

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

Report identification number: 1-0832/20-01-11 Exclusion (FCC_ISED)

contains the module with the following certification numbers	
FCC ID	2ACAHAU5MNRT
ISED number	11936A-AU5MNRT
HVIN (Hardware Version Identification Number)	MI_AU5_MNR_T
PMN (Product Marketing Name)	MI_AU5_MNR_T
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 power: (AVG)	Max. antenna gain:	Min. pathloss:
Bluetooth LE 2450 MHz	2.7 dBm	2.6 dBi	0 dB (if applicable)

NOTE: Bluetooth LE test results see CTC advanced test report 1-0832/20-01-05-A.

Max. measured conducted output power: 7.4 dBm

The duty cycle for BT LE is documented in Annex A of this document. (33.9%) → 2.7 dBm AVG

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 ≤ 50mm

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

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	2.70	1.86	yes

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

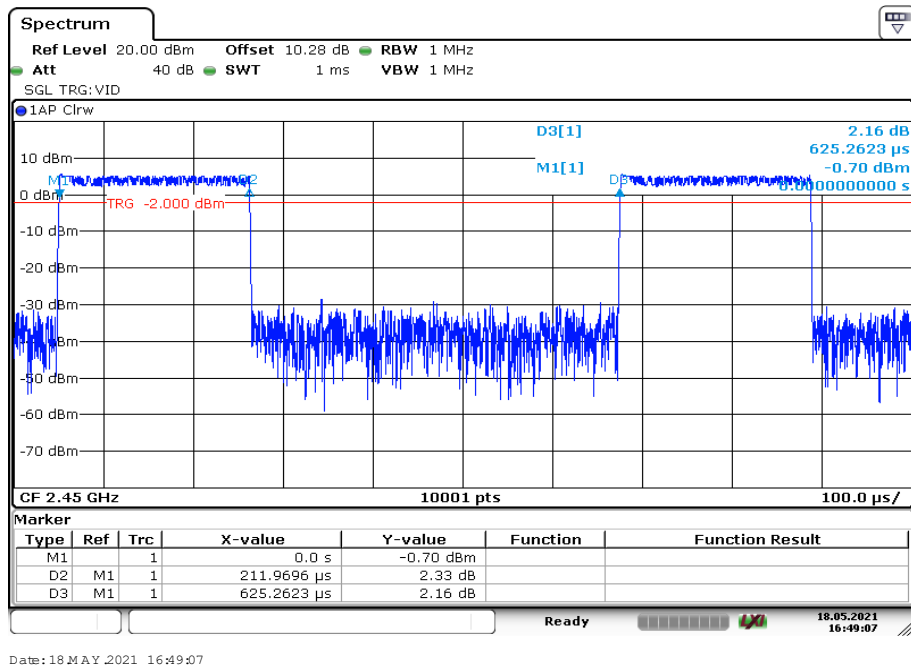
The table below gives the calculated maximal power that could be used for source based time averaged conducted or radiated power, adjusted for tune up tolerance. If this is at or below the calculated value the DUT is exempted from SAR evaluation.

frequency [MHz]	d _{separation} [mm]	tissue volume	Powerlimit [mW]	P _{max-declared}		Exclusion
				[dBm]	[mW]	
2450.00	5	1 g	4.00	5.30	3.39	yes

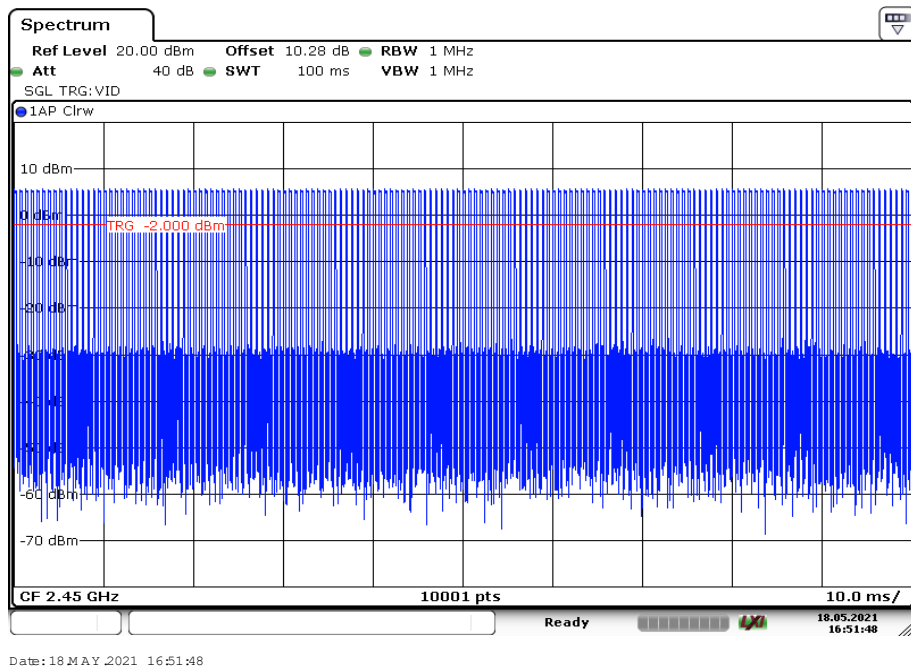
The limits above are defined for body worn application and therefore cover all use cases.

ANNEX A: Duty Cycle

Burst length:



Bursts in 100 ms:



Duty cycle in 100 ms: Burst length * Number of bursts = 0.212 ms*160 = 33.9%