

Remote VSAT RF Radiation Levels for Circular Reflector Antenna

Reference: OET Bulletin 65

Antenna ID: REMOTE1A**INPUT**

Frequency (MHz)	14250
Antenna Diameter (m)	0.96
Antenna Efficiency	0.65
Power (W) Fed to the Antenna	4
Assumed Distance (m) of Far Field Rcvr.	27
Off-axis Angle (deg, >1) of Far Field Rcvr.	2.1

Note: If
off-axis angle ≥ 2.1 deg, then in the
Far Field, off-axis dist. > ANT. DIAM.

INTERMEDIATE**CALCULATIONS:**

Wavelength (m)	0.0210386	
Near Field (Fresnel) Boundary (m)	10.951301	
Far Field (Fraunhofer) Boundary (m)	26.283122	
Estimated Antenna Gain (factor), (dB)	13357.403	41.2572204
Far Field Off-Axis Antenna Gain (dB)	23.944518	

FCC MAXIMUM**Occupational 6 minute****Average (mW/cm²):**

5

Limit applicable to > 20 cm distance

FCC MAXIMUM**General Population****30 minute Average****(mW/cm²):**

1

Limit applicable to > 20 cm distance

CALCULATED ON-AXIS**ANTENNA RADIATION LEVEL:**

	Antenna Surface	Max. in Near Field	Max. in Middle of Transition Region	Far Field
Power Density (W/m ²)	22.104853	14.36815458	8.451855638	5.832364243
Power Density (mW/cm ²)	2.2104853	1.436815458	0.845185564	0.583236424

CALCULATED OFF-AXIS ANTEN-**NA RADIATION LEVEL AT****off-axis distance > ANT. DIAM.:**

	Off-axis Max. in Near Field	Off-axis Max. in Middle of Trans.Region	Off-axis Far Field
Power Density (mW/cm ²)	0.014368155	0.008451856	0.010828651