

A 50-Gbit/s 1:4 demultiplexer IC in InP-based HEMT technology

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We have developed a 50-Gb/s 1:4 demultiplexer (DEMUX) integrated circuit with a wide phase margin of 108 degrees in 0.13- μm InP-based HEMT technology. To increase the phase margin, we designed the data and clock distribution with the aim of achieving high symmetry and eliminating multiple reflections. The measured performance of the fabricated 1:4 DEMUX was suitable for practical use in 50-Gbit/s-class applications.

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