

Maximal Permissible Exposure

FCC ID: V9N106308900A1

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy in excess limit for maximum permissible exposure.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 and RSS-102 this device has been defined as a mobile device whereby a distance of 0.2, normally can be maintained between the user and the device.

The following calculation presents the exposure value against the limits for occupational / controlled use.

Operating mode: UPCS

name			nature value	log value		
max conducted power			109,14mW	20,38dBm		
max Antenna gain dBi			1,58	2,00dBi		
max Antenna gain dBd			0,97	-0,15dBd		
calculated radiated power		EIRP	172,98mW	22,38dBm		
		ERP	105,48mW	20,23dBm		
measured radiated power		EIRP	0,40mW	-3,98dBm		
		ERP	1,00mW	dBm		
duty cycle factor						
frequency	1900MHz					
dwell time			100ms			
Time of occupancy/puls-train time			100ms			
duty cycle factor	10log(dwell time/100 ms)		100,00%	0,00dB		
max source-based time-averaged power						
conducted power			109,14mW	20,38dB		
calculated radiated power		EIRP	172,98mW	22,38dB		
measured radiated power		EIRP	0,40mW	-3,98dB		
MPE						
$S = \frac{PG}{4\pi R^2}$		calculated with max source-based time-averaged power measured conducted power				
power density		r [cm]	20	2,5	1,5	3,711121 56
		S [mW/cm ²]	0,034	2,204	6,121	1
Limit general population		[mW/cm ²]	1,000			
Limit occupational population		[mW/cm ²]	5,00	for f =	1900 MHz	
$S = \frac{EIRP}{4\pi R^2} = \frac{1,64 \text{ ERP}}{4\pi R^2} = \frac{0,41 \text{ ERP}}{\pi R^2}$		calculated with max source-based time-averaged power measured radiated power			0,282166 32	
		r [cm]	20	2,5	1,5	3,711121 56
		S [mW/cm ²]	0,000	0,013	0,035	1