




Canada

## **Exhibit: RF Exposure – FCC**

FCC ID: 2AQSOCBRSYS6500

Report File #: 7169004663E-000

Client	<b>Octasic Inc.</b>	
Product	<b>CBRSYS6500</b>	
Standard(s)	FCC KDB 447498:2015	

## **RF Exposure – FCC**

The EUT contains a UMTS Transmitter, operating at 5 MHz bandwidth, in the following bands.

FCC Rule part	Band #	Lower (MHz)	Upper (MHz)
22	5	869	894
24	2	1930	1990
27	4	2110	2155

## **Radiofrequency Radiation Exposure Evaluation: Mobile Devices**

Mobile devices shall be evaluated for RF radiation exposure according to the provisions of FCC §2.1091 and the MPE guidelines identified in FCC §1.1310.

As per FCC §1.1310 Table 1(B), the limit for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields for General Population/Uncontrolled Exposure in the frequency range of 300 MHz to 1.5 GHz is  $f/1500$  mW/cm<sup>2</sup> and in the frequency range of 1.5GHz to 100GHz is 1.0 mW/cm<sup>2</sup>. Where f = frequency in MHz.

The power density formula is given by:

$$P_d = (P_{out} * G) / (4 * \pi * R^2)$$

Where,


$P_d$  = Power density in mW/cm<sup>2</sup>

$P_{out}$  = Conducted output power to antenna in mW

G = Numeric Antenna Gain

Pi = 3.1416

R = Separation distance in cm (120cm as specified by client).

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### MPE Calculation:

The UMTS transmitter has a maximum conducted output power of 43 dBm or 20 W.

For a distance of 120cm, the power density is as per the below table.

FCC Rule part	Band #	Lower (MHz)	Upper (MHz)	Antenna Gain (dBi)	Power (dBm)	Calculated (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Pass/Fail
22	5	869	894	4	43	0.277	0.579	Pass
24	2	1930	1990	8	43	0.696	1	Pass
27	4	2110	2155	8	43	0.696	1	Pass

The device passes the requirement.