# Article information:

Design & development of 45 watt GaN HEMT power amplifier with high speed gate switching for pulsed radar application | IEEE Conference Publication | IEEE Xplore  
<https://ieeexplore.ieee.org/document/8312326>

# Article summary:

1. This article discusses the design, development and testing of a 45 Watt GaN based solid state power amplifier (SSP A) for use in RADAR and Wireless Communication Systems.

2. The article covers the use of GaN technology and GaN RF power amplifiers to achieve higher efficiency and better thermal performance than their silicon counterparts.

3. The article also covers the design of a gate switching circuit to improve pulse performance, PAE, output power, gain, efficiency and pulse to pulse stability.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable in terms of its content as it provides detailed information about the design, development and testing of a 45 Watt GaN based solid state power amplifier (SSP A). It also provides information about the advantages of using GaN technology over silicon transistors in wireless systems and radar applications. Furthermore, it provides details about the gate switching circuit used to improve pulse performance, PAE, output power, gain, efficiency and pulse to pulse stability.

However, there are some potential biases that should be noted when considering this article's trustworthiness and reliability. Firstly, the article does not provide any evidence or sources for its claims regarding the advantages of using GaN technology over silicon transistors in wireless systems and radar applications. Secondly, there is no discussion or exploration of counterarguments or alternative solutions that could be used instead of GaN technology for these applications. Thirdly, there is no mention of possible risks associated with using this technology or any potential drawbacks that could arise from its implementation. Finally, while the article does provide detailed information about the design process for the SSP A amplifier as well as its gate switching circuit, it does not provide any evidence or sources to support these claims either.

In conclusion, while this article is generally reliable in terms of its content regarding the design process for a 45 Watt GaN based solid state power amplifier (SSP A), there are some potential biases that should be noted when considering its trustworthiness and reliability such as lack of evidence or sources for its claims regarding advantages of using GaN technology over silicon transistors in wireless systems and radar applications; lack of discussion or exploration of counterarguments or alternative solutions; lack of mention of possible risks associated with using this technology; and lack of evidence or sources to support claims made about design process for SSP A amplifier as well as its gate switching circuit.

# Topics for further research:

* GaN technology advantages in wireless systems
* GaN technology advantages in radar applications
* Alternatives to GaN technology for wireless systems
* Alternatives to GaN technology for radar applications
* Risks associated with GaN technology
* Design process for SSP A amplifier gate switching circuit

# Report location:

<https://www.fullpicture.app/item/4d05948e10102b153423ae1178f59ca3>