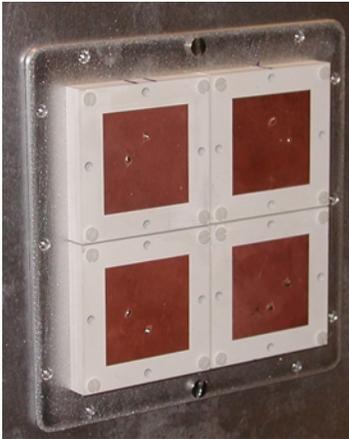




POLARIMETRIC ARRAY



DESCRIPTION

The Polarimetric Array offers a solution for many smaller, space-limited aircraft that need small GPS arrays containing only a few antenna elements. The nulling capability of these smaller arrays is limited by the number of antenna elements if a single polarization (e.g., RHCP) is used for both the reference and auxiliary elements. An array with "N" elements has "N-1" degrees of freedom and can null out "N-1" broadband jammers. One method for improving the nulling performance of a smaller array is to use dual linear polarization in the auxiliary elements so as to increase the number of degrees of freedom. The main reference element in the array remains RHCP to receive GPS signals. A reduced size 7" square four element Polarimetric Array has been designed, built, and tested.

MITRE

FEATURES

- ▶ Four-element array in a 7" square footprint with a radome cover
- ▶ Height of array: 1.3"
- ▶ Stacked patch antenna elements to allow operation at both L1 and L2
- ▶ Polarization: RHCP for "reference" antenna element and dual orthogonal polarizations for the three "auxiliary" elements
- ▶ Bandwidth: 24 MHz for 2:1 VSWR for M-Code compatibility
- ▶ Average Boresight Gain: 2.7 dBiC at L1 and 1.0 dBiC at L2

- ▶ Seven output channels allow compatibility with legacy antenna electronics

APPLICATIONS

Reduced size CRPA for smaller military platforms

FOR FURTHER INFORMATION CONTACT:

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