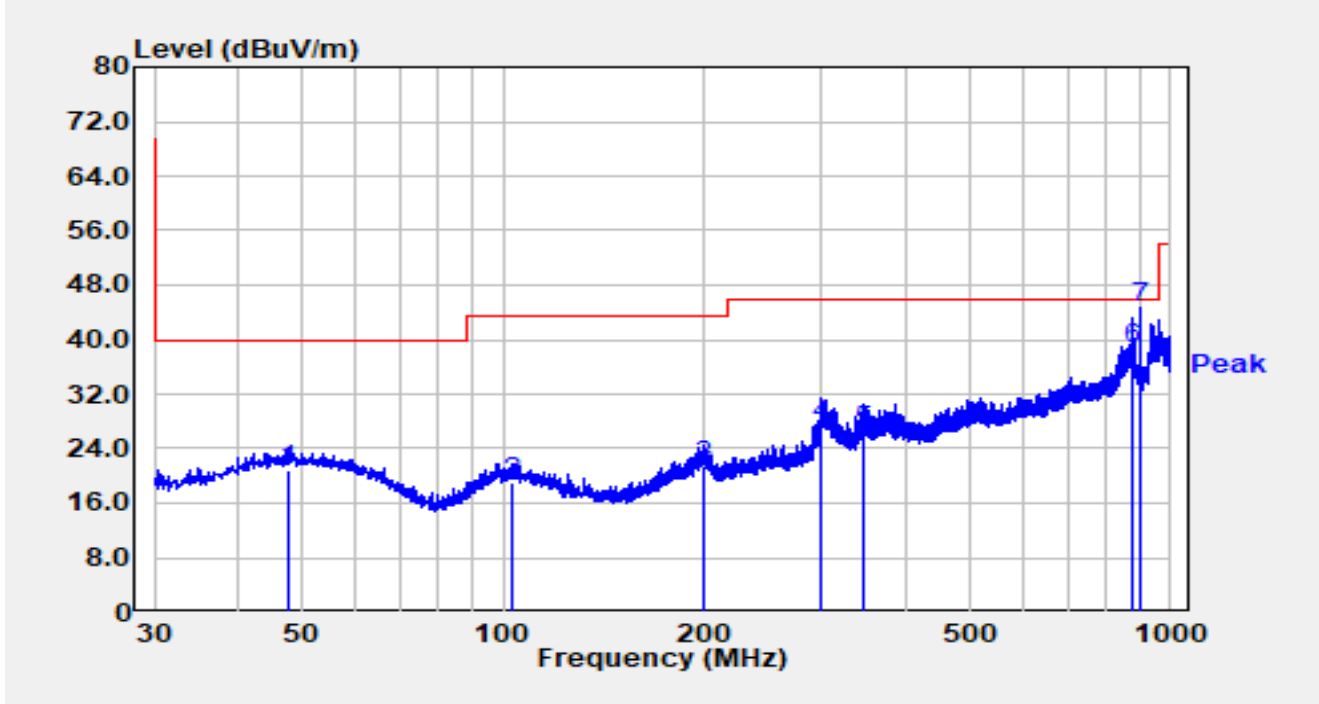
For emission above 1GHz:

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

The Result of Radiated Emission below 1GHz

Antenna EA2-0287-N01SP-050

Site	WZ-AC2	Test Date	2024-11-11
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module A at 903MHz and Receive by Module B at 903MHz		



