

Introduction

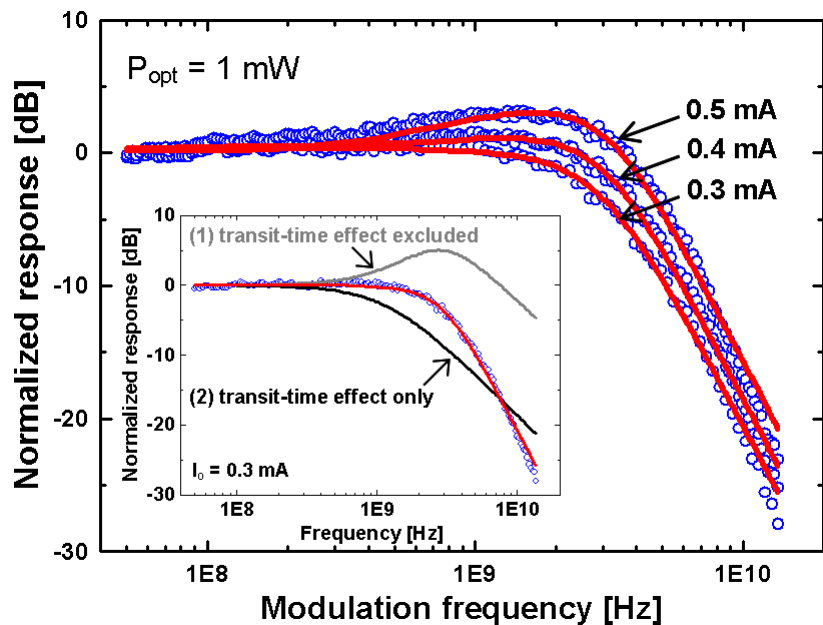
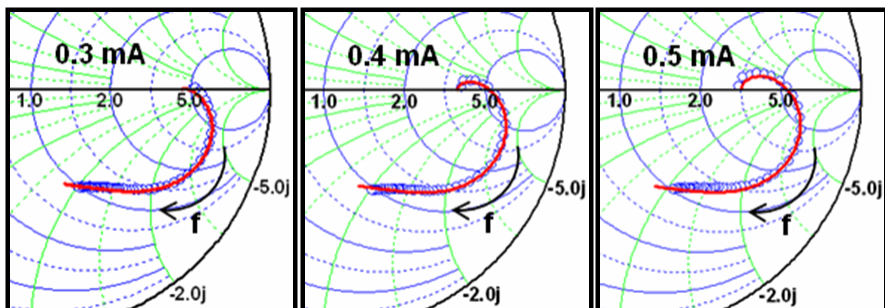
❖ Topic

- Equivalent Circuit Model for Si Avalanche Photodetectors Fabricated in Standard CMOS Process

❖ Team member

- Team member: M.-J. Lee and H.-S. Kang

❖ Sponsor



The equivalent circuit model includes an inductive component for avalanche delay, a current source for photogenerated carriers, and several components that model the device structure and parasitic effects.

The model parameter values are extracted from two-port S-parameters and photodetection frequency responses of CMOS-APD.

This equivalent circuit model can be very useful for designing monolithic optical receivers having photodetectors as well as all the necessary electronic circuits in standard CMOS process.