Study, design and fabrication of a L-band, high-power transmitter system using a combination method

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Abstract: This paper deals with the results of the study, design and fabrication of a L-band, high power transmitter system for a purpose of application in the national sovereignty identification coding system. As known, it is usually difficult to build a high power transmitter system from the low power components by combination technique. Here we present a design and fabrication of such a system by combination of components which amplify signals from 1W to 45W, and then to 200W. The 200W power amplifier is a module which combines power to the theoretical value. We utilized the Hybrid and Wilkinson bridges as the combination logics. The studies were carried out along with the simulink-study by Ansolf and ADS software for design and fabrication of logic circuits. The obtained results showed that the method is suitable for application in the national sovereignty identification coding system in Vietnam. ??2009 IEEE.

Author Keywords: Hybrid; Power combination...; Wilkinson

Index Keywords: Coding system; Combination logic; Combination method; High-power; Hybrid power; Low Power; Simulink; Theoretical values; Viet Nam; Wilkinson; Fabrication; Logic circuits; Power amplifiers; Signal encoding; Software design; Switching circuits; Transmitters; Logic design

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