

RF Exposure Evaluation Report

Product Name : Bluetooth Module
Model No. : MDBT40-VE
FCC ID : 2A2XGMDBT40-VE

Applicant : Victron Energy B.V.
Address : De Paal 35 1351 JG Almere Netherlands

Date of Receipt : Dec. 14, 2020
Date of Declaration : May 05, 2021
Report No. : 20C0474R-E3082100014
Report Version : V1.0



The test results relate only to the samples tested.

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

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Issued Date: May 05, 2021

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Product Name	Bluetooth Module	
Applicant	Victron Energy B.V.	
Address	De Paal 35 1351 JG Almere Netherlands	
Manufacturer	Victron Energy B.V.	
Model No.	MDBT40-VE	
FCC ID.	2A2XGMDBT40-VE	
Trade Name	Raytac	
Applicable Standard	KDB 447498 D01 v06	<input type="checkbox"/> Minimum test separation distance \geq 20 cm <input checked="" type="checkbox"/> For low power devices
Test Result	Complied	

Documented By :

Joanne Lin

(Senior Adm. Specialist / Joanne Lin)

Tested By :

wen Lee

(Senior Engineer / Wen Lee)

Approved By :

Vincent Lin

(Director / Vincent Lin)

Revision History

Report No.	Version	Description	Issued Date
20C0474R-E3082100014	V1.0	Initial issue of report.	2021-05-05

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Bluetooth Module
Trade Name	Raytac
Model No.	MDBT40-VE
FCC ID.	2A2XGMDBT40-VE
Frequency Range	2402-2480MHz
Channel Number	V4.2: 40CH
Type of Modulation	V4.2: GFSK(1Mbps)
Antenna Type	PCB Antenna
Antenna Gain	Refer to the table "Antenna List"

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Raytac	MDBT40-VE	PCB Antenna	-3.7767dBi for 2.4 GHz

2. RF Exposure Evaluation

2.1. Standard Applicable

According to 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

2.2. Measurement Result:

According to KDB Publication 447498 D01, section 4.3.1, per the calculations of item 1 ($\text{Power(mW)}/\text{separation (mm)}*\sqrt{f(\text{GHz})}\leq 3.0$), SAR is required as shown in the table below where calculated values are greater than 3.0:

Operation frequency = 2450MHz and antenna separation distance = 5mm

Body SAR Test Exclusion Threshold = 10mW

Frequency Band (MHz)	Maximum peak output power		SAR Test Exclusion Threshold	Calculated Threshold Value (≤ 3.0 SAR is not required)
	(dBm)	(mW)	(mW)	
2480	1.52	1.42	10	0.447

Note1: The SAR/MPE measurement is not necessary.

Note2: The maximum peak output power is refer to report No.: 20C0474R-E3032110109 from the DEKRA.