Abstracts

RF-interconnect for multi-Gb/s digital interface based on 10 GHz RF-modulation in 0.18 /spl mu/m CMOS

Hyunchol Shin, Zhiwei Xu and M.F. Chang. "RF-interconnect for multi-Gb/s digital interface based on 10 GHz RF-modulation in 0.18 /spl mu/m CMOS." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 477-480 vol.1.

Presents an RF-interconnect (RFI) for multi-Gb/s digital interface based on capacitive coupling and RF-modulation over an impedance-matched transmission line. The RFI can reduce the switching noise coupling greatly and eliminate the dc current dissipation completely over the channel. The improved signal-to-noise ratio enables data transmission with reduced signal swing (as low as 0.2 V) and potentially enhanced data speed. A prototype RFI implemented in 0.18 /spl mu/m CMOS demonstrates a maximum data rate of 2.2 Gb/s with 10.5 GHz RF-carrier.

❑ Return to main document.