



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 an LTE Transmitter, operating at 5 MHz bandwidth, in the following bands.

FCC Rule part	Band #	Lower (MHz)	Upper (MHz)
27	71	617	652
27	12	729	746
27	13	746	756
22	5	869	894
24	2	1930	1990
24	25	1930	1995
27	4	2110	2155
27	66	2110	2200
27	30	2350	2360
27	41	2496	2690

## 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 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
27	71	617	652	4	43	0.277	0.411	Pass
27	12	729	746	4	43	0.277	0.486	Pass
27	13	746	756	4	43	0.277	0.497	Pass
22	5	869	894	4	43	0.277	0.579	Pass
24	2	1930	1990	8	43	0.696	1	Pass
24	25	1930	1995	8	43	0.696	1	Pass
27	4	2110	2155	8	43	0.696	1	Pass
27	66	2110	2200	8	43	0.696	1	Pass
27	30	2350	2360	7.5	43	0.696	1	Pass
27	41	2496	2690	7.5	40	0.349	1	Pass

The device passes the requirement.