



Polarization Rotating Phased Array Element

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The Invention

A phase shifter includes a first dielectric layer, a switch mounted to the first dielectric layer, a conductive layer mounted to the first dielectric layer, a second dielectric layer mounted to the conductive layer, a conducting pattern layer mounted to the second dielectric layer, and a plurality of vias. The switch is switchable between a first conducting position and a second conducting position. Each via is connected between a first or a second throw arm of the switch and a conductor of the conducting pattern layer. When an electromagnetic wave incident on the phase shifter is reflected, an electric polarization of the reflected electromagnetic wave is rotated by ± 90 degrees compared to an electric polarization of the incident electromagnetic wave based on a conducting position of the switch. The phase shifter can be used as one-bit spatial phase shifter to provide either 0° or 180° phase shift over wide bandwidths.

Additional Information

For More Information About the Inventors

- [John Booske](#)

Related Intellectual Property

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Tech Fields

- [Information Technology : Hardware](#)
- [Information Technology : Networking & telecommunications](#)

For current licensing status, please contact Michael Carey at mcarey@warf.org or 608-960-9867