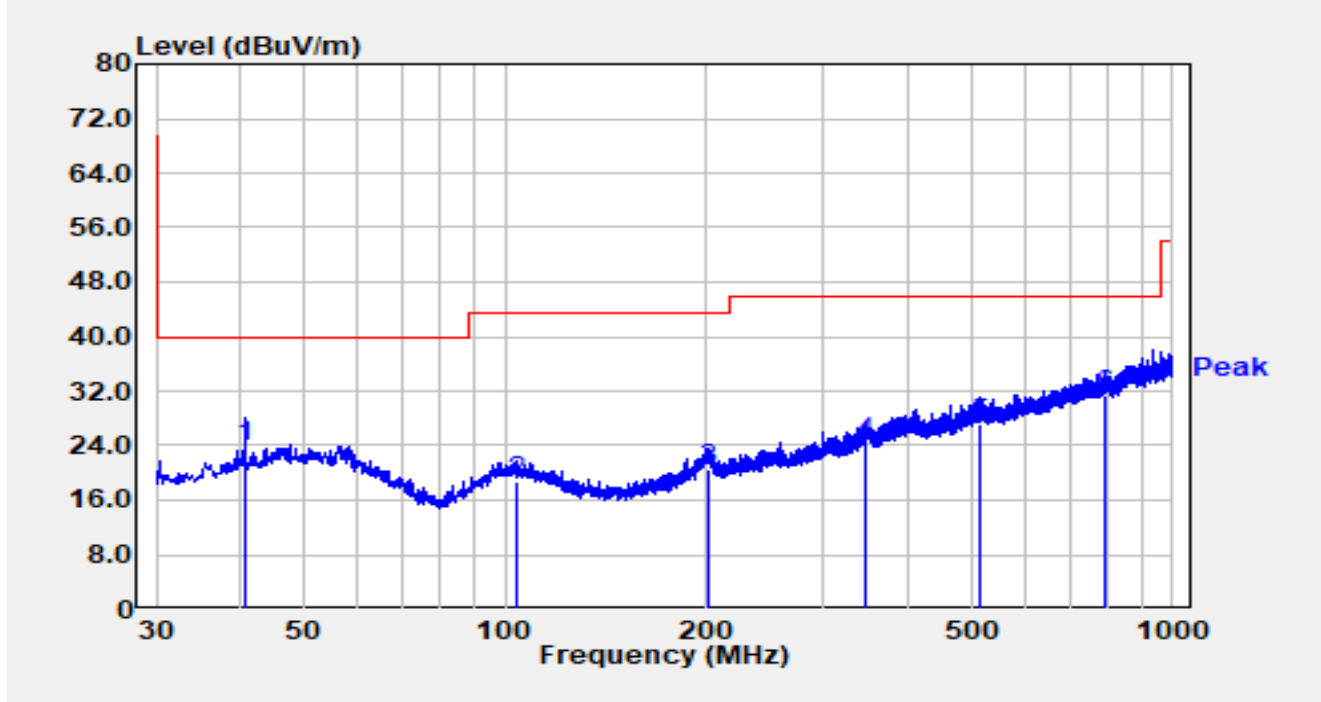
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		47.460	0.50	20.43	20.93	-19.07	40.00	QP
2		103.041	0.28	18.59	18.88	-24.62	43.50	QP
3		200.429	2.55	18.89	21.44	-22.06	43.50	QP
4		300.048	6.52	20.94	27.46	-18.54	46.00	QP
5		346.123	3.81	22.76	26.57	-19.43	46.00	QP
6	*	873.221	7.32	31.19	38.51	-7.49	46.00	QP
7	*	902.709	13.05	31.49	44.54	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).
4. Point (7) is the fundamental frequency which is not considered in spurious emission domain.
5. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not

presented in the report.

Site	WZ-AC2	Test Date	2024-11-11
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module A at 903MHz and Receive by Module B at 903MHz		

