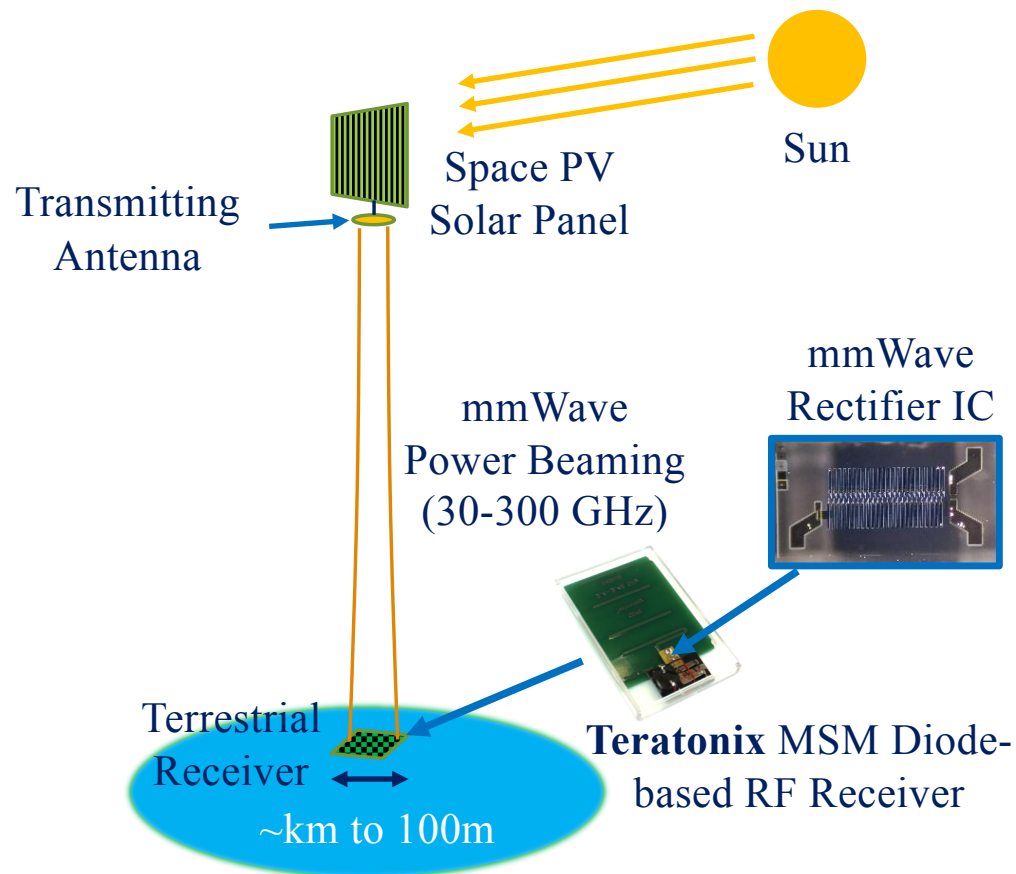


High Efficiency mmWave Receiver for Space-based Solar Power



Space-based Solar Power (SBSP)

Problem

- High cost from large receiver size (~ km²) at current low RF frequency (<10GHz) for power beaming
- Low RF to DC conversion efficiency (~10-30%) for power beaming at high frequency mmWave band

Teratonix's Solution

- High efficiency (70-80%) mmWave receiver based on proprietary *THz MSM diode*
- Significantly reduce SBSP deployment cost by decreasing receiver size from *km to ~100m in diameter*
- Enable flexible "*clean solar energy on demand*" globally

Technology Status

- Granted patents & exclusive license from **Carnegie Mellon University**
- Successfully developed RF rectenna prototype (1-10GHz)

Objective: Develop high efficiency (70-80%) mmWave receiver at 35 & 95 GHz for pilot