

Minimum Safe Distance From Antennas Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	2110
Pout Watts	0.23000
Duty Cycle Percent	100.0%
Ant. Gain dBi	13.20
Coax Loss dB	0.00

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	13.20
Min. Distance Inches	7.70
Min. Distance Centimeters	19.56
ERP (Watts)	2.9301
EIRP (Watts)	4.8054

REFERENCE DATA

Pout dBm	23.62
Antenna Gain (non-log)	20.89
Coax loss (non-log)	1.00
FCC Limit (mw/cm ²)	1.00
Calculated limit (mw/cm ²)	1.00

NOTES:

- (1) Valid only between 300 MHz 100,000 MHz.
- (2) Calculations are sufficient for determining antenna safe distance for <u>mobile</u> antennas and <u>fixed inside</u> antennas provided that calculated ERP < 1.5 watts for frequencies equal to or below 1.5 GHz, and calculated ERP < 3 watts for frequencies above 1.5 GHz.
- (3) Mobile antenna distances and fixed indoor antenna distances shall be no less than 8 inches.
- (4) There are no predefined ERP and distance limitations for fixed outside (building) antennas.
- (5) Mobile/portable stations are limited to 2 watts EIRP peak power in the 1900 MHz band (FCC rules §24.232[c]).

SUMMARY FOR PUBLICATION

For Amplifier Model Number:	272365
Frequency Band (MHz)	2110-2155 MHz (downlink)
Mobile or Fixed?	Fixed
Outside or Inside Antenna?	Inside
Antenna Type:	Any antenna whose gain less cable loss does not exceed 13.2 dBi
Safe Distance (inches):	8 inches
Signature:	What M. Khiw
Date:	July 12, 2011

7/14/2011, 1:07 PM MPE Calculations.xls



Minimum Safe Distance From Antennas Based upon FCC OET Bulletin 65 and other FCC Sources

INPUT DATA

Frequency MHz	1710
Pout Watts	0.61900
Duty Cycle Percent	100.0%
Ant. Gain dBi	7.90
Coax Loss dB	5.90

RESULTS OF CALCULATIONS

Ant. Gain less Coax Loss dBi	2.00
Min. Distance Inches	3.48
Min. Distance Centimeters	8.84
ERP (Watts)	0.5982
EIRP (Watts)	0.9810

REFERENCE DATA

Pout dBm	27.92
Antenna Gain (non-log)	6.17
Coax loss (non-log)	0.26
FCC Limit (mw/cm ²)	1.00
Calculated limit (mw/cm ²)	1.00

NOTES:

- (1) Valid only between 300 MHz 100,000 MHz.
- (2) Calculations are sufficient for determining antenna safe distance for <u>mobile</u> antennas and <u>fixed inside</u> antennas provided that calculated ERP < 1.5 watts for frequencies equal to or below 1.5 GHz, and calculated ERP < 3 watts for frequencies above 1.5 GHz.
- (3) Mobile antenna distances and fixed indoor antenna distances shall be no less than 8 inches.
- (4) There are no predefined ERP and distance limitations for fixed outside (building) antennas.
- (5) Mobile/portable stations are limited to 2 watts EIRP peak power in the 1900 MHz band per FCC rules §24.232(c).
- (6) Fixed/Mobile/Portable stations are limited to 1 watt EIRP in 1710-1755 MHz band per FCC rules §27.50(d)(4).

SUMMARY FOR PUBLICATION

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For Amplifier Model Number:	272365
Frequency Band (MHz)	1710-1755 MHz (Uplink)
Mobile or Fixed?	Fixed
Outside or Inside Antenna?	Outside
Antenna Type:	Any antenna whose gain less cable loss does not exceed 2 dBi
Safe Distance (inches):	8 inches
Signature:	Wheel M. Khim
Date:	September 1, 2011