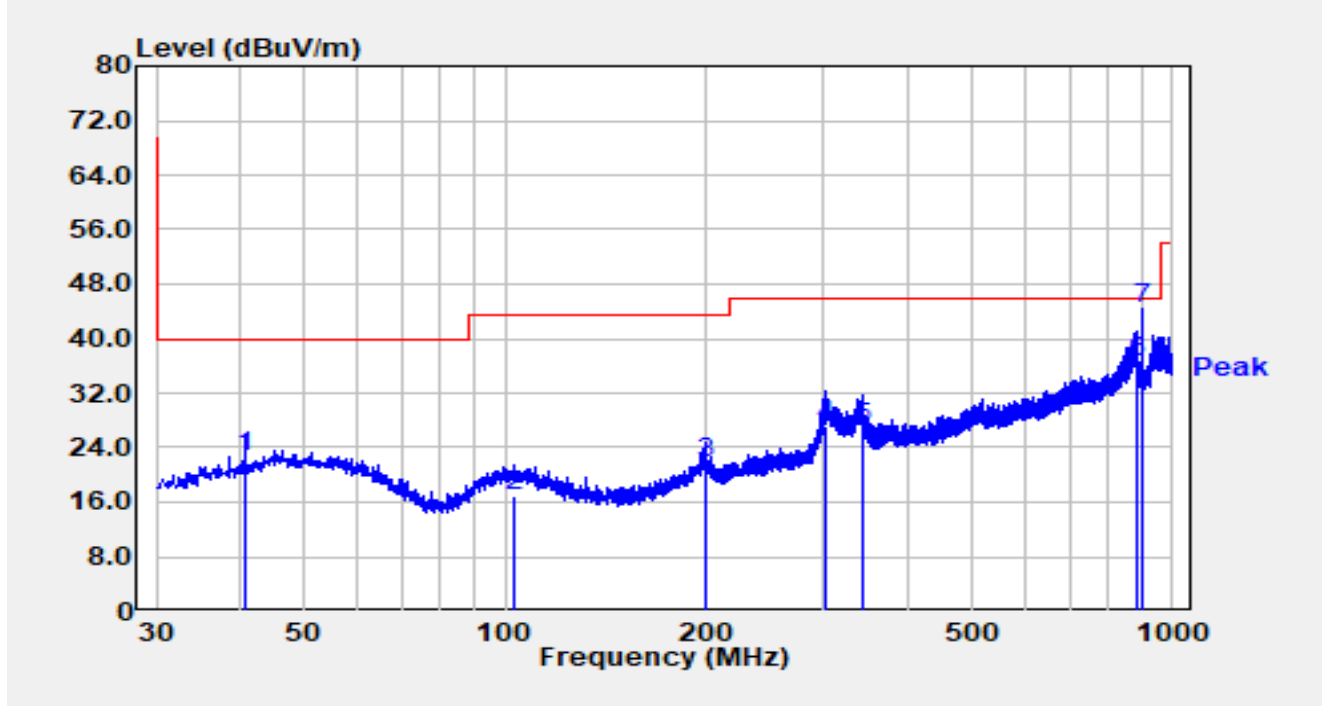


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		40.670	4.52	19.41	23.93	-16.07	40.00	QP
2		104.011	0.19	18.58	18.77	-24.73	43.50	QP
3		200.720	1.74	18.88	20.62	-22.88	43.50	QP
4		345.735	1.71	22.74	24.45	-21.55	46.00	QP
5		516.261	1.88	25.27	27.15	-18.85	46.00	QP
6	*	795.330	1.23	30.28	31.51	-14.49	46.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-11-11
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module B at 903MHz and Receive by Module A at 903MHz		

