Abstracts

Micromachined low dispersion interconnects for optoelectronic array packaging

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A micromachined microstrip interconnect, partially shielded on the top surface, is designed, fabricated, and measured for use in optical array packaging applications. Field simulations show the interconnects to be highly isolated for an array pitch of 500 /spl mu/m. S-parameter, relative phase constant, and attenuation curves are shown up to 40 GHz for 1 cm long 50-ohm designs. The structure exhibits 1.4 dB/cm of attenuation at 40 GHz and a phase constant that has only /spl plusmn/ 0.5% variation across the band. The micromachined partially shielded microstrip offers high isolation, low dispersion, and low attenuation that is necessary for arrayed interconnects.

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