

US Tech Test Report:

FCC ID:

Test Report Number:

Issue Date:

Customer:

Model:

FCC Part 15 Certification

2AUFI-FT-06DCH

20-0187

June 26, 2020

OKYANUS TEKNOLOJİ

FT-06DCH, FT-06DCH-POE, FT-06DCH – POE-IO

### Maximum Permissible 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 <sup>2</sup> )	Averaging time (minutes)
<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
300-1,500			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/cm<sup>2</sup>

Peak Power (dBm) = 13.01 dBm

Peak Power (Watts) = 0.020 W

Gain of Transmit Antenna = 2.0 dB<sub>i</sub> = 1.58, numeric

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} \mathbf{S} &= (\mathbf{P}\mathbf{G} / 4\pi\mathbf{d}^2) = \mathbf{EIRP}/4\mathbf{A} = 0.020 * (1.58) / 4 * \pi * 0.2 * 0.2 \\ &= 0.0316 / 0.5030 = 0.0628 \text{ W/m}^2 \\ &= (0.0628 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.00628 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 1 mW/cm<sup>2</sup>

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**NOTE: This information included here for simultaneous MPE calculation reasons only.**

**Simultaneous transmission MPE calculation for all radios in the EUT:**

From above for operation at 20cm or greater:

Individual Power Spectral Density ratios:

This EUT: 0.00628 mW/cm<sup>2</sup>

UWB module FCC ID: 2AUFI-UWB001: 0.0000011 mW/cm<sup>2</sup>

Sum of the total of all radios = 0.0062811 mW/cm<sup>2</sup>

which is << less than 1 mW/cm<sup>2</sup>