Paper Title: This is a template for an IEEE submission

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Abstract—The abstract

Index Terms—**keywords must be lowercased, common mode chokes, ferrite, complex permeability, multi conductor transmission lines**

I. INTRODUCTION

COMMON mode (CM) ferrite chokes are essential components used for electromagnetic compatibility (EMC) purposes

> ToDo notes can be used temporarily to mark pending work that must be done before submitting.

> State the purpose of this work

> Reference to current state-of-the-art

> Explain the organization of the paper.

Units can be written in SI as $20\,\text{dB/dec}$.

A citation example [1]–[3]. This references must be located in the `bibliography/references.bib` file, using `bibtex` format.
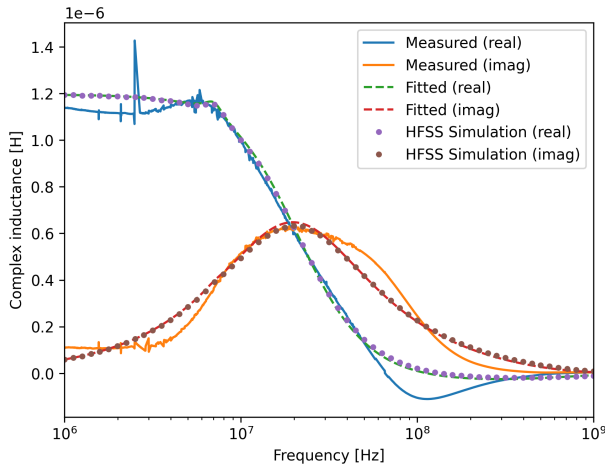
II. EXPERIMENTAL AND SIMULATION RESULTS

Fig. 1. Example of figure

A. Experimental setup

In Ohm's law,

$$V = RI \tag{1}$$

Text can include references to figures Fig. 1, to sections Sec. I and to equations (1).

B. Simulations

More complex formulas can be placed using `align` environment

$$\boldsymbol{Z} = j\omega \boldsymbol{L}_{fit} \tag{2}$$

$$= j\omega \boldsymbol{\mu}_{fit} \ln\left(\frac{r_e}{r_i}\right)\frac{h}{2\pi} \tag{3}$$

$$= j\omega(\mu'_{fit} - j\mu''_{fit})\ln\left(\frac{r_e}{r_i}\right)\frac{h}{2\pi} \tag{4}$$

In figure Fig. 2 we show an example of a circuit written in latex. Missing figures that are not available while writting the paper can be placed temporarily Fig. 2
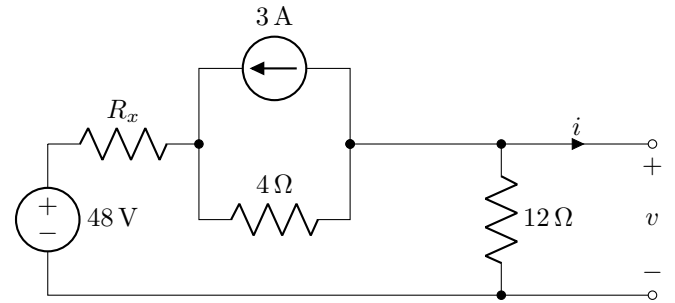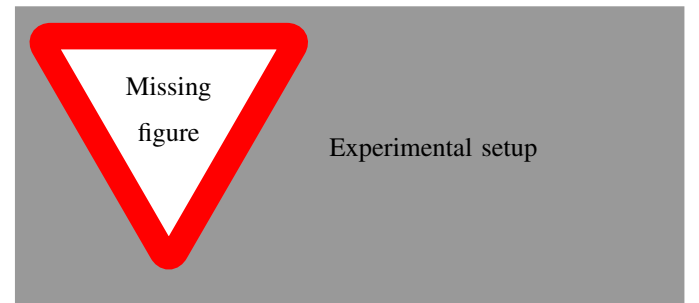

Fig. 2. This is an example of a circuit

Fig. 3. Example of missing figure.

III. Conclusions

Conclusions

IV. Acknowledgements

The authors want to thank these people for this and that company for that.

References

[1] E. S. Lee and B. G. Choi, "Calculation methodologies of complex permeability for various magnetic materials," *Electronics*, vol. 10, no. 17, 2021.

[2] A. Barba, C. Clausell, J. Jarque, and L. Nuño, "Magnetic complex permeability (imaginary part) dependence on the microstructure of a Cu-doped Ni–Zn-polycrystalline sintered ferrite," *Ceramics International*, vol. 46, no. 10, Part A, pp. 14 558–14 566, 2020. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0272884220305812

[3] M. Kacki, M. S. Rylko, J. G. Hayes, and C. R. Sullivan, "Analysis and experimental investigation of high-frequency magnetic flux distribution in Mn-Zn ferrite cores," *IEEE Transactions on Power Electronics*, vol. 38, no. 1, pp. 703–716, 2023.