



Canada

## **Exhibit: RF Exposure – FCC**

FCC ID: 2AQSOCBRSYS6500

Report File #: 7169004663E-000

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Client	Octasic Inc.
Product	CBRSYS6500
Standard(s)	FCC KDB 447498:2015



## RF Exposure – FCC

The EUT contains a CDMA2K Transmitter, operating at 1.48 MHz bandwidth, in the following bands.

FCC Rule part	Band #	Lower (MHz)	Upper (MHz)
90	10	860	869
90	0a	860	869
22	0b	869	894
24	14	1930	1995
27	15	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  $f/1500 \text{ mW/cm}^2$  and in the frequency range of 1.5GHz to 100GHz is  $1.0 \text{ mW/cm}^2$ . 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  $\text{mW/cm}^2$

$P_{out}$  = 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 LTE 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^2)	Limit (mW/cm^2)	Pass/Fail
90	10	860	869	4	43	0.277	0.486	Pass
90	0a	860	869	4	43	0.277	0.497	Pass
22	0b	869	894	4	43	0.277	0.579	Pass
24	14	1930	1995	8	43	0.696	1	Pass
27	15	2110	2155	8	43	0.696	1	Pass

The device passes the requirement.