

Accepted Manuscript

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PII: S0924-4247(17)30246-7
DOI: <http://dx.doi.org/doi:10.1016/j.sna.2017.07.057>
Reference: SNA 10253

To appear in: *Sensors and Actuators A*

Received date: 8-2-2017
Revised date: 7-7-2017
Accepted date: 31-7-2017

Please cite this article as: Ferran Reverter, Xavier Perpiñà, Enrique Barajas, Javier León, Miquel Vellvehi, Xavier Jordà, Josep Altet, Single-MOSFET DC Thermal Sensor for RF-Amplifier Central Frequency Extraction, *Sensors and Actuators: A Physical* <http://dx.doi.org/10.1016/j.sna.2017.07.057>

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Single-MOSFET DC Thermal Sensor for RF-Amplifier

Central Frequency Extraction

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HIGHLIGHTS:

- -A single MOSFET can be employed as a thermal sensor to measure on-chip DC thermal changes caused by a power-dissipating CUT.
- -The proposed MOSFET sensor is applied to extract the central frequency of a RF amplifier.
- -Simulations in Cadence/COMSOL and experimental results from a chip fabricated in 0.35 μm CMOS technology are provided.
- -The main advantage of the proposed sensing method is that the impact on the IC layout area is minimum, which is crucial when testing RF-ICs.

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