

Electromagnetic Devices for Radio Communications Systems

September 11, 2012

Subject: RF MPE Exposure IC Label: 8986A-CBDAS1A1S

To Whom It May Concern:

The MPE calculations for model CBDAS1A1S signal booster were done for frequency band 800 Mhz.

For this band two calculations were done; these included the different possibilities of antennas that may be connected to this device : fixed outside and inside antennas.



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# Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC sources

INPUT DATA	
Frequency (Mhz)	824
Pout (Watts)	0.1
Duty Cycle (%)	100.00%
Ant. Gain (dBi)	13.00
Coax Loss (dB)	0
Distance From Antenna (cm)	17.00

### RESULTS

Ant. Gain less Coax Loss dBi	13.00	
Distance From Antenna (inches)	6.69	
ERP (Watt)	1.2166	
EIRP (Watt)	1.9953	
FCC Power Density Limit (mW/cm2)	0.55	
Calculated Power Density (mW/cm2)	0.55	

## **REFERENCE DATA**

Pout (dBm)		20
Antenna Gain (non-log)	19	9.95
Coax loss (non-log)		1
General FCC Limit (mW/cm2)	f/1500	



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## Minimum Safe Distance From Antennas

Based upon FCC OET Bulletin 65 and other FCC sources

INPUT DATA	
Frequency (Mhz)	869
Pout (Watts)	0.1
Duty Cycle (%)	100.00%
Ant. Gain (dBi)	6.00
Coax Loss (dB)	0
Distance From Antenna (cm)	7.40

#### RESULTS

Ant. Gain less Coax Loss dBi	13.00	
Distance From Antenna (inches)	2.91	
ERP (Watt)	0.2427	
EIRP (Watt)	0.3981	
FCC Power Density Limit (mW/cm2)	0.58	
Calculated Power Density (mW/cm2)	0.58	

## **REFERENCE DATA**

Pout (dBm)		20
Antenna Gain (non-log)		3.98
Coax loss (non-log)		1
General FCC Limit (mW/cm2)	f/1500	

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