

EXHIBIT 13. CHANNEL PLAN AND SEPARATION

Not Applicable to this Device.

EXHIBIT 14. MPE CALCULATIONS

The following MPE calculations are based on the inverted-L printed circuit board trace antenna and the whip antenna, with a measured ERP of 137.2 dBμV/m and 135.1 dBμV/m respectively, at 1 meter, and conducted RF power of +28.8 dBm (Both antenna have peak power on channel 7) as presented to the antenna. The calculated gain of the trace antenna, based on the ERP measurements is 4.0 dB. The whip antenna has a declared gain of 1.0 dBi

14.1 MPE prediction for Trace antenna.

Prediction of MPE limit at a given distance	
Equation from page 18 of OET Bulletin 65, Edition 97-01	
$S = \frac{PG}{4\pi R^2}$	
where:	S = power density P = power input to the antenna G = power gain of the antenna in the direction of interest relative to an isotropic radiator R = distance to the center of radiation of the antenna
Maximum peak output power at antenna input terminal:	28.80 (dBm)
Maximum peak output power at antenna input terminal:	758.578 (mW)
Antenna gain (typical):	4 (dBi)
Maximum antenna gain:	2.512 (numeric)
Prediction distance:	20 (cm)
Prediction frequency:	2400 (MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1 (mW/cm ²)
Power density at prediction frequency:	0.379079 (mW/cm ²)
Maximum allowable antenna gain:	8.2 (dBi)
Margin of Compliance at 20 cm =	4.2 dB

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Report #: 306468 TCB TX v3	Customer FCC ID #: TMB-EM000019	Page 67 of 73

14.2 MPE prediction for Whip antenna.

<u>Prediction of MPE limit at a given distance</u>			
Equation from page 18 of OET Bulletin 65, Edition 97-01			
$S = \frac{PG}{4\pi R^2}$			
where:	S = power density		
	P = power input to the antenna		
	G = power gain of the antenna in the direction of interest relative to an isotropic radiator		
	R = distance to the center of radiation of the antenna		
	Maximum peak output power at antenna input terminal:	28.80	(dBm)
	Maximum peak output power at antenna input terminal:	758.578	(mW)
	Antenna gain(typical):	1	(dBi)
	Maximum antenna gain:	1.259	(numeric)
	Prediction distance:	20	(cm)
	Prediction frequency:	2400	(MHz)
	MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm ²)
	Power density at prediction frequency:	0.189990	(mW/cm ²)
	Maximum allowable antenna gain:	8.2	(dBi)
	Margin of Compliance at 20 cm =	7.2	dB

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