

EPFL
MICROCITY
X, XXXXXXXXXXXXX
1008 Neuchatel

Semester Project – Bandgap Reference Voltage

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#### Abstract

ABSTRACT

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# 1 Principle

## 2 PTAT Reference

- 2.1 MOS PTAT
- 2.2 Bipolar PTAT

## 3 CTAT Reference

$$3.1 \quad VBE = f(T)$$

## 4 Bandgap Voltage

- 4.1 Current Source
- 4.2 OTA
- 4.3 Overall circuits
- 4.3.1 Structure 1 ( 3 BJT )
- 4.3.2 Structure 2 ( 2 BJT )

#### 5 Results after Simulation

- 5.1 Temperature Dependence
- 5.2 Dependence to VDD PSRR
- 5.3 Simulation Post route

## Conclusion

## Annexes

## A ANNEXE A

## B ANNEXE B

## C ANNEXE C