



CTC  **advanced**
member of RWTÜV group



Bundesnetzagentur

BNetzA-CAB-02/21-102

SAR Test exclusion documentation according to CFR 47 §1.1307, RSS-102

Report identification number: 1-7847/19-01-06 Exclusion (FCC) / MPE (ISED)

contains the module with the following certification numbers	
FCC ID	2APE2-TRACKBASE
ISED number	24012-TRACKBASE
HVIN (Hardware Version Identification Number)	A
PMN (Product Marketing Name)	TRACKING BASE
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 (MHz)	Max. Effective Power (Calculated) Max.meas.E.I.R.P. @1MHz x (BW/1MHz) (RMS)	
	(dBm)	(µW)		(µW)	(dBm)
UWB (Channel 1) 3.0 to 4.0 GHz	-43.23	0.048	569.76	27.35	-15.63
UWB (Channel 2) 3.5 to 4.5 GHz	-43.42	0.046	606.66	27.91	-15.54
UWB (Channel 3) 4.0 to 5.0 GHz	-42.08	0.062	547.77	33.96	-14.69
UWB (Channel 4) 3.3 to 4.8 GHz	-44.42	0.036	1004	36.14	-14.42
UWB (Channel 5) 6.0 to 7.0 GHz	-42.34	0.058	606.73	35.19	-14.54
UWB (Channel 7) 5.8 to 7.2 GHz	-42.99	0.050	1030	51.50	-12.88

NOTE: Result taken from CTC Advanced GmbH report 1-7847/19-01-03-A.

Blanket test exemption according CFR 47 §1.1307:

§1.1307(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 (MHz)	Power density (W/m ²)	Reference Period (minutes)
0.003-10	--	Instantaneous*
0.1-10	--	6**
1.1-10	--	6**
10-20	2	6
20-48	$8.944 / f^{0.5}$	6
48-300	1.291	6
300-6000	$0.02619 \times f^{0.6834}$	6
6000-15000	10	6
15000-150000	10	$616000 / f^{1.2}$
150000-300000	$6.67 \times 10^{-5} \times f$	$616000 / f^{1.2}$

Note: f is frequency in MHz.
 * Based on nerve stimulation (NS).
 ** Based on specific absorption rate (SAR).

Prediction: worst case

		UWB (CH7)	
	Frequency	6500	MHz
R	Distance	5	mm
PG	Maximum EIRP	-12.88	dBm
PG	Maximum EIRP	51.5	µW
S	Power density	0.2	W/m ²
Exclusion Limit from above:		10.0	W/m ²
Calculated percentage of Limit:		1.64%	