



RF Exposure Evaluation Declaration

FCC ID: YIY-ASMB0876
Applicant: Industrea Mining Technology Pty Ltd
Product: MINI RF UHF MODULE SiLABS
Model No.: ASMB0876
Trading Name: T/A Digital Mining Technology
FCC Rule Part(s): FCC Part 2 (Section 2.1091)
Test Date: October 27 ~ November 30, 2021

Reviewed By:

Sunny Sun

Approved By:

Robin Wu



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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
2110RSU017-U2	Rev. 01	Initial Report	03-14-2022	Valid

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1.4. Product Information

Product	MINI RF UHF MODULE SiLABS
Model No.	ASMB0876
SRD Frequency Range	902 ~ 928MHz for FCC & IC 915 ~ 928MHz for Australia
Operating Temp.	-40 ~ 75°C
Rated Input	3.3Vdc
Extreme Voltage	6.0 ~ 18.0Vdc
Test Fixture Normal Voltage	12Vdc
Remark:	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

Frequency Range	902 ~ 928MHz
Channel Number	25
Modulation	4GFSK
Antenna Type	External antenna
Maximum Antenna Gain	8 dBi

1.6. Applied Standards

KDB 447498 D01v06

2. RF Exposure Evaluation

2.1. Test Limit

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.1. Test Result

Product	MINI RF UHF MODULE SiLABS
Test Item	RF Exposure Evaluation

Frequency Band (MHz)	Conducted Power (dBm)	Max. Antenna Gain (dBi)	Max. EIRP (dBm)	Compliance Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
902 ~ 928	20.64	8.0	28.64	20	0.15	0.60

Note: EIRP (dBm) = Conducted Power (dBm) + Antenna Gain (dBi)

CONCLUSION:

So the compliance distance is 20cm for device installed without any other radio equipment.