

0.1–40 GHz radio over fiber system

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The paper presents the results of the development of 0.1–40 GHz radio over fiber (RoF) system. The system transmits amplitude-modulated light with 1.31 μm wavelength over an optical fiber and includes a transmitting and a receiving optoelectronic modules. Modules cases are hermetically sealed and have small size. The transmitting module includes integrated systems for temperature control and laser power control. No additional external controls are required for the RoF system to function. The RF input and RF output of transmitting and receiving modules are matched to 50 ohms. The developed system can be used to transmit a signal with a frequency of up to 50 GHz.

Keywords: transmitting optoelectronic module, receiving optoelectronic module, radio over fiber system.

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