COMPARATIVE STUDY OF VOLTAGE REFERENCE CIRCUIT FOR TWO STAGE AMPLIFIER

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ABSTRACT

The essence of this proposal is about a comparative study of voltage reference circuit for a two stage amplifier. In this proposal, the study is about a comparing voltage reference in two type of reference circuit used in a two stage amplifier. The research will focused on the parameters or characteristics between the references circuits to differentiate their precision and stability. Band gap reference circuits is a temperature independent voltage reference circuit while Bootstraps circuit is an arrangements of components used to boost the input impedance of a circuit by using a small amount of positive feedback. In this study, we will compare this two reference circuit characteristics and its output. The outcome of this research is to compare and analyze the voltage reference circuit on the two stage amplifier.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Operational amplifier is a voltage amplifier with differential input and there used in industrial, consumer and scientific devices. It is able to produce an output voltage that has high voltage difference between in its input terminals. However, operation amplifier output may cause a high noise or consume more power. Therefore, this thesis is presenting the voltage references circuit that may help the operational amplifier to produce a better and stable output. The circuits are Bandgap voltage reference and Bootstraps voltage reference. We will compare which one will be better to improve the output of two stage operational amplifier. The designs for the circuits are designed in 0.18um CMOS technology using Silvaco EDA Tools.