基于MEMS工艺的异性材料定向天线

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摘　要：

制备了一种基于MEMS工艺的定向天线。以异性材料为基底的亚波长谐振腔结构有效降低了天线体积。这种天线可以用于要求高能量密度的微系统的能量传送。本文中的天线厚度为1.5 mm，可工作于10 GHz频段。这使得其易于与微系统集成。文中也给出了仿真及实验的结果，并介绍了天线的加工过程。

关键词：天线，MEMS，谐振腔，异性材料

A metamaterial directional antenna fabricated using MEMS Technique

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Abstract:

In this paper, a directional emission antenna was fabricated using MEMS process. Its size was largely decreased by a sub wavelength resonance cavity. Metamaterial is also included as one part of the cavity. The antenna can be used in power transmission of micro system for high power density and small size. The thickness is less than 1.5 mm and work on 10 GHz. This made it easily integrated with micro system. The simulation and experimental results are carried out, and the fabricating process is also introduced.

Keywords: Antenna, MEMS, Resonance cavity, Metamaterial

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