An Inverted CMOS Class-AB Transconductor Featuring Rail-to-Rail Common-Mode Input Range and Constant Transconductance Gain

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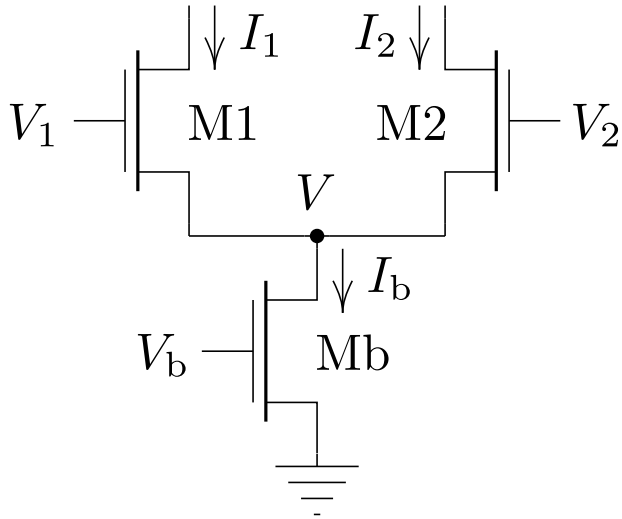
23 October 2014

Conventional Differential Pair



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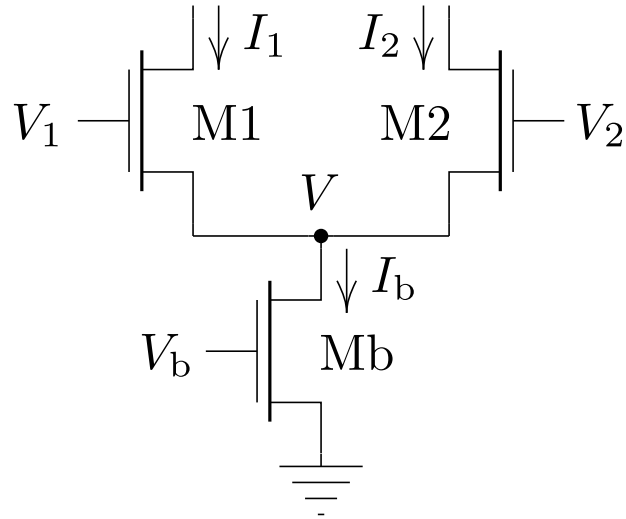

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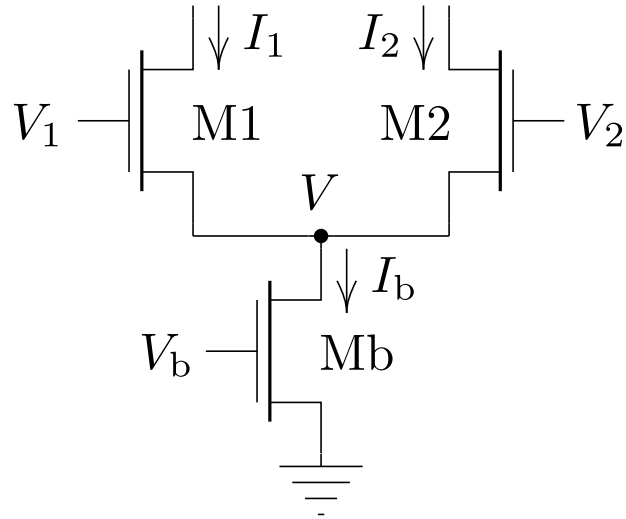

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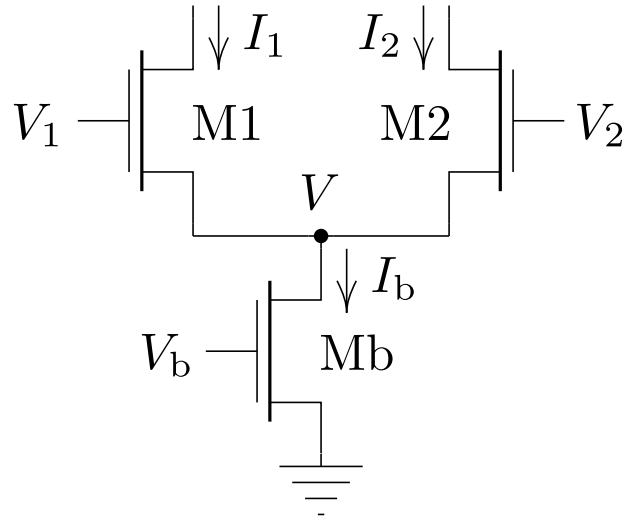

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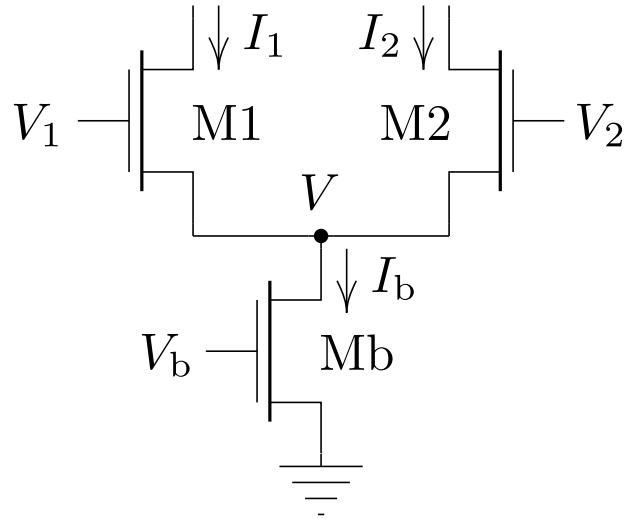

