Zhejiang University / University of Illinois Urbana-Champaign Institute

Senior Design Individual Report

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By

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Individual Report for Senior Design, Spring 2023

Sponsor: The name of your sponsor

TA: The name of your TA

August 21, 2023

Project No. 114

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Abstract

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Keywords Keyword 1, keyword 2, keyword 3

Contents

1 Introduction

1.1 Problem statement

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1.2 Importance

$$f(x) = \sum_{n=0}^{\infty} \frac{1}{n!} f^{(n)}(x_0)(x-x_0)^n, x \in U(x_0) \tag{1.1}$$

$$\begin{aligned} e^{ix} &= 1 + ix + \frac{1}{2!}(ix)^2 + \frac{1}{3!}(ix)^3 + \cdots \frac{1}{n!}(ix)^n + \cdots \\ &= 1 + ix - \frac{1}{2!}x^2 - i\frac{1}{3!}x^3 + \frac{1}{4!}x^4 + i\frac{1}{5!}x^5 - \cdots \\ &= \left(1 - \frac{1}{2!}x^2 + \frac{1}{4!}x^4 - \cdots\right) + i\left(x - \frac{1}{3!}x^3 + \frac{1}{5!}x^5 - \cdots\right) \\ &= \cos x + i \sin x \end{aligned} \tag{1.2}$$

1.3 Literature Review

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.[1], [3], [4].

2 Methodology

Test the ability to print some units, say (in texts), $10 \times 10^5\,\mu\text{m} \cdot \Omega \cdot {}^\circ$.
It also applies to equations,

$$R_t = 10 \times 10^5\,\mu\text{m} \cdot \Omega \cdot {}^\circ \tag{2.1}$$

3 Results

4 Discussion

5 Conclusion

References

[1] Y. Li and J. Fang, "测量半导体中少子漂移迁移率和扩散长度的新方法 [New Method of Determining Excess Carrier Bipolar Mobility]," 半导体学报 *[Chinese Journals of Semiconductors]*, vol. 20, no. 12, pp. 1129–1131, Dec. 1999. [Online]. Available: http://www.jos.ac.cn/fileBDTXB/oldPDF/2005092734449173.pdf.

[2] J. R. Haynes and W. Shockley, "The Mobility and Life of Injected Holes and Electrons in Germanium," *Physical Review*, vol. 81, no. 5, pp. 835–843, Mar. 1, 1951. DOI: 10.1103/PhysRev.81.835.

[3] J. A. Prufrock, *Lasers and Their Applications in Surface Science and Technology*, 2nd ed. New York, NY: McGraw-Hill, 2009.

[4] J. R. Haynes and W. Shockley, "Investigation of Hole Injection in Transistor Action," *Physical Review*, vol. 75, no. 4, pp. 691–691, Feb. 15, 1949. DOI: 10.1103/PhysRev.75.691.

Appendices

A Some Test Data

B Derivation of Square Law

Acknowledgement