



## **MPE Calculation / RF Exposure**

Applicant name: BBR Displayworks Inc

Product name: TvPOP G1

Model name: TP01AS

FCC ID : 2AAC5-TP01AS

The FCC requires that the calculated MPE be equal to or less than a given limit dependent on frequency at a distance of 20 cm from the device to the body of the user. The equation for the calculation is given in OET Bulletin 65, page 19 as:

$$S = \text{EIRP} / 4 \pi R^2$$

### **Where**

S = Power density

EIRP = Effective Isotropically Radiated Power

R = distance to the centre of radiation of the antenna

### **Values**

S = 1.0 mW/cm<sup>2</sup> for General population uncontrolled exposure (FCC Part 1.1310 Radiofrequency radiation exposure limits)

$$S = 1.0 \text{ mW/cm}^2$$

PT = 11.41 dBm (13.83 mW) : measured maximum peak output power

G = Antenna gain = 1.21 dBi (1.32 in linear terms)

$$\text{EIRP} = \text{PT} \times \text{G}$$

R = 20 cm

### **Calculation**

$$\text{EIRP} = 13.83 \times 1.32 = 18.25 \text{ mW}$$

$$S = 18.25 / 12.56 \times (20)^2$$

$$S = 18.25 / 5024$$

$$S = 0.00363 \text{ mW/cm}^2$$

### **Conclusion**

This confirms compliance to the required FCC Part 1.1310 Radiofrequency radiation exposure limit of 1.0m W/cm<sup>2</sup> at 20 cm operation.