



BNetzA-CAB-02/21-102

Radio Communications & EMC

# SAR Test exclusion documentation according to FCC KDB 447498, CFR 47 §1.1307 and RSS-102

Report identification number: 1-1604/20-03-03 Exclusion (FCC) / MPE (ISED)

contains the module with the following certification numbers		
FCC ID	PFJGA211	
ISED number	909C-GA211	
HVIN (Hardware Version Identification Number)	GA211	
PMN (Product Marketing Name)	GA211	
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.

Document authorised:				
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#### **EUT technologies:**

Technologies:	Max. measured E.I.R.P. per BW=1MHz (RMS):		BW	Max. Effective Power (Calculated) Max.meas.E.I.R.P. <sub>@1MHz</sub> x (BW/1MHz) (RMS)	
	(dBm)	(µW)	(MHz)	(µW)	(dBm)
UWB 6.2 to 6.8 GHz	-44.7	0.034	517.7	17.60	-17.54
UWB 7.6 to 8.3 GHz	-46.1	0.025	542.7	13.57	-18.68

NOTE: Result taken from CTC Advanced GmbH report 1-1604/20-03-02.

## Blanket test exemption according CFR 47 §1.1307:

 $\S1.1307(b)(3)(i)(A) - A$  single RF source is exempt if the available maximum time-averaged power is **no more than 1 mW**, regardless of separation distance.

## Prediction of MPE limit at given distance - ISED

RSS-102, general limitations for E- and H- Field

Reference levels for general public (uncontrolled environment) exposure to time-varying electric and magnetic fields

According to: RSS 102-ISSUE 05				
Frequency Range Power density		Reference Period		
(MHz)	(W/m²)	(minutes)		
0.003-10		Instantaneous*		
0.1-10		6**		
1.1-10		6**		
10-20	2	6		
20-48	8.944 / f <sup>0.5</sup>	6		
48-300	1.291	6		
300-6000	$0.02619 \times f^{0.6834}$	6		
6000-15000	10	6		
15000-150000	10	616000 / f <sup>1.2</sup>		
150000-300000	$6.67 \times 10^{-5} \times f$	616000 / f <sup>1.2</sup>		
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**Note:** f is frequency in MHz.

#### Prediction: worst case

		UWB	UWB	
	Frequency	6500	8000	MHz
R	Distance	5	5	mm
PG	Maximum EIRP	-17.54	-18.68	dBm
PG	Maximum EIRP	17.6	13.6	μW
S	Power density	0.1	0.0	W/m²
	Exclusion Limit from above:	10.0	10.0	W/m²
	Calculated percentage of Limit:	0.56%	0.43%	·

<sup>\*</sup> Based on nerve stimulation (NS).

<sup>\*\*</sup> Based on specific absorption rate (SAR).