CMOS Power-Supply Modulator for 20 MHz LTE Envelope Tracking Technique

**Schematic**

- Linear Amplifier
- Current sensing
- Large
- Vout
- Low frequency power
- RF Tx
- Power Amplifier
- Vsen
- Ramp generator
- Nonoverlap
- Lsmall
- Buck Regulator 1
- Buck Regulator 2
- Comparator
- PWM1
- PWM2
- Comparator
- 1 MHz
- 20 MHz
- Vx2
- 200:1
- Vc
- Pass devices of linear amplifier
- Buffer
- C3
- R2
- C2
- R1

**Chip & PCB**

- Process: 0.35 μm CMOS
- Supply Voltage: 5 V
- Output Voltage Range: 0.4 V–3.9 V
- Load: 5 Ω
- Signal: 20 MHz 16 QAM LTE
- Max Efficiency (%): 82.3

**Measurement Result**