MILLIMETER WAVE SENSORS FOR HELICOPTER LANDING AID

The millimeter wave frequency range (f > 30 GHz) of the electromagnetic spectrum is increasingly addressed by sensor technologies, due to its fascinating properties. Millimeter waves easily penetrate dust, snow, fog as well as fabrics. Operation distances up to a few hundred meters are feasible. Amongst others, Fraunhofer IAF has developed a helicopter landing aid operating with millimeter waves.

Technical data
- 94 GHz frequency modulated continuous wave radar
- Proven metamorphic HEMT technology
- Single Rx/Tx antenna
- 6 GHz tuning bandwidth
- Max. 10 mW output power
- Low power consumption < 500 mW

Features
- Distance sensor for brown- and white-out conditions
- For distances up to 200 meters
- Single chip solution (integrates VCO, LNA, MPA, coupler, I/Q-mixer)
- Low cost packaging technology
- Flight tests successfully accomplished (aviation certification ongoing)