



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

Report identification number: 1-0115/20-02-07 Exclusion (FCC_ISED)

contains the module with the following certification numbers	
FCC ID	N5A5932
ISED number	11245A-5932
HVIN (Hardware Version Identification Number)	5932
PMN (Product Marketing Name)	5932
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

This test report is electronically signed and valid without handwritten 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 avg.* EIRP [dBm]	#
BT LE 2450 MHz	-7.49	A

***) NOTE:**

Duty cycle corrected with 0.105, as the manufacturer declares a duty cycle of 10.5% for the tested mode.

Details and origins of the measurements shown in the table above:

#	Results from:	Additional information
A	1-0115/20-02-05 CTC advanced GmbH	Antenna gain page 19, Conducted output power page 23

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

Equation from Chapter 4.3.1: Standalone SAR test exclusion considerations page 11 and ff.

(1) Standalone SAR test exclusion for 100 MHz to 6 GHz at test separation distances $\leq 50\text{mm}$

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

where

$\text{Threshold}_{1\text{-g};10\text{-g}}$ is 3 for 1-g; 7.5 for 10-g

$d_{\text{separation}}$ 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]	$d_{\text{separation}}$ [mm]	$\text{Threshold}_{1\text{-g}}$	Powerlimit [mW]	$P_{\text{max-declared}}$		Exclusion
				[dBm]	[mW]	
2450.00	5	3	9.58	-7.49	0.18	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.

frequency [MHz]	$d_{\text{separation}}$ [mm]	tissue volume	Powerlimit [mW]	$P_{\text{max-declared}}$		Exclusion
				[dBm]	[mW]	
2450.00	5	1 g	4.00	-7.49	0.18	yes

The limits above are defined for body worn application and therefore cover all use cases.