


## **MPE Calculation according part 47 CFR 1.1310**

		Test Item
<b>Kind of test item:</b>	Discussion unit	
<b>Model name:</b>	Quinta MU 31 and Quinta MU 33	
<b>FCC ID:</b>	OSDQUINTAMU3X	
<b>IC:</b>	3628A-QUINTAMU3X	
<b>Frequency:</b>	UNII band 5150 MHz to 5250 MHz (lowest channel 5180, highest channel 5240 MHz)	



**Table of contents**

**1 MPE Calculation ..... 2**  
1.1 Prediction of MPE limit at given distance.....2

**1 MPE Calculation**

**1.1 Prediction of MPE limit at given distance**

Equation from page 18 of OET Bulletin 65, Edition 97-01

**$S = PG / 4\pi R^2$**

- where: S = Power density
- P = Power input to the antenna
- G = Antenna gain
- R = Distance to the center of radiation of the antenna

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure"

Frequency Range (MHz)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction:

- P Max power input to the antenna: 17.51 dBm / 56.36 mW (conducted measurement value)
- R Distance: 20 cm
- S MPE limit for uncontrolled exposure: 1 mW/cm<sup>2</sup>
  
- G Antenna gain: 3.98 numerical (+6 dBi)
  
- Calculated Power density: 0.0446 mW/cm<sup>2</sup>

**This prediction demonstrates the following:**

The power density levels at a distance of 20 cm are below the maximum levels allowed by FCC regulations

**Signature:**

**Date: 2013-10-30**

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