



Unit 7 Greenways Business Park
Bellinger Close
Chippenham
Wiltshire SN15 1BN

Telephone: 01249 800100
Facsimile: 01249 800101

7th January 2011

PCTEST Engineering Laboratory
6660-B Dobbin Road
Columbia
MD 21045
USA

RE: 2.5GHz V5 Node B FCC ID: PKTNODEBAMF MPE Calculation.

To Whom It May Concern,

The MPE calculation in table 1 below for the 2.5GHz V5 Node B assumes the transmitter is operating using a 100% duty cycle. The Node B implements TDD (Time Division Duplex) technology and in normal operation, the duty cycle is a maximum of 67%, therefore source based averaging can be applied in the MPE calculation, see table 2.

MPE Distance Calculation	5.5MHz Channel		11MHz Channel	
Antenna Gain	20	dBi	20	dBi
Line Loss	0	dBi	0	dBi
Antenna Gain Ratio	100		100	
Node B Model HZ Output Power	40	dBm	37	dBm
Output Power mW	10000.00	mW	5011.87	mW
Maximum EIRP (per Channel)	1000000.00	mW	501187.23	mW
MPE Limit from 1.1310	1	mw/cm ²	1	mw/cm ²
Un-controlled/General Public Limit				
Minimum Distance to meet MPE Limit	282.09	cm	199.71	cm
(100% Duty Cycle)	110.97	inches	78.56	inches

Table 1: 100% Duty Cycle Calculation



Sourced Based Duty Cycle Adjustment	5.5MHz Channel		11MHz Channel	
Total Timeslots in Frame	15		15	
Timeslots for Transmit	10		10	
Timeslots for Receive	5		5	
Percentage time transmitting in Tx timeslot	100	%	100	%
Power Control Attenuation	0	dB	0	dB
Duty Cycle Correction Factor	66.67	%	66.67	%
Minimum Distance to meet MPE Limit	230.33	cm	163.06	cm
(66.67% Duty Cycle)	90.61	inches	64.15	inches

Table 2: Source Based Averaging Calculation

The calculations above show the 2.5GHz V5 Node B complies with the un-controlled/General Public limit of 1mW/cm² at a distance of 2.31m for operation in a 5.5MHz channel and at a distance of 1.64m for operation in an 11MHz channel when operated at the worst case duty cycle of 67%.

Yours Faithfully.

P Warburg
Principal Engineer
IPWireless UK Ltd