

On-Die Droop Detector for Analog Sensing of Power Supply Noise

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Abstract

In this paper, we present a circuit design approach to measure the on die high frequency local power supply noise that can be used to collect data in an automated high volume manufacturing environment. The data can be utilized to isolate and fix power delivery related speed paths. The circuit has been implemented on a test chip, manufactured in 90nm process, and validated as capable of detecting noise in the GHz range.