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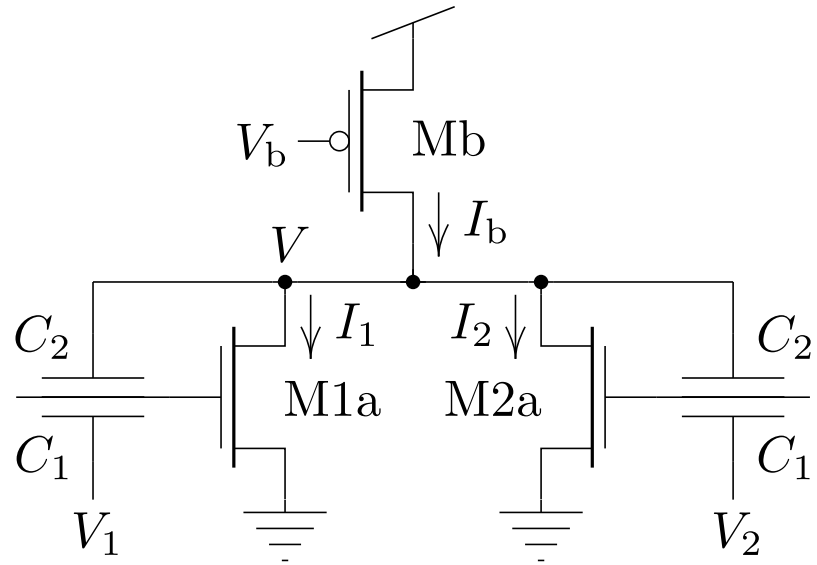

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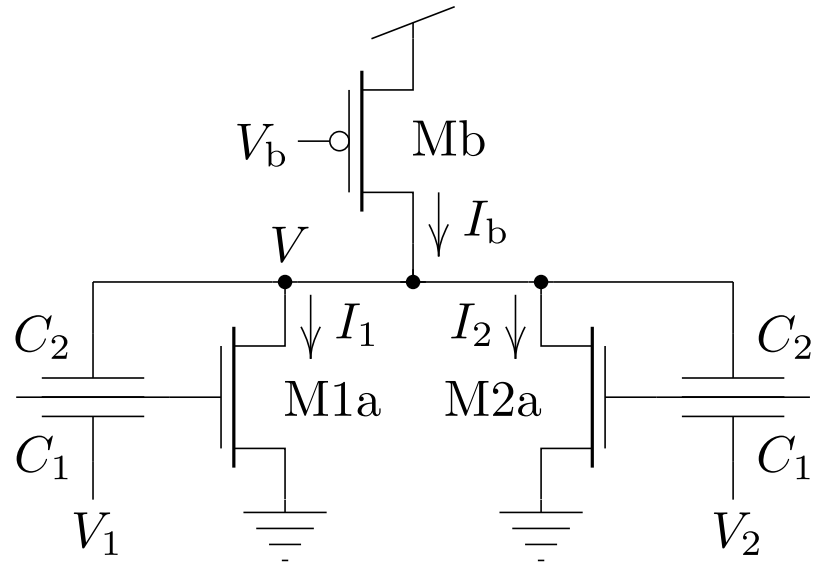

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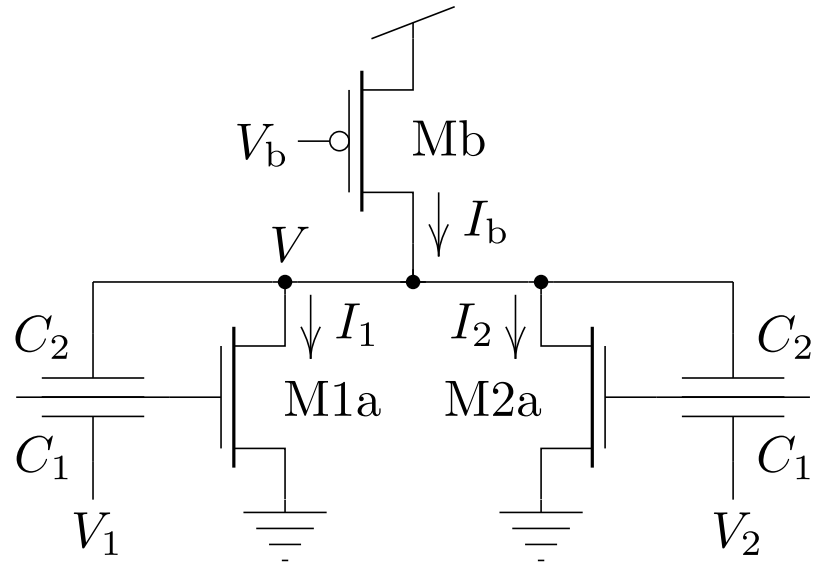

