

عنوان مقاله:

Groove Gap Waveguide (GGW) H-plane Horn Antenna and a Method for Its Back lobe Suppression

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خلاصه مقاله:

recently a new structure called groove gap waveguide (GGW) is introduced to implement low loss microwave component devices especially for millimeter wave applications. This paper presents a new type of H-plane horn antenna making use of this new technology in which backward radiation is significantly suppressed by introducing a high impedance surface at the antenna aperture. The high impedance surface that we used as the back lobe suppressor is a corrugated surface. The designed antenna is simulated by HFSS and its radiation performance is compared with an ordinary GGW H-plane horn in which no back lobe suppression mechanism is used. Results show a significant improvement in back lobe suppression and gain enhancement by the proposed structure.

کلمات کلیدی:

Groove Gap Waveguide (GGW), Horn Antenna, Back lobe Suppression.

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