WILSON ELECTRONICS, LLC
3301 E. Deseret Dr, St. George, UT 84790
T. 1 800 204 4104 F. 1 435 673 0899 E. info@weboost.com
www.wilsonelectronics.com

August 4, 2025
Subject: RF MPE EXPOSURE
Re: FCC ID: PWO075i

To Whom It May Concern:

The MPE calculations for model 460075 signal booster were done for each frequency band: 700 MHz Band 12, 700 MHz Band 13, 800 MHz Band 5, 1900 MHz Band 25, and 1700/2100 MHz Band 4. For each band, one calculation was done; this included an outside antenna, and an inside antenna that may be connected to this signal booster. The order of the attached calculations is as follows:

700 MHz Band 12:
1. Inside Antenna: 304412-952300
2. Inside Antenna: 311242-952300

700 MHz Band 13:
1. Inside Antenna: 304412-952300
2. Inside Antenna: 311242-952300

800 MHz Band 5:
1. Inside Antenna: 304412-952300
2. Inside Antenna: 311242-952300

1900 MHz Band 25:
1. Inside Antenna: 304412-952300
2. Inside Antenna: 311242-952300

1700/2100 MHz Band 4:
1. Inside Antenna: 304412-952300
2. Inside Antenna: 311242-952300

1. Outside Antenna: 314411-952300

A booster's uplink power must not exceed 1 watt equivalent isotropic radiated power (EIRP) for each band of operation. Composite downlink power must not exceed 0.05 watt EIRP for each band of operation (20.21(e)(8)(i)(D)). The following formula was used to calculate the EIRP:

EIRP= Power Out (Watts)*Duty Cycle Percent*Antenna Gain (non-log)*Coax loss (non-log)

The power density (mW/cm^2) is calculated using the following formula:

Calculated Power Density=1000*EIRP (Watts)/(4*π*(Distance from Antenna (cm)^2))

Sincerely,

Ilesh Patel Senior Engineering Product Manager

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Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC Sources

Band 12 Downlink – 700MHz

INPUT DATA	
Frequency MHz	728
Pout Watts	0.06761
Duty Cycle Percent	100.0%
Ant. Gain dBi	-2.43
Coax Loss dB	0.00
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	-2.43
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.0386
FCC Power Density Limit (mw/cm^2)	0.49
Calculated Power Density (mw/cm^2)	0.0075
REFERENCE DATA	
Pout dBm	18.30
Antenna Gain (non-log)	0.57
Coax loss (non-log)	1.00
General FCC Limit (mw/cm^2)	f/1500

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Band 12 Uplink – 700MHz

INPUT DATA	
Frequency MHz	698
Pout Watts	0.41687
Duty Cycle Percent	100.0%
Ant. Gain dBi	7.30
Coax Loss dB	3.72
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	3.58
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.9506
FCC Power Density Limit (mw/cm^2)	0.47
Calculated Power Density (mw/cm^2)	0.1836
REFERENCE DATA	
Pout dBm	26.20
Antenna Gain (non-log)	5.37
Coax loss (non-log)	0.42
General FCC Limit (mw/cm^2)	f/1500

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Band 13 Downlink – 700MHz

INPUT DATA	
Frequency MHz	746
Pout Watts	0.06761
Duty Cycle Percent	100.0%
Ant. Gain dBi	-1.69
Coax Loss dB	0.00
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	-1.69
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.0458
FCC Power Density Limit (mw/cm^2)	0.50
Calculated Power Density (mw/cm^2)	0.0088
REFERENCE DATA	
Pout dBm	18.30
Antenna Gain (non-log)	0.68
Coax loss (non-log)	1.00
General FCC Limit (mw/cm^2)	f/1500

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Band 13 Uplink – 700MHz

INPUT DATA	
Frequency MHz	777
Pout Watts	0.33884
Duty Cycle Percent	100.0%
Ant. Gain dBi	7.20
Coax Loss dB	3.99
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	3.21
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.7096
FCC Power Density Limit (mw/cm^2)	0.52
Calculated Power Density (mw/cm^2)	0.1370
REFERENCE DATA	
Pout dBm	25.30
Antenna Gain (non-log)	5.25
Coax loss (non-log)	0.40
General FCC Limit (mw/cm^2)	f/1500

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Band 5 Downlink – 800MHz

INPUT DATA	
Frequency MHz	869
Pout Watts	0.12589
Duty Cycle Percent	100.0%
Ant. Gain dBi	-2.79
Coax Loss dB	0.00
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	-2.79
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.0662
FCC Power Density Limit (mw/cm^2)	0.58
Calculated Power Density (mw/cm^2)	0.0128
REFERENCE DATA	
Pout dBm	21.00
Antenna Gain (non-log)	0.53
Coax loss (non-log)	1.00
General FCC Limit (mw/cm^2)	f/1500

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Band 5 Uplink – 800MHz

INPUT DATA	
Frequency MHz	824
Pout Watts	0.18621
Duty Cycle Percent	100.0%
Ant. Gain dBi	7.80
Coax Loss dB	4.79
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	3.01
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.3724
FCC Power Density Limit (mw/cm^2)	0.55
Calculated Power Density (mw/cm^2)	0.0719
REFERENCE DATA	
Pout dBm	22.70
Antenna Gain (non-log)	6.03
Coax loss (non-log)	0.33
General FCC Limit (mw/cm^2)	f/1500

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Band 25 Downlink – 1900MHz

INPUT DATA	
Frequency MHz	1930
Pout Watts	0.23988
Duty Cycle Percent	100.0%
Ant. Gain dBi	-1.29
Coax Loss dB	0.00
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	-1.29
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.1782
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.0344
REFERENCE DATA	
Pout dBm	23.80
Antenna Gain (non-log)	0.74
Coax loss (non-log)	1.00
General FCC Limit (mw/cm^2)	1.00

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Band 25 Uplink – 1900MHz

INPUT DATA	
Frequency MHz	1850
Pout Watts	0.25119
Duty Cycle Percent	100.0%
Ant. Gain dBi	9.10
Coax Loss dB	7.18
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	1.92
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.3908
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.0755
REFERENCE DATA	
Pout dBm	24.00
Antenna Gain (non-log)	8.13
Coax loss (non-log)	0.19
General FCC Limit (mw/cm^2)	1.00

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Band 4 Downlink – 2100MHz

INPUT DATA	
Frequency MHz	2100
Pout Watts	0.16982
Duty Cycle Percent	100.0%
Ant. Gain dBi	-0.33
Coax Loss dB	0.00
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	-0.33
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.1574
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.0304
REFERENCE DATA	
Pout dBm	22.30
Antenna Gain (non-log)	0.93
Coax loss (non-log)	1.00
General FCC Limit (mw/cm^2)	1.00

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Band 4 Uplink – 1700MHz

INPUT DATA	
Frequency MHz	1710
Pout Watts	0.22387
Duty Cycle Percent	100.0%
Ant. Gain dBi	7.90
Coax Loss dB	5.85
Distance From Antenna In cm	20.3
RESULTS OF CALCULATIONS	
Ant. Gain less Coax Loss dBi	2.05
Distance From Antenna In Inches	7.99
EIRP (Watts)	0.3589
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.0693
REFERENCE DATA	
Pout dBm	23.50
Antenna Gain (non-log)	6.17
Coax loss (non-log)	0.26
General FCC Limit (mw/cm^2)	1.00