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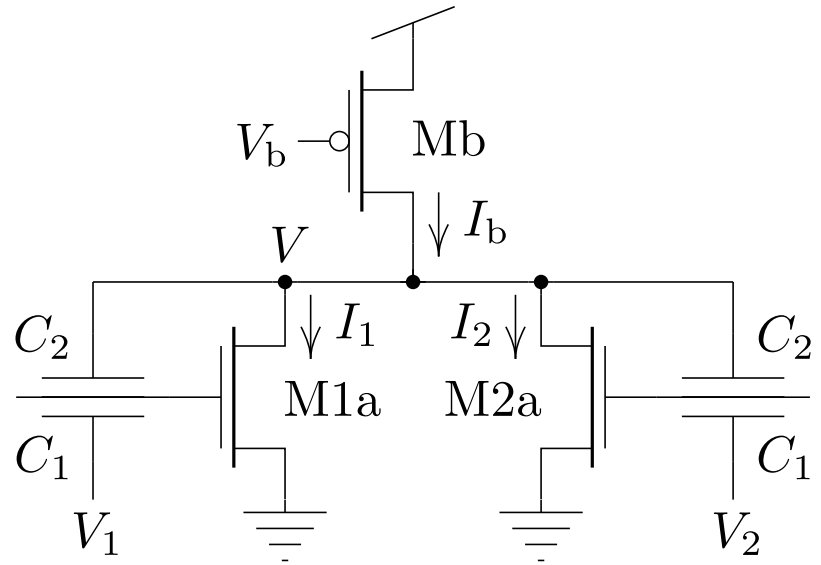

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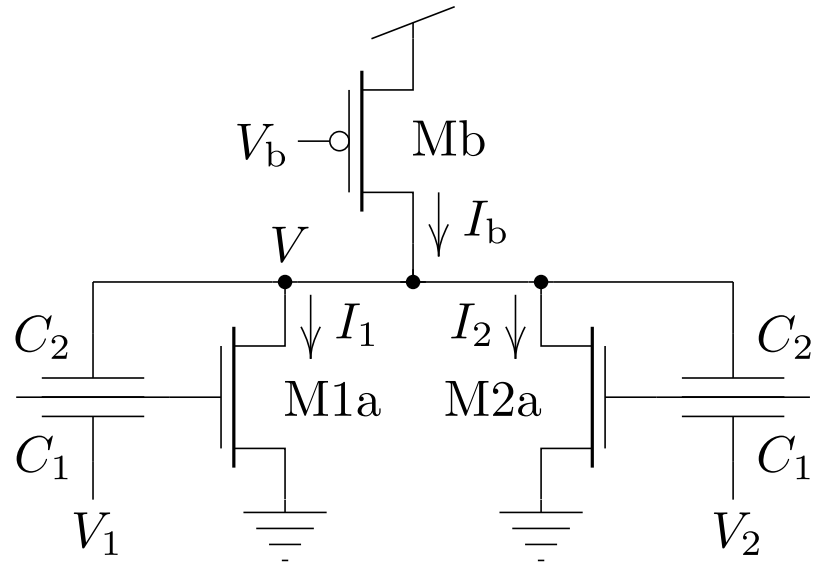

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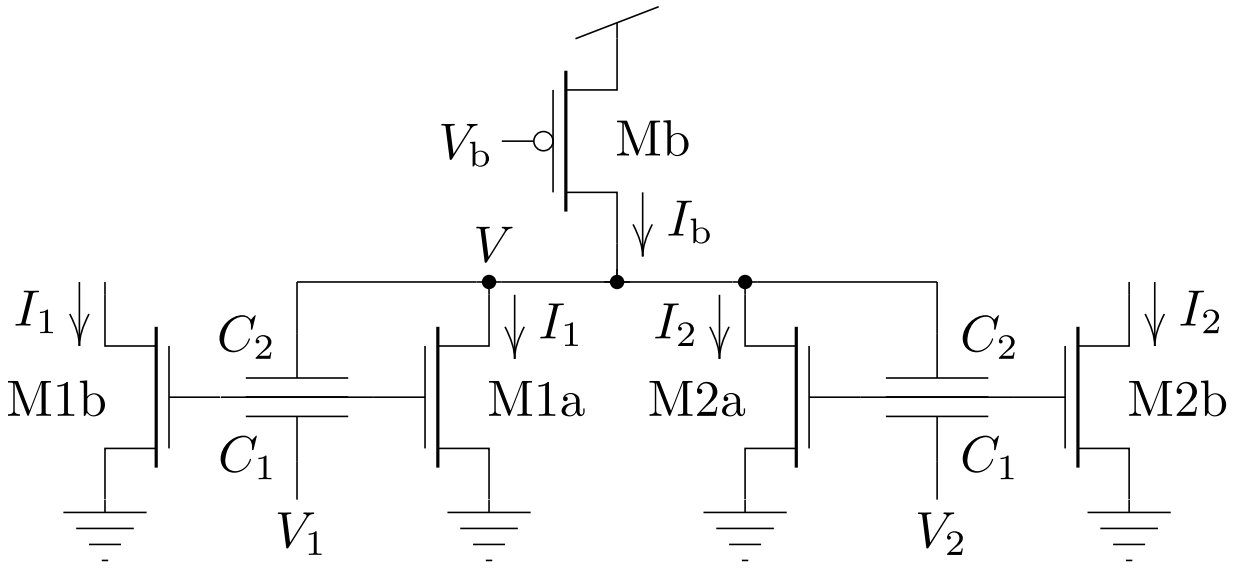

