Suitability of GaN and LDMOS for 70–82% efficiency 120–200W HPA addressing spaceborne P-band radar applications - DTU Orbit (25/12/2018)

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This paper addresses the development of P-band (435 MHz) HPA based on different technologies (GaN HEMT, LDMOS FET) for future use in space radar applications in the context of the Biomass project. In particular best in class PAE of 70%–82% is targeted and achieved for power levels of 120W. In order to address suitability for space applications, the results of radiation tests are presented. The results constraint the design mainly for LDMOS technology and allow to draw conclusions on the most appropriate technology for use in future spaceborne application at P-band.

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