

Master 2020

Ahmad Shabaneh

Design of a 10W Wide-Band Power Amplifier up to 6 GHz.

ABSTRACT - Masterthesis

In this thesis an ultra wide-band power amplifier was designed and built, with bandwidth of 5 GHz from 1 to 6 GHz. A Gan HEMT CGH40010 transistor was used for the design, the design had an almost flat gain of 10 dB over the whole frequency band. Other designs were also built, a narrow band power amplifier with an operating frequency of 3 GHz and 12.8 dB Gain was also designed and built using BFP 780 Transistor. A third design was also Simulated but not built, which was an ultra wide-band power amplifier with bandwidth of 5 GHz from 1 to 6 GHz, this design contains three stages, first two stages were designed using the BFP 760 transistor and the third stage was designed using the CGH 40010F transistor, this design delivered gain around 35 dB over the whole frequency band.