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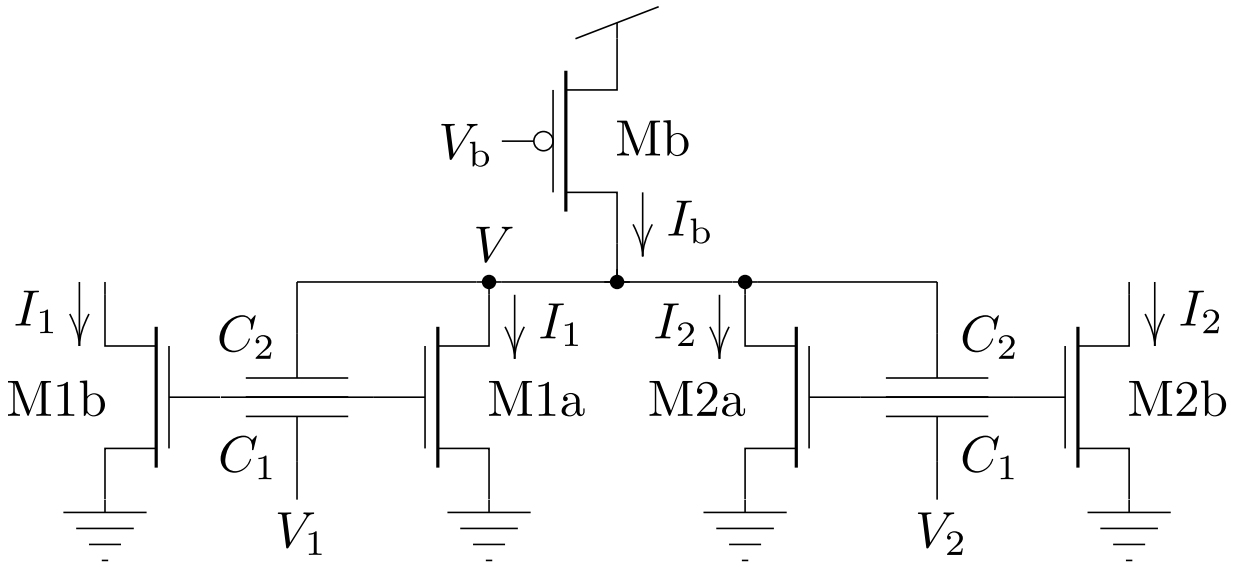

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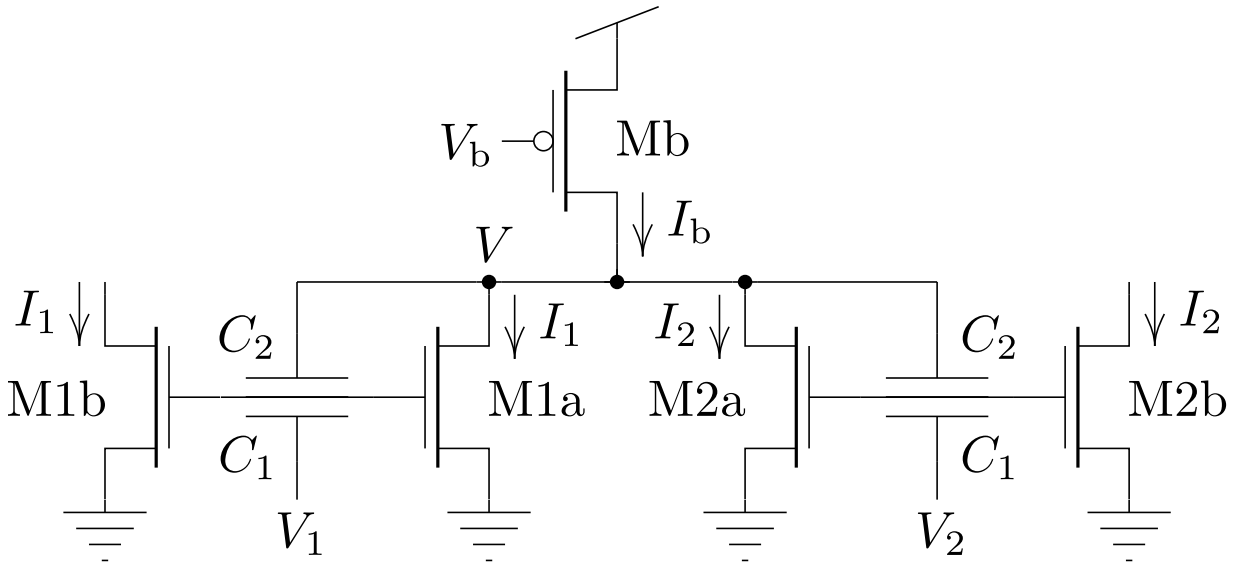

