

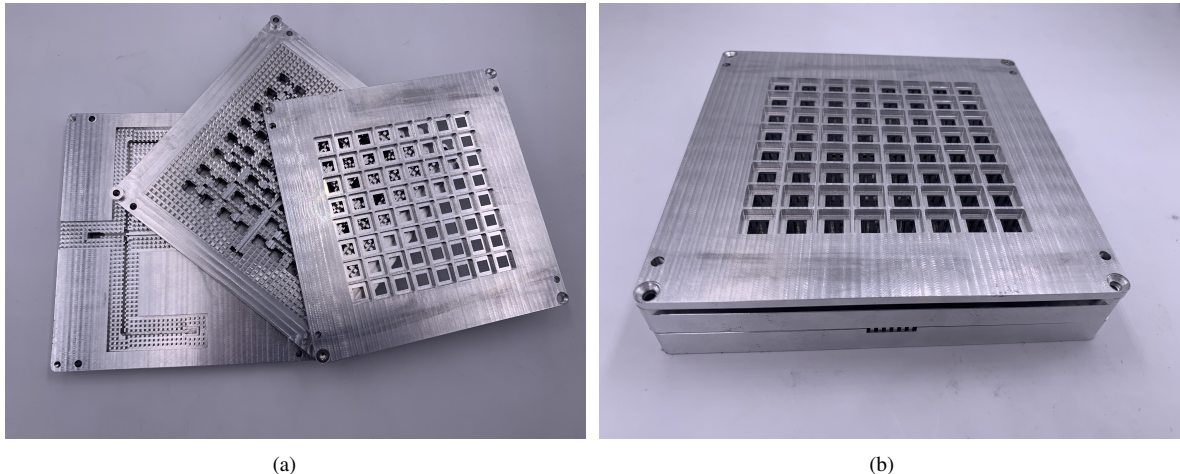
## Antena monopulso enteramente metálica en la banda Ka con una red comparadora usando guías de onda de gap Ridge y Groove

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En esta trabajo se presenta una antena monopulso tricapa totalmente metálica basada en la tecnología de guía de ondas Gap que opera en banda Ka (concretamente de 29 a 31 GHz) para aplicaciones de radiogoniometría . Esta contribución destaca principalmente por la simplicidad de su red comparadora de una sola capa (capa 1) compuesta por una combinación de guías de onda gap ridge y groove. Asimismo, la compacidad de la red de alimentación (capa 2) permite obtener una antena monopulso de bajo perfil compuesta únicamente por tres piezas de aluminio. La antena se alimenta por la parte inferior a través de tres puertos conectados, dos de ellos a la red comparadora, y uno directamente a la red de alimentación corporativa, para conseguir un diagrama suma ( $\Sigma$ ) y dos diagramas diferencia ( $\Delta_H$ ,  $\Delta_E$ ). Los resultados experimentales validan el concepto, mostrando una estrecha concordancia con las simulaciones. La profundidad nula medida es cercana a  $-30$  dB en ambos diagramas diferencia, y el diagrama suma alcanza una directividad de 26.9 dBi con una eficiencia de radiación realizada superior al 80%.



(a)

(b)

**Figure 1.** Manufactured all-metal low-profile monopulse.

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