



Dr. Keith Whites

Professor/Steven P. Miller Chair
Electrical and Computer
Engineering Department

STATUS

- Patent Protection in Place

CONTACT

Joseph Wright
Associate Vice President for
Research,
Office of Economic
Development
605-394-1205 (office)
Joseph.wright@sdsmt.edu
www.sdsmt.edu

South Dakota School of
Mines & Technology
501 E. St Joseph Street
Rapid City, SD 57701

OVERVIEW

As electronic components become increasingly miniaturized, it becomes more difficult to build and model them. This is especially true with respect to manufacturing and simulating miniature microwave devices. Advantageously this process of circuit fabrication would only take a few hours compared to a time frame of multiple days or weeks.

DESCRIPTION

This invention provides a “plug and play” microwave device design that allows engineers to rapidly design and test new devices. Rather than using time consuming existing techniques of prototyping, design engineers are now able to quickly swap out different “plug and play” circuit prototypes with different elements thereon until the microwave device functions as desired. This will greatly reduce the amount of time it takes to make a working prototype and reduce the cost of prototyping. The devices can be pre-printed in kit form and available with small variations, allowing an engineer to quickly remove and replace it with a slightly modified version. Another advantage is that the electrical circuit devices produced on the sheets are thin, flexible, inexpensive, and can be directly soldered into an existing circuit on base.

ADVANTAGES

- Significantly shorter circuit fabrication
- Greater cost savings
- Versatile design with plug and play simplicity

LICENSING OPPORTUNITIES

A non-provisional patent for this technology is currently in place. South Dakota School of Mines Office of Economic Development is actively seeking exclusive and/or nonexclusive licensing opportunities. Joint development opportunities are also available.