

We demonstrate that, with this IC, an Si MRM can provide the maximum OMA for 25-Gb/s operation despite changes in temperature and input optical power.

The fabricated EO polymer modulator on a silicon substrate represents a new paradigm in EO modulator development for ensuring excellent high-temperature reliability and up to 200 Gbit s⁻¹ ultra-high ...

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Design and characterization of transmitter circuits architectures using silicon ring resonator modulators for high bit rate communications (Doctoral dissertation, Lyon).

Plasma Dispersion Effect o The change in refractive index and optical absorption coefficient is induced by free carriers in a semiconductor

We demonstrate high bit rate electro-optic modulation in a resonant micrometer-scale silicon modulator over an ambient temperature range of 15 K. ...

A high-temperature-resistant electro-optic polymer modulator is fabricated and demonstrated for generating reliable 56Gbit/s OOK and 112Gbit/s PAM-4. With the d

We present an on-chip analog feedback circuit to stabilize the micro-ring modulator operation against temperature fluctuations, implemented in monolithic 45 nm CMOS-Silicon-Photonics (Si-Ph) 300 mm ...

Here, we demonstrate a high-bandwidth graphene electro-optic modulator at 4.9 K. The mobility of the graphene in these devices in-creases with decreasing temperature, leading to reduced device ...

Here, the authors introduce a silicon-polymer hybrid modulator that maintains high data rates for long periods at high temperatures that could be used under such conditions, to reduce ...

This is a tractable problem in linear modulators, that are nominally balanced so that variations induced by temperature swings are relatively modest and can be straightforwardly compensated for.

The thermal stability of electro-optic polymer modulators is improved using a common ridge and hybrid silicon-to-polymer waveguide-structure. It reveals excellent thermal resistance at 105°C for ~2,000 ...



High Temperature Resistance Adjustment of Optical Modulator

Abstract: An integrated silicon photodiode and heater are used to thermally stabilize a microring modulator, interfacing with external feedback circuitry to provide error-free microring modulator ...

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