



SAR Test exemption documentation according to CFR 47 §1.1307

Report identification number: 1-1604/20-09-03 Exemption / MPE (FCC)

contains the module with the following certification numbers

FCC ID	PFJGA211A
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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:

MPE based exempted technologies:

Technologies:	Max. measured E.I.R.P. per BW=1MHz:		BW (MHz)	Max. declared E.I.R.P. per BW=1MHz:	Max. Effective Power (Calculated) Max.meas.E.I.R.P. _{@1MHz} x (BW/1MHz)	Max. declared E.I.R.P. for Full BW: Max.decl.E.I.R.P. _{@1MHz} X (BW/1MHz)	#
	(dBm)	(μW)		(dBm)			
UWB 6.2 to 6.8 GHz	-41.4	0.072	569.7	< -41.3 (=0.07413μW)	41.02 μW	0.07413μW x 569.7 = 42.232μW (ERP: 25.751 μW)	A
UWB 7.6 to 8.3 GHz	-42.2	0.060	559.7	< -41.3 (=0.07413μW)	33.58 μW	0.07413μW x 559.7 = 41.491μW (ERP: 25.299 μW)	A

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

#	Results from:	Additional information
A	1-1604/20-06-03 CTC Advanced GmbH	--

Declared minimum safety distance: 1cm

According the manual a safety distance of 1cm shall be applied between the user (and/or bystanders) to the EUT antenna whilst active transmitting.

MPE-Based Exemption following 47 CFR 1.1307 amendment:

If the declared ERP does not exceed the specified threshold based on the calculations below, the device is exempt from routine evaluation.

Transmitter Frequency (MHz)	Threshold ERP (W)
0.3 – 1.34	$1.920 R^2$
1.34 – 30	$3.450 R^2/f^2$
30 – 300	$3.83 R^2$
300 – 1500	$0.0128 R^2$
1500 – 100 000	$19.2 R^2f$

where

f is the frequency (MHz)

R is the separation distance (at least $\lambda/2\pi$)

Prediction: worst case

Technology	Transmitter frequency (MHz)	$R_{\min}$ (mm)	Max. decl. ERP (mW)	Treshhold ERP		Minimal Safety Distance (mm)
				(mW)	(dBm)	
UWB	6200	8	0.02525	1.92	2.8	10
UWB	6800	7	0.02525	1.92	2.8	10
UWB	7600	6	0.02539	1.92	2.8	10
UWB	8300	6	0.02539	1.92	2.8	10

This prediction demonstrates the following:

The power density levels for FCC that are larger than the minimum safety-distances stated above, are below the maximum levels allowed by regulations.