

SAR Test exclusion documentation according to CFR 47 §1.1307

Report identification number: 1-5116/22-01-11-A Exemption / MPE (FCC)

contains the module with the following certification numbers	
FCC ID	QZ9-CG3

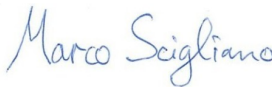
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Document History:

Version	Applied Changes	Date of Release
	Initial Release	2023-03-02
-A	Editorial corrections on page 2.	2023-03-20

EUT technologies:

Technologies:	Max. meas. cond. AVG Power	Max. declared antenna gain	Max. EIRP for RF exposure	Max. ERP for RF exposure
BT EDR 2450 MHz	5.0 dBm ¹⁾	< 5.0 dBi	10.0 dBm	7.85 dBm (= 6.10mW)

¹⁾ Test result taken from CTC advanced GmbH report 1-5116/22-01-03.

Declared minimum safety distance: 19.72cm

According the CADs and technical descriptions from the manufacturer a safety distance of 19.72 cm shall be applied between the user (and/or bystanders) to the EUT antenna whilst active transmitting.

SAR-Based Exemption following 47 CFR 1.1307 amendment:

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW). This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th}(mW) = \begin{cases} ERP_{20cm} \left(\frac{d}{20cm}\right)^x & d \leq 20cm \\ ERP_{20cm} & 20cm \leq d \leq 40cm \end{cases} \quad (B.2)$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20cm} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula (B.1).

$$P_{th}(mW) = ERP_{20cm}(mW) = \begin{cases} ERP_{20cm} \left(\frac{d}{20cm}\right)^x & d \leq 20cm \\ ERP_{20cm} & 20cm \leq d \leq 40cm \end{cases} \quad (B.1)$$

Technology	Transmitter frequency (MHz)	Max. decl. ERP (mW)	Treshold ERP		Minimal Safety (mm)	Verdict
			(mW)	(dBm)		
BT EDR	2450	6.10	3060.00	34.8	197.2	EXEMPTED