To Whom It May Concern:

The MPE calculations for model C27G-CP 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: Yagi 11dbi
  2. Inside Antenna: Panel 10dbi
- 1900 MHz band：
  1. Fixed Outside Antenna: Yagi 11dbi
  2. Inside Antenna: Panel 10dbi

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 equivalent isotropic radiated power:

EIRP=Power Out (Watts) *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 $(cm)^2$))

Yagi 11dbi with 30' 5D N male

Input Data

Frequency MHz	824
Pout Watts	0.14
Antenna gain dBi	11
Coax Loss dB	1.7
Distance from Antenna In cm	20

Results Of Calculations

Antenna gain less Coax Loss dBi	9.3
Distance from Antenna In Inches	8
EIRP (Watts)	1.23
FCC Power Density Limit (mw/cm^2)	0.55
Calculated Power Density (mw/cm^2)	0.25

Reference Data

Pout dBm	21.61
Antenna Gain (non-log)	12.59
Coax Loss(non-log)	0.68
General FCC Limit (mw/cm^2)	f/1500

Panel 10dbi with 3' 5D N Male

Input Data

Frequency MHz	869
Pout Watts	0.00068
Antenna gain dBi	10
Coax Loss dB	0.2
Distance from Antenna In cm	20

Results Of Calculations

Antenna gain less Coax Loss dBi	9.8
Distance from Antenna In Inches	8
EIRP (Watts)	0.0065
FCC Power Density Limit (mw/cm^2)	0.58
Calculated Power Density (mw/cm^2)	0.00129

Reference Data

Pout dBm	-1.69
Antenna Gain (non-log)	10.00
Coax Loss(non-log)	0.95
General FCC Limit (mw/cm^2)	f/1500

Yagi 11dbi with 30' 5D N male

Input Data

Frequency MHz	1850
Pout Watts	0.14
Antenna gain dBi	11
Coax Loss dB	2.7
Distance from Antenna In cm	20

Results Of Calculations

Antenna gain less Coax Loss dBi	8.3
Distance from Antenna In Inches	8
EIRP (Watts)	0.95
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.19

Reference Data

Pout dBm	21.47
Antenna Gain (non-log)	12.59
Coax Loss(non-log)	0.54
General FCC Limit (mw/cm^2)	1

Panel 10dbi with 3' 5D N Male

Input Data

Frequency MHz	1930
Pout Watts	0.00167
Antenna gain dBi	10
Coax Loss dB	0.3
Distance from Antenna In cm	20

Results Of Calculations

Antenna gain less Coax Loss dBi	9.7
Distance from Antenna In Inches	8
EIRP (Watts)	0.0156
FCC Power Density Limit (mw/cm^2)	1.00
Calculated Power Density (mw/cm^2)	0.00311

Reference Data

Pout dBm	2.24
Antenna Gain (non-log)	10.00
Coax Loss(non-log)	0.93
General FCC Limit (mw/cm^2)	1