| | | | | | | |
|---|---|---|---|---|---|---|
| **RF Radiation Hazard Calculations** | | | | | | |
| | | | | | | |
| Calculations are based on OET Bulletin 65 equations 11-18 | | | | | | |
| | | | | | | |
| **Input Values** | | | | | | |
| Frequency of operation | | | | | 14125.00 | MHz |
| Wavelength | | | | | 0.02 | Meters |
| Reflector Diameter | | | | | 2.00 | Meters |
| Reflector Area | | | | | 3.14 | |
| Antenna Gain | | | | | 46.40 | dBi |
| Input Power | | | | | 15.30 | dBW |
| Input Power | | | | | 33.88 | W |
| | | | | | | |
| **Resultant EIRP** | | | | | 61.70 | dBW |
| | | | | | 1479108.39 | W |
| | | | | | | |
| **Power Density At Antenna Surface** | | | | | | |
| | | | | | | |
| Maximum Power Density At Antenna Surface | | | | | 43.14 | W/m^2 |
| Maximum Power Density At Antenna Surface | | | | | 4.31 | mW/cm^2 |
| Maximum Power Density At Antenna Surface | | | | | 6.35 | dBW/cm^2 |
| | | | | | | |
| Is this compliant with limits? | | | | | | |
| For occupational/ controlled exposure (5 mW/cm^2) | | | | | NO | |
| For general population/ uncontrolled exposure (1 mW/cm^2) | | | | | NO | |
| | | | | | | |
| **Power Density in the Near-Field Region** | | | | | | |
| | | | | | | |
| Extent of the Near-Field | | | | | 47.08 | Meters |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aperture Efficiency | | | | | 0.08 | |
| On-Axis Near-Field Power Density | | | | | 3.41 | W/m^2 |
| | | | | | 0.34 | mW/cm^2 |
| | | | | | | |
| Is this compliant with limits? | | | | | | |
| For occupational/ controlled exposure (5 mW/cm^2) | | | | | NO | |
| For general population/ uncontrolled exposure (1 mW/cm^2) | | | | | NO | |
| | | | | | | |
| **Power Density in the Transition Region** | | | | | | |
| | | | | | | |
| Beginning of the Far-Field Region | | | | | 113.00 | Meters |
| Transition Region Power Density | | | | | | |
| Power density (near-field) | | 0.10 | mW/cm^2 | | 47.08 | Meters |
| Power density (far-field) | | 0.04 | mW/cm^2 | | 113.00 | Meters |
| | | | | | | |
| Is this compliant with limits? | | | | | | |
| For occupational/ controlled exposure (5 mW/cm^2) | | | | | NO | |
| For general population/ uncontrolled exposure (1 mW/cm^2) | | | | | NO | |
| | | | | | | |
| **Power Density in the Far-Field Region** | | | | | | |
| | | | | | | |
| Far-Field starts at | | | | | 113.00 | Meters |
| Power density at the start of Far-Field Region | | | | | 0.15 | mW/cm^2 |
| | | | | | | |
| At what range is power density compliant with limits? | | | | | | |
| For occupational/ controlled exposure (5 mW/cm^2) | | | | | 286.1 | Meters |
| For general population/ uncontrolled exposure (1 mW/cm^2) | | | | | 639.8 | Meters |