

Technology Opportunity, Ref. No. UA-13/248

Microwave field imaging device

An easy-to-implement device for imaging the magnetic components of a microwave field is provided

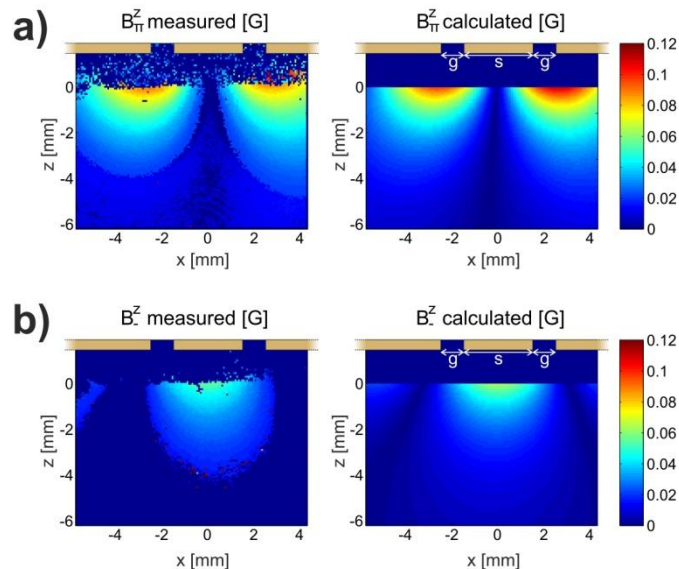
Keywords Microwave field, Integrated Microwave Circuits

Inventors Pascal Böhi, Philipp Treutlein, Max F. Riedel, University of Basel; Theodor W. Hänsch, Max-Planck Gesellschaft

Reference in preparation

Background Measuring a microwave field distribution is technologically important, e.g. for the development of integrated microwave circuits. Various methods have been developed so far but no satisfactory standard technique exists.

Invention A simple technique for microwave field imaging has been developed. It allows single-shot 2D imaging and reconstruction of amplitudes and phases of the microwave magnetic field components. Since the measured quantities only depend on the microwave field strength and well-known atomic constants, the method is intrinsically calibrated.



The Figure shows an overview of the measured spatial distribution of two selected microwave magnetic field components around a microwave device in the form of an (interchangeable) coplanar waveguide (CPW) and comparison to a simulation

Patent Status Patent pending

Contact Unictetra, Technology Transfer of University Basel, Dr. Wolfgang Henggeler
Steinengraben 5, CH-4003 Basel, +41 61 267 18 99, mail@unictetra.ch