

3rd March 2015

**Telecommunication Certification Body
UL Verification Services Ltd
Offices 18-26 Grove House
Lutyens Close
Chineham Court,
Basingstoke
Hampshire
RG24 8AG**

RE: Band 14 RN2420 eNode B FCC ID: PKTNODEBBBK MPE Calculation.

To Whom It May Concern,

The General Dynamics Broadband Band 14 RN2420 eNode B is considered to be fixed equipment and intended for operation with separation distances greater than 20cm between the user and the equipment. Therefore the RF Exposure performance can be assessed by a Maximum Permissible Exposure (MPE) calculation using the limits defined in Part 1.1310 Table 1B for the General Population/Uncontrolled Exposure category.

The General Dynamics Broadband Band 14 RN2420 eNode B uses frequency division duplex (FDD) technology in normal operation with a duty cycle of 100%, therefore source based averaging is not applied in the MPE calculation.

MPE Distance Calculation	Channel Size		
	5MHz	10MHz	
Antenna Gain	20	20	dBi
Line Loss	0	0	dB
Antenna Gain Ratio	100	100	
V6 eNode B Tx Output Power (per branch)	40	40	dBm
Upper Power Tolerance (per branch)	2	2	
Number of Transmitter Branches	2	2	
Total Output Power - all branches	31697.86	31697.86	mW
Maximum EIRP - all branches	3169786.38	3169786.38	mW
Frequency	758	758	MHz
MPE Limit from 1.1310	0.505	0.505	mw/cm ²
Un-controlled/General Public Limit			
Minimum Distance to meet MPE Limit	706.51	706.51	cm
(100% Duty Cycle)	277.94	277.94	inches

Table 1: 100% Duty Cycle Calculation

The calculations above show the General Dynamics Broadband Band 14 RN2420 eNode B complies with the un-controlled /General Public limit of $0.505\text{mW}/\text{cm}^2$ at a minimum distance of 7.07m for operation using either 5MHz or 10MHz channel sizes.

Yours Faithfully



P Warburg
Principal Engineer
General Dynamics Broadband.