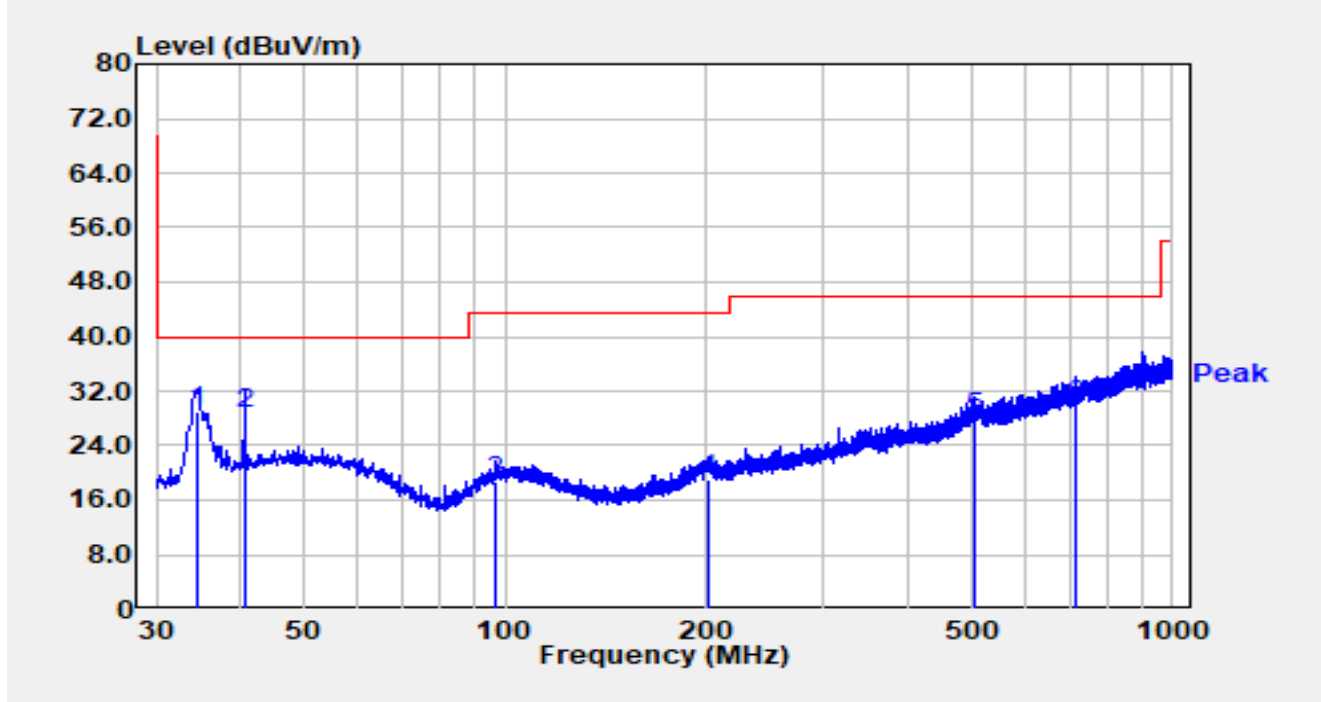


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		40.670	3.22	19.41	22.63	-17.37	40.00	QP
2		103.332	-1.81	18.59	16.78	-26.72	43.50	QP
3		199.071	2.72	18.92	21.64	-21.86	43.50	QP
4		302.376	6.30	20.97	27.27	-18.73	46.00	QP
5		341.952	4.24	22.50	26.74	-19.26	46.00	QP
6	*	882.727	5.36	31.20	36.56	-9.44	46.00	QP
7	*	902.709	12.74	31.49	44.23	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).
4. Point (7) is the fundamental frequency which is not considered in spurious emission domain.
5. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-11-11
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module B at 903MHz and Receive by Module A at 903MHz		



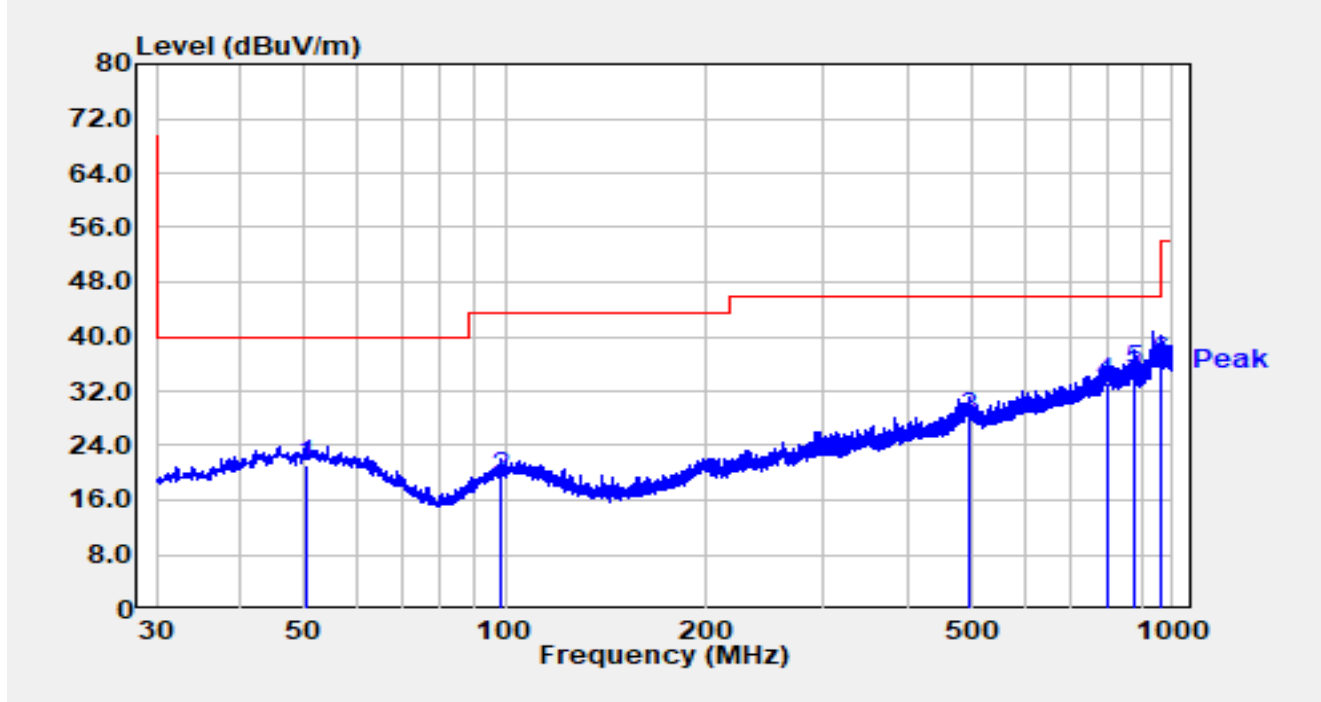
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1	*	34.656	11.35	17.50	28.85	-11.15	40.00	QP
2		40.670	9.25	19.41	28.66	-11.34	40.00	QP
3		96.930	0.58	18.20	18.78	-24.72	43.50	QP
4		202.175	0.37	18.77	19.14	-24.36	43.50	QP
5		507.046	2.77	25.40	28.17	-17.83	46.00	QP
6		715.887	1.29	28.74	30.03	-15.97	46.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Antenna MISC1626

