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RE: 700MHz V5 Node B FCC ID: PKTNODEBAFB1 MPE Calculation

To Whom It May Concern,

The MPE calculation in table 1 below for the 700MHz V5 Node B assumes the transmitter is operating using a 100% duty cycle, this is the worst case operating configuration. The limit is calculated with $f = 728\text{MHz}$ as this is the lowest frequency of the Node B and provides the most conservative assessment.

MPE Distance Calculation	5MHz Channel	
Antenna Gain	20	dBi
Line Loss	0	dB
Antenna Gain Ratio	100	
700MHz V5 Node B Model AFB Tx Output Power	40	dBm
Output Power mW	10000.00	mW
Maximum EIRP (per Channel)	1000000.00	mW
MPE Limit from 1.1310 ($f_{\text{MHz}}/1500$)	0.485	mw/cm ²
Un-controlled/General Public Limit		
Minimum Distance to meet MPE Limit	405.06	cm
(100% Duty Cycle)	159.35	inches

Table 1: 100% Duty Cycle Calculation



The calculations above show the 700MHz V5 Node B complies with the uncontrolled/ General Public limit of 0.485 mW/cm^2 at a minimum distance of 4.06m for operation using 5MHz channels.

Yours Faithfully,

P Warburg
Technical Associate
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