

## RF Exposure Compliance

**RESULT:****Pass**

Test standard : FCC Part 1.1091  
Limit : Table 1 of 47 CFR FCC Part 1.1310  
Kind of test site : Shielded room

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm. Therefore MPE measurement or computational modelling should be used to determine compliance.

MPE Calculation is based on the conducted power, and considering maximum power and Antenna gain. The following formula is used to MPE evaluation.

$$Pd = \frac{P_{out} * G}{4R^2\pi}$$

Where

$P_d$  = power density in mW/cm<sup>2</sup> or W/m<sup>2</sup>

$P_{out}$  = output power to antenna in mW or W

$G_{num}$  = Antenna gain in numeric

$\pi$  = 3.14159

R = Distance between observation point and the center of radiator in cm or m

**FCC Part 1.1310, Part 2.1091**


According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

**MPE-Based Evaluation:**

Operating Mode	Max. EIRP incl. tune-up (dBm)	Distance (cm)	MPE (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Verdict
24GHz SRD	17.326	20	0.0107	1.0	Pass
The Max fundamental is <a href="#">112.555dBuV/m@3m</a> (Refer to report CN23WPIZ 002), i.e. 17.326dBm when converted to EIRP.					

**Inclusion: The MPE is much lower than the limit.**

<b>geprüft von:</b> <i>tested by:</i>	 <hr/> Signed by: Chris Chen
<b>Datum:</b> <i>Date:</i> 2023-03-10	
<b>Stellung / Position</b>	Section Manager