

## عنوان مقاله:

Influence of Aluminum Concentration of Barrier on Noise Characteristics of  $Al_{0.3}Ga_{0.7}N/Al_{0.05}Ga_{0.95}N/GaN$  HEMTs

## محل انتشار:

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## نویسندگان:

Robab Madadi - Arak Azad University

Rahim Faez - Sharif University of technology

## خلاصه مقاله:

The noise characteristics of Composite-Channel  $Al_{0.3}Ga_{0.7}N/Al_{0.05}Ga_{0.95}N/GaN$  HEMT is calculated as a function of gate voltage as well as drain voltage. The noise curve versus drain voltage shows two regions. The first region is related to the triode region of the transistor where the noise decreases with increase of the drain voltage. The second region is related to the saturation region of the transistor where the noise is almost constant. The noise curve versus gate voltage also shows two regions. The first region is related to the saturation region of the transistor where the noise decreases with increase of the gate voltage. The second region is related to the triode region where the noise increases with increase of the gate voltage. Also minimum Noise Figure (NFmin) is calculated for different Aluminum mole fraction of barrier. It is shown that the minimum Noise Figure (NFmin) decreases when the Aluminum mole fraction increases.

## کلمات کلیدی:

ALGaN, GaN, Microwave noise, Minimum Noise Figure (NFmin), Composite- Channel HEMT

## لینک ثابت مقاله در پایگاه سیویلیکا:

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