

ABSTRACT

The work contains 124 pages, 114 figures, 17 tables and 33 sources have been used.

Objective: The research of the transmitting possibility of UWB signals over RRL THz and estimate the distortion of the signal parameters during transmission.

General information about the terahertz range and UWB signals is considered.

The calculation of wireless telecommunications systems based on UWB signals the power budget is made.

A block diagram of a wireless telecommunications systems based on UWB signals is developed.

Signal generator and receiver for UWB signals is simulated using AWR Microwave Office software and Multisim.

Keywords: terahertz range, microwave relay of terahertz range, UWB signals, simulation model, UWB signal generator, UWB signal receiver.