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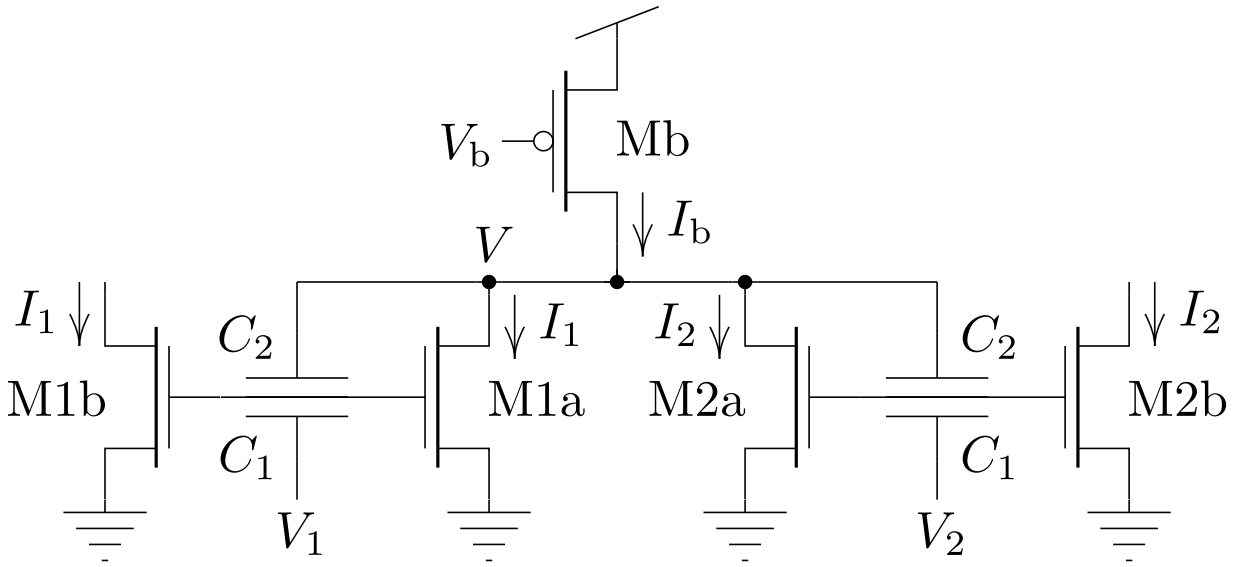

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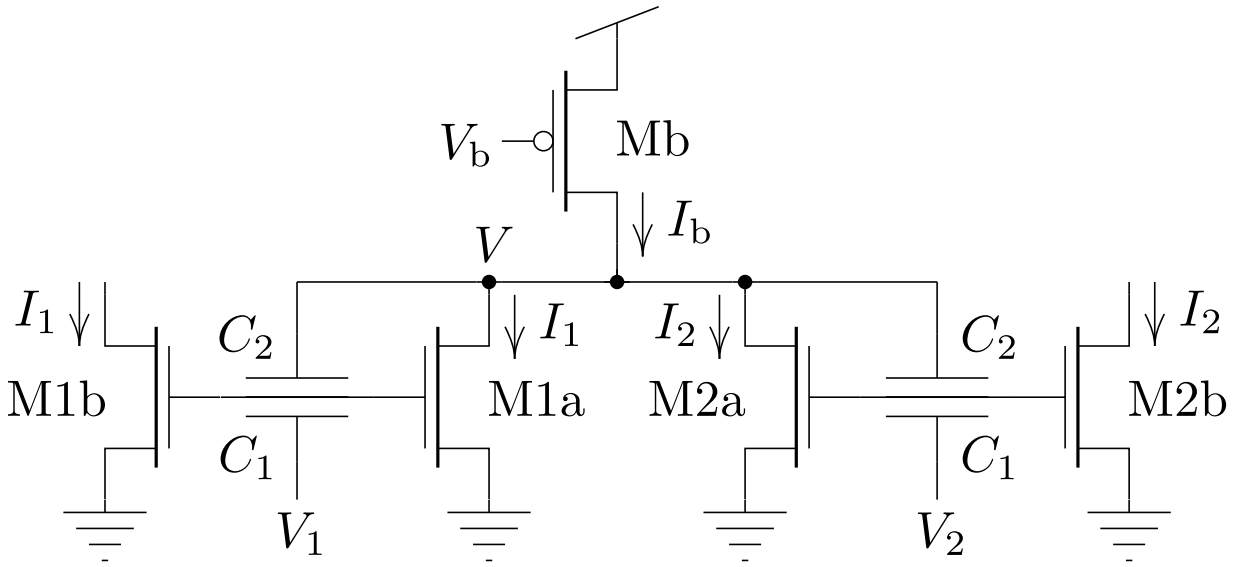
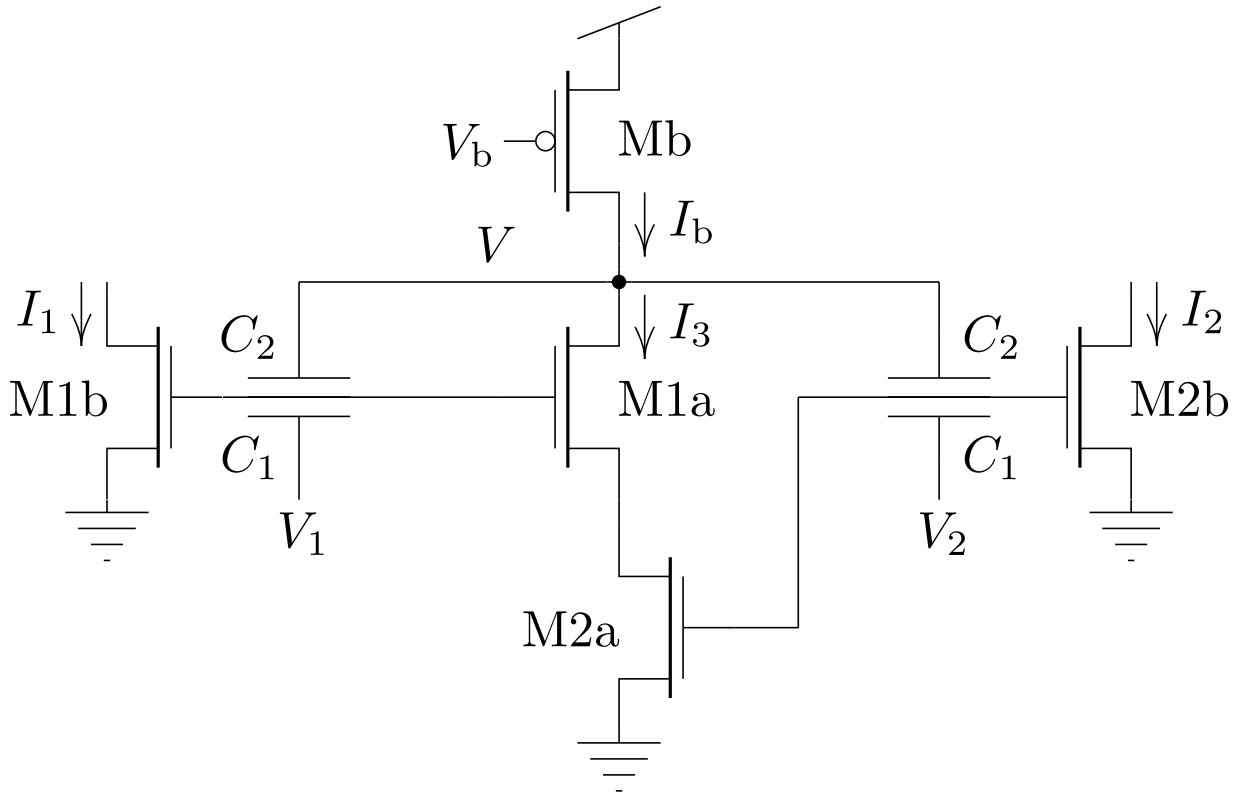


