

QPSK modulation technique in optical communication systems

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Abstract: The topic focuses on researching and implementing Quadrature Phase Shift Keying (QPSK) modulation technique in optical communication transmission systems. The context of the topic arises from the need to increase data transmission efficiency over optical networks, meeting the high-speed and stability requirements of modern times. The research objective is to build a complete QPSK transmission system, including theoretical analysis, design, and practical validation steps. The approach combines synthesizing knowledge from specialized literature with specific application testing processes. Expected results will contribute significantly to the field of optical communications, providing effective solutions for modern information network systems.

Keywords: Quadrature Phase Shift Keying, Optical communication system, Research and deployment