

US Tech Test Report:
FCC ID:
Test Report Number:
Issue Date:
Customer:
Model:

FCC Part 15 Certification
2AUF1-FT-06FLC
20-0196
July 6, 2020
OKYANUS TEKNOLOJI
FT-06FLC

Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, **d**, of 20 cm from the EUT.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Therefore, for:

MPE for 2400 MHz – 2483.5 MHz

Limit: 1 mW/cm²

Peak Power (dBm) = +9.0 dBm

Peak Power (Watts) = 0.008 W

Gain of Transmit Antenna = 2.8 dBi = 1.91, numeric

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG/4\pi d^2) = \text{EIRP}/4A = 0.008*(1.91)/4*\pi*0.2*0.2 \\ &= 0.0153/0.5030 = 0.0304 \text{ W/m}^2 \\ &= (0.0304 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.00304 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 1 mW/cm²

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Therefore, for:

MPE for 4308.00 MHz (UWB Radio #1) FCC ID: 2AUF1-UWB001

Limit: 1 mW/cm²

Peak Power (dBuV/m) = 70.30 dBuV/m @ 3

Peak Power (dBm) = 70.30 dBuV/m + 20 log(3) – 104.8 = -24.85 dBm

Peak Power (Watts) = 0.000003 W

Gain of Transmit Antenna = 2.6 dBi = 1.82, numeric

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG/4\pi d^2) = \text{EIRP}/4A = 0.000003 \cdot (1.82)/4 \cdot \pi \cdot 0.2^2 \\ &= 0.000006/0.5030 = 0.000011 \text{ W/m}^2 \\ &= (0.000011 \text{ W/m}^2) (1 \text{ m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.0000011 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 1 mW/cm²

MPE for 4308.00 MHz (UWB Radio #2) FCC ID: 2AUF1-UWB001

Limit: 1 mW/cm²

Peak Power (dBuV/m) = 70.30 dBuV/m @ 3

Peak Power (dBm) = 70.30 dBuV/m + 20 log(3) – 104.8 = -24.85 dBm

Peak Power (Watts) = 0.000003 W

Gain of Transmit Antenna = 2.6 dBi = 1.82, numeric

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG/4\pi d^2) = \text{EIRP}/4A = 0.000003 \cdot (1.82)/4 \cdot \pi \cdot 0.2^2 \\ &= 0.000006/0.5030 = 0.000011 \text{ W/m}^2 \\ &= (0.000011 \text{ W/m}^2) (1 \text{ m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.0000011 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 1 mW/cm²

Summation:

$$0.0000011 \text{ mW/cm}^2 + 0.0000011 \text{ mW/cm}^2 = 0.0000022 \text{ mW/cm}^2$$

which is << less than S = 1 mW/cm²