eurofins | Product Service GmbH

Maximal Permissible Exposure

FCC ID: UTCAP300-001

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 (DECT 6.0)

name			nature value	log value
max conducted power			132,74 mW	21,23 dBm
max Antenna gain			1,41	1,50 dBi
calculated radiated power		EIRP	187,50 mW	22,73 dBm
measured radiated power		EIRP	231,21 mW	23,64 dBm
Tx frequency	1928,448	MHz		
duty cycle factor				
duty cycle factor	10log (dwell time/100 ms)	declared	**50,0%**	-3,01 dB
max source-based time-averaged power				
conducted power			**66,37** mW	18,22 dB
calculated radiated power		EIRP	**93,75** mW	19,72 dB
measured radiated power		EIRP	**115,60** mW	20,63 dB

M P E

$$S = \frac{PG}{4\pi R^2}$$

calculated with max source-based time-averaged power
measured conducted power

r [cm]	20	2,5	1,5	**2,73**
S [mW/cm²]	**0,019**	**1,194**	**3,317**	1,0

Limit general population		[mW/cm²]	1,0
Limit occupational population		[mW/cm²]	5,0

for f = 1928,448 MHz

$$S = \frac{EIRP}{4\pi R^2} = \frac{1.64\ ERP}{4\pi R^2} = \frac{0.41\ ERP}{\pi R^2}$$

calculated with max source-based time-averaged power
measured radiated power

r [cm]	20	2,5	1,5	**3,03**
S [mW/cm²]	**0,023**	**1,473**	**4,091**	1,0