

SAR Test exclusion documentation according to FCC KDB 447498, RSS-102

Report identification number: 1-7776/18-01-08 Exclusion (FCC_IC)

contains the module with the following certification numbers	
FCC ID	TCN017
IC number	5103A - 017
HVIN (Hardware Version Identification Number)	WT 210 BLE
PMN (Product Marketing Name)	WT 210 BLE
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

This report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

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EUT technologies:

Technologies:	Max. measured power: (AVG)	Max. gain:	Min. pathloss:
13.56 MHz RFID	-29.4 dBm*	0 dBi	0 dB (if applicable)
2450 MHz BTLE **	2.09 dBm	0.6 dBi	0 dB (if applicable)

*) result taken from CTC Advanced report 1-7776/18-01-04 – 65.96 dBµV/m@3m → -29.4 dBm

***) result taken from SAR Exemption for the module: FCC ID: 2AAQS-ISP130301
IC ID: 11306A-ISP130301

SAR test exclusion according to KDB447498 (General RF Exposure Guidance v06)

Equation from Chapter 4.3.1: Standalone SAR test exclusion considerations page 11(ff.) and tables in Annex C.

Low frequency exclusion for RFID:

f in [MHz]	d _{separation} [mm]	Powerlimit [mW]	P _{max-declared} [mW]	Exclusion
13.56	5	459.0	<< 1 mW	yes

Exclusion for Bluetooth LE:

(1) Standalone SAR test exclusion for 100 MHz to 6 GHz at test separation distances ≤ 50mm

$$(\text{Threshold}_{1-g;10-g}) \times d_{\text{separation}} / f^{0.5}$$

where

Threshold_{1-g;10-g} is 3 for 1-g; 7.5 for 10-g

d_{separation} is the min. test separation distance; 5mm is used if the distance is less

f is the RF channel transmit frequency

The table below gives the calculated maximal power that could be used for source based time averaged conducted or radiated power, adjusted for tune up tolerance. If this is at or below the calculated value the DUT is exempted from SAR evaluation.

frequency [MHz]	d _{separation} [mm]	Threshold _{1-g}	Powerlimit [mW]	P _{max-declared}		Exclusion
				[dBm]	[mW]	
2450.00	5	3	9.58	2.69	1.86	yes

SAR test exclusion according to RSS-102 Issue 5 Section 2.5.1/Table 1

The table below gives the calculated maximal power that could be used for source based time averaged conducted or radiated power, adjusted for tune up tolerance. If this is at or below the calculated value the DUT is exempted from SAR evaluation.

Low frequency exclusion for RFID:

f in [MHz]	d _{separation} [mm]	tissue volume	Powerlimit [mW]	P _{max-declared} [mW]	Exclusion
13.56	5	1 g	71.0	<< 1 mW	yes

Exclusion for Bluetooth LE:

frequency [MHz]	d _{separation} [mm]	tissue volume	Powerlimit [mW]	P _{max-declared}		Exclusion
				[dBm]	[mW]	
2450.00	5	1 g	4.0	2.69	1.86	yes