

4 Conclusion

In this study, I designed and evaluated multi-input comparator circuit. This circuit has additional one pMOSFET and nMOSFET input pair and one cascade output circuit. For example, proposed 3-input comparator in fig.3, V_{PLUS} has common analog input signal, and V_{MINUS1} and V_{MINUS2} have another analog signal. V_{out1} produces the result of comparison between V_{PLUS} and V_{MINUS1} , and V_{out2} produces between V_{PLUS} and V_{MINUS2} . As results, two outputs, V_{out1} and V_{out2} , can be generated by the results of the comparison at the same time. The maximum power consumption is 71.0 nW.

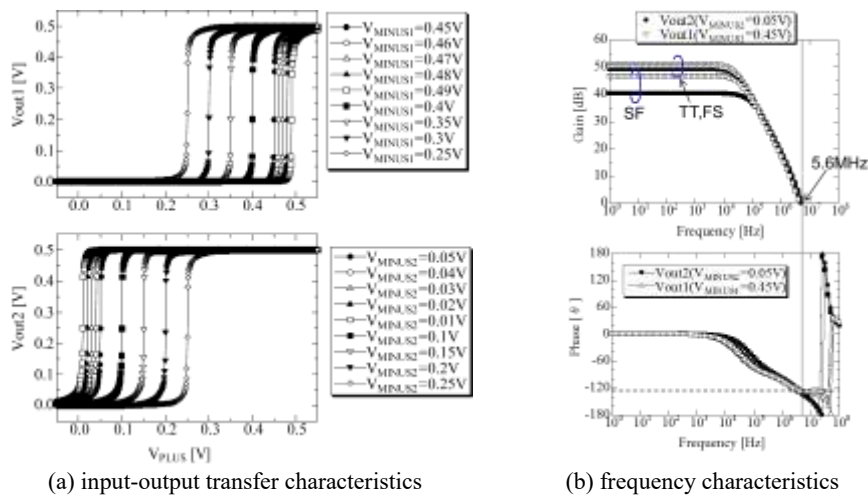


Fig. 3. The characteristics using the subthreshold region at the 0.5V power supply

Acknowledgments. The VLSI chip in this study has been fabricated in the chip fabrication program of VLSI Design and Education Center (VDEC), the University of Tokyo in collaboration with Rohm Corporation and Toppan Printing Corporation.

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