Inverted Class-AB Transconductor

What would happen if we arranged M1a and M1b in series rather than in parallel?



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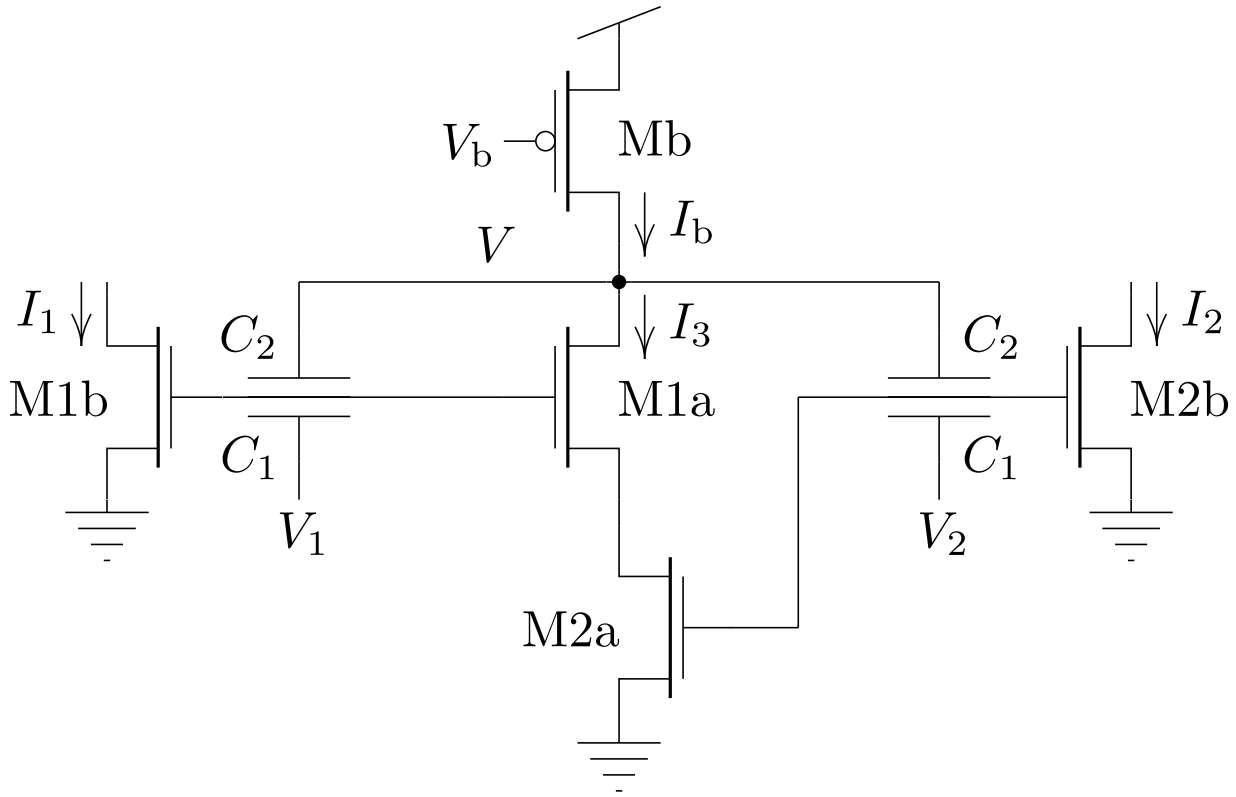