Site	WZ-AC2	Test Date	2024-11-12
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module A at 903MHz and Receive by Module B at 903MHz		

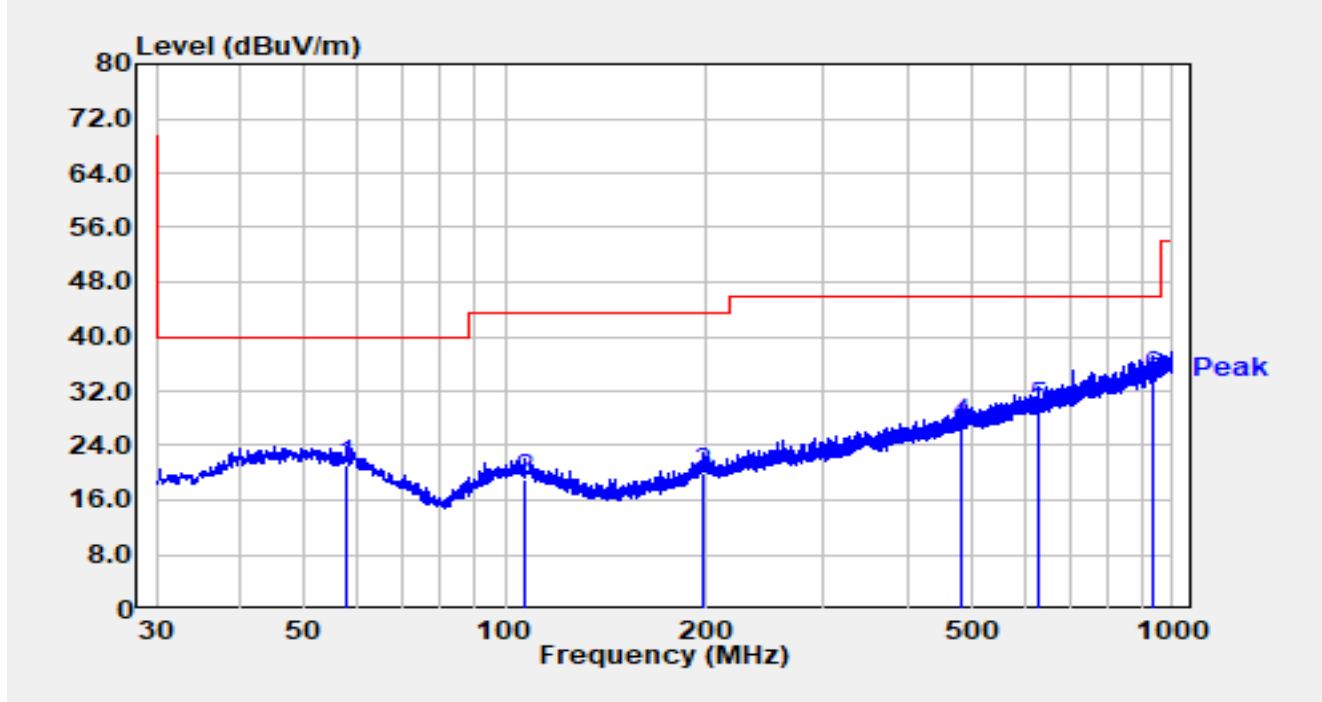


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		50.176	0.64	20.48	21.12	-18.88	40.00	QP
2		98.385	0.77	18.41	19.18	-24.32	43.50	QP
3		495.600	2.53	25.44	27.97	-18.03	46.00	QP
4		795.912	2.78	30.29	33.07	-12.93	46.00	QP
5	*	878.459	3.87	31.18	35.05	-10.95	46.00	QP
6		963.140	4.58	31.59	36.17	-17.83	54.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-11-12
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module A at 903MHz and Receive by Module B at 903MHz		

