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August 3, 2012

Subject: RF MPE EXPOSURE

Re: FCC ID: PWO277280

To Whom It May Concern:

The MPE calculations for model 277280 signal booster were done for each frequency band: 800 MHz and 1900 MHz. For each band two calculations were done; these included the different possibilities of antennas that may be connected to this signal booster: fixed outside and inside antennas. The order of the attached calculations is as follows:

800 MHz band:

1. Fixed Outside Antenna
2. Inside Antenna

1900 MHz band:

3. Fixed Outside Antenna
4. Inside Antenna

The results of these calculations determine the safe distances and gains for antennas that may be connected to this signal booster as summarized below:

	Fixed Outside Antenna	Inside Antenna
Maximum Gain less Cable Loss (dBi)	15	12.1
Minimum Distance from All People (inches/cm)	21/52	8/20

Sincerely,

A handwritten signature in black ink, appearing to read 'Patrick L. Cook', is written over a light blue grid background.

Patrick L. Cook

Senior Research and Development Engineer



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	824
Pout Watts	0.57500
Duty Cycle Percent	100.0%
Ant. Gain dBi	15.00
Coax Loss dB	0.00
Distance From Antenna In cm	52.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	15.00
Distance From Antenna In Inches	20.47
ERP (Watts)	11.0873
EIRP (Watts)	18.1831
FCC Power Density Limit (mw/cm ²)	0.55
Calculated Power Density (mw/cm ²)	0.54

REFERENCE DATA

Pout dBm	27.60
Antenna Gain (non-log)	31.62
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	869
Pout Watts	0.15100
Duty Cycle Percent	100.0%
Ant. Gain dBi	12.10
Coax Loss dB	0.00
Distance From Antenna In cm	20.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	12.10
Distance From Antenna In Inches	7.87
ERP (Watts)	1.4933
EIRP (Watts)	2.4489
FCC Power Density Limit (mw/cm ²)	0.58
Calculated Power Density (mw/cm ²)	0.49

REFERENCE DATA

Pout dBm	21.79
Antenna Gain (non-log)	16.22
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	f/1500



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	1850
Pout Watts	0.52500
Duty Cycle Percent	100.0%
Ant. Gain dBi	15.00
Coax Loss dB	0.00
Distance From Antenna In cm	36.5

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	15.00
Distance From Antenna In Inches	14.37
ERP (Watts)	10.1231
EIRP (Watts)	16.6020
FCC Power Density Limit (mw/cm ²)	1.00
Calculated Power Density (mw/cm ²)	0.99

REFERENCE DATA

Pout dBm	27.20
Antenna Gain (non-log)	31.62
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	1.00



Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	1930
Pout Watts	0.17000
Duty Cycle Percent	100.0%
Ant. Gain dBi	14.60
Coax Loss dB	0.00
Distance From Antenna In cm	20.0

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	14.60
Distance From Antenna In Inches	7.87
ERP (Watts)	2.9895
EIRP (Watts)	4.9029
FCC Power Density Limit (mw/cm ²)	1.00
Calculated Power Density (mw/cm ²)	0.98

REFERENCE DATA

Pout dBm	22.30
Antenna Gain (non-log)	28.84
Coax loss (non-log)	1.00
General FCC Limit (mw/cm ²)	1.00