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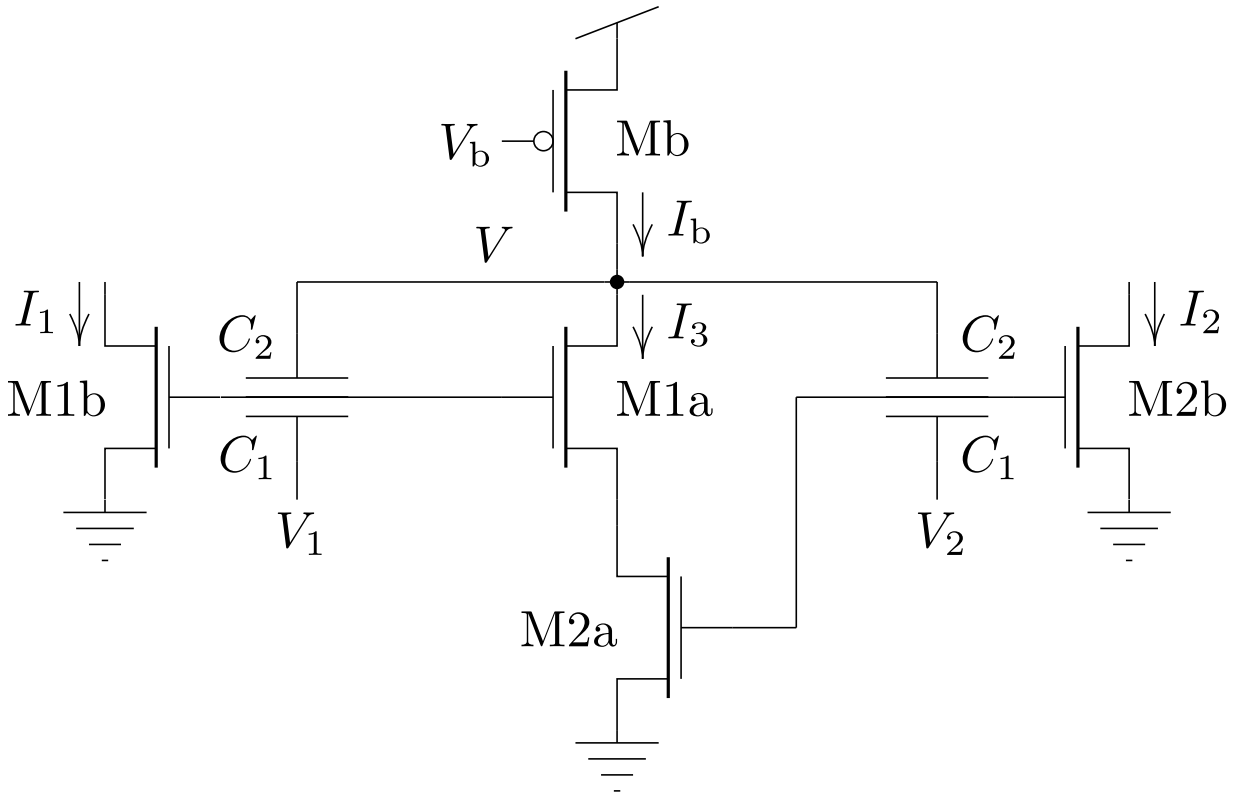