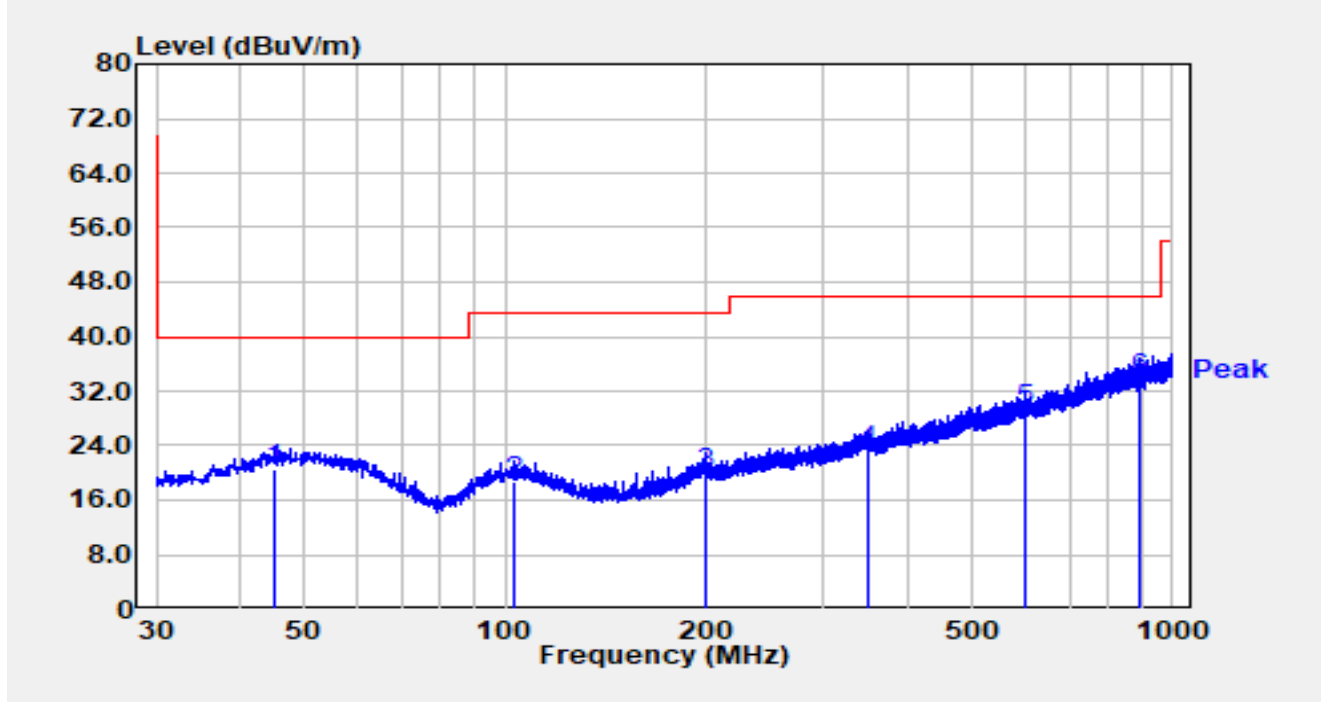


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		57.839	1.22	19.77	20.99	-19.01	40.00	QP
2		106.630	0.52	18.44	18.96	-24.54	43.50	QP
3		198.198	1.15	18.89	20.04	-23.46	43.50	QP
4		482.990	2.05	25.01	27.06	-18.94	46.00	QP
5		628.005	2.02	27.45	29.47	-16.53	46.00	QP
6	*	932.682	2.67	31.51	34.18	-11.82	46.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-11-12
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module B at 903MHz and Receive by Module A at 903MHz		

