# Abstracts

## MMIC Antenna Front End for Optically Distributed MMW Antennas

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It is well documented that fiber optic remoting of information to the millimeter wave distributed antennas is viable only when the modulated carrier is constructed at the antenna front end. The MMIC based antenna front is designed to perform three important functions of i) generation of phase and frequency stable local oscillator, ii) down-conversion (up-conversion) of the modulated RF (IF) carrier, iii) and 0-360° phase control of the modulated RF (IF) for beam steering. This paper presents design and experimental evaluation of a MMIC front end circuit designed for operation at Ka band. A P-HEMT based foundry service from TRW was selected to design this integrated front end.

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