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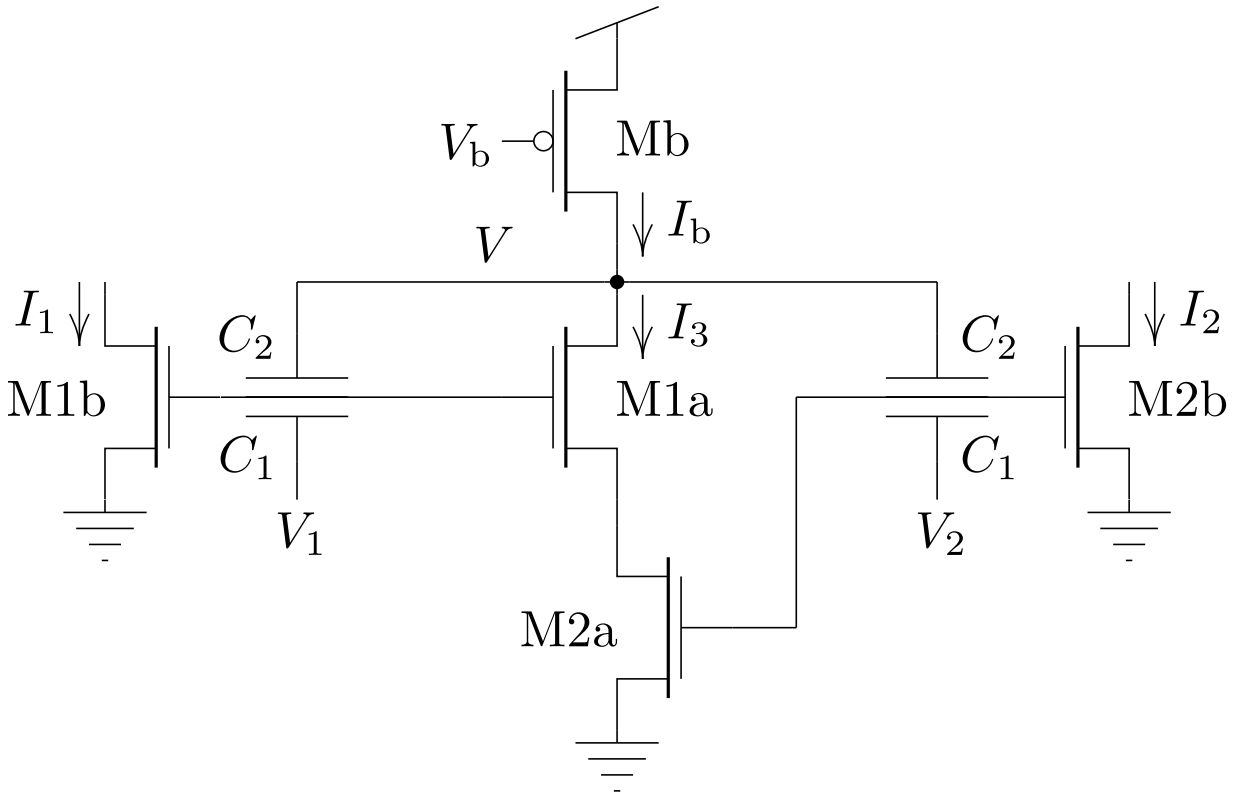

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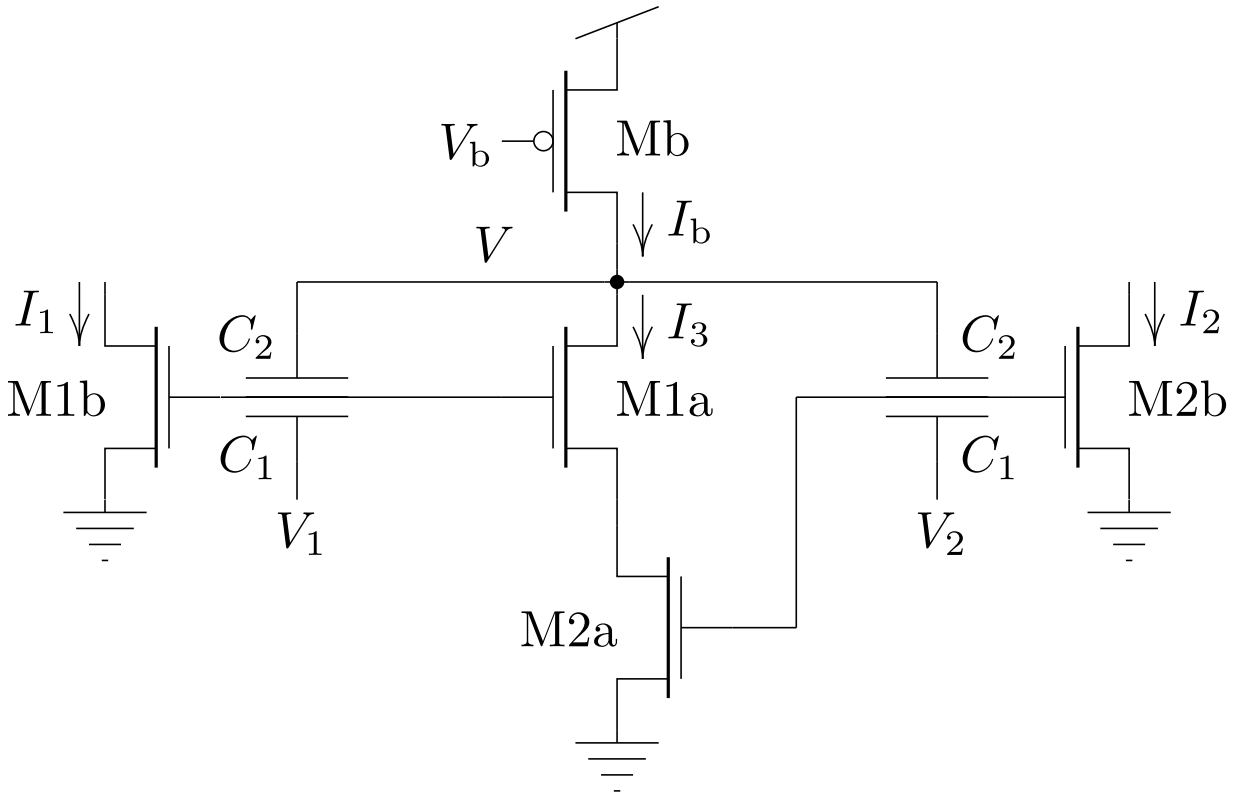

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