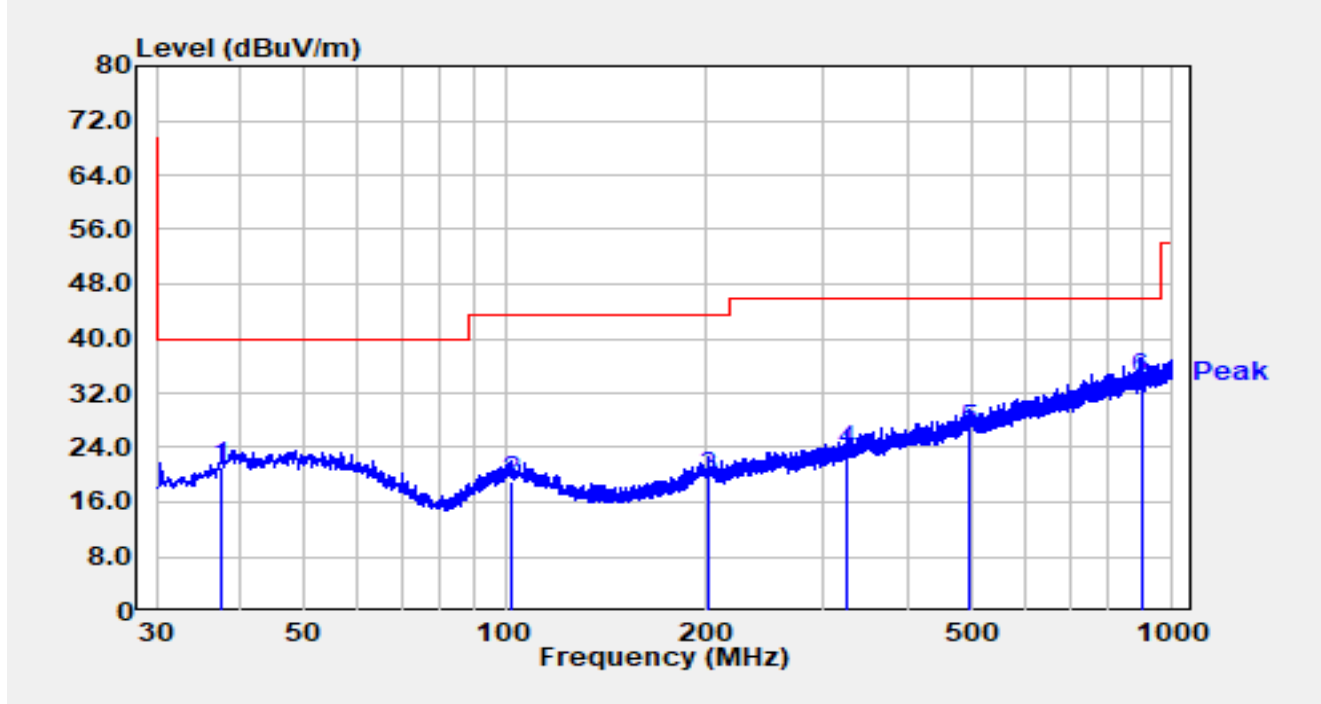


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		45.132	0.38	20.28	20.66	-19.34	40.00	QP
2		103.235	0.10	18.59	18.69	-24.81	43.50	QP
3		198.974	0.92	18.92	19.83	-23.67	43.50	QP
4		348.451	0.32	22.82	23.14	-22.86	46.00	QP
5		603.658	1.70	27.44	29.14	-16.86	46.00	QP
6	*	893.106	2.45	31.34	33.79	-12.21	46.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-11-12
Test Engineer	Ajin Fan	Temp./Humidity	27.2°C /47.7%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Mini Dual RF UHF Module SiLabs	Test Voltage	DC 12V
Test Mode	Transmit by Module B at 903MHz and Receive by Module A at 903MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		37.469	2.77	18.43	21.20	-18.80	40.00	QP
2		102.265	0.36	18.59	18.95	-24.55	43.50	QP
3		201.205	0.92	18.85	19.77	-23.73	43.50	QP
4		324.007	1.91	21.65	23.56	-22.44	46.00	QP
5		495.309	1.18	25.43	26.61	-19.39	46.00	QP
6	*	897.083	2.59	31.42	34.01	-11.99	46.00	QP

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).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix B - Test Setup Photograph

Refer to “2411RSU001-UT” file.

Appendix C - EUT Photograph

Refer to “2411RSU001-UE” file.

_____ The End _____