Maximal Permissible Exposure

FCC IC: RFF-3DDISTO
IC: 3177A-3DDISTO

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 m, 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: DSSS, 1Mbps, power level 12

name			nature value	log value
max conducted power			21,88 mW	13,40 dBm
max Antenna gain			0,75	-1,23 dBi
calculated radiated power		EIRP	16,48 mW	12,17 dBm
measured radiated power		EIRP	9,12 mW	9,60 dBm
Tx frequency	2462,000 MHz			
duty cycle factor				
duty cycle factor	10log(dwell time/100 ms)	declared	**95,0%**	-0,22 dB
max source-based time-averaged power				
conducted power			**20,78** mW	13,18 dB
calculated radiated power		EIRP	**15,66** mW	11,95 dB
measured radiated power		EIRP	**8,66** mW	9,38 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	**1,12**
S [mW/cm²]	**0,003**	**0,199**	**0,554**	1,0

Limit general population	[mW/cm²]	1,0	for f = 2462,000	MHz
Limit occupational population	[mW/cm²]	5,0		

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

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

r [cm]	20	2,5	1,5	**0,83**
S [mW/cm²]	**0,002**	**0,110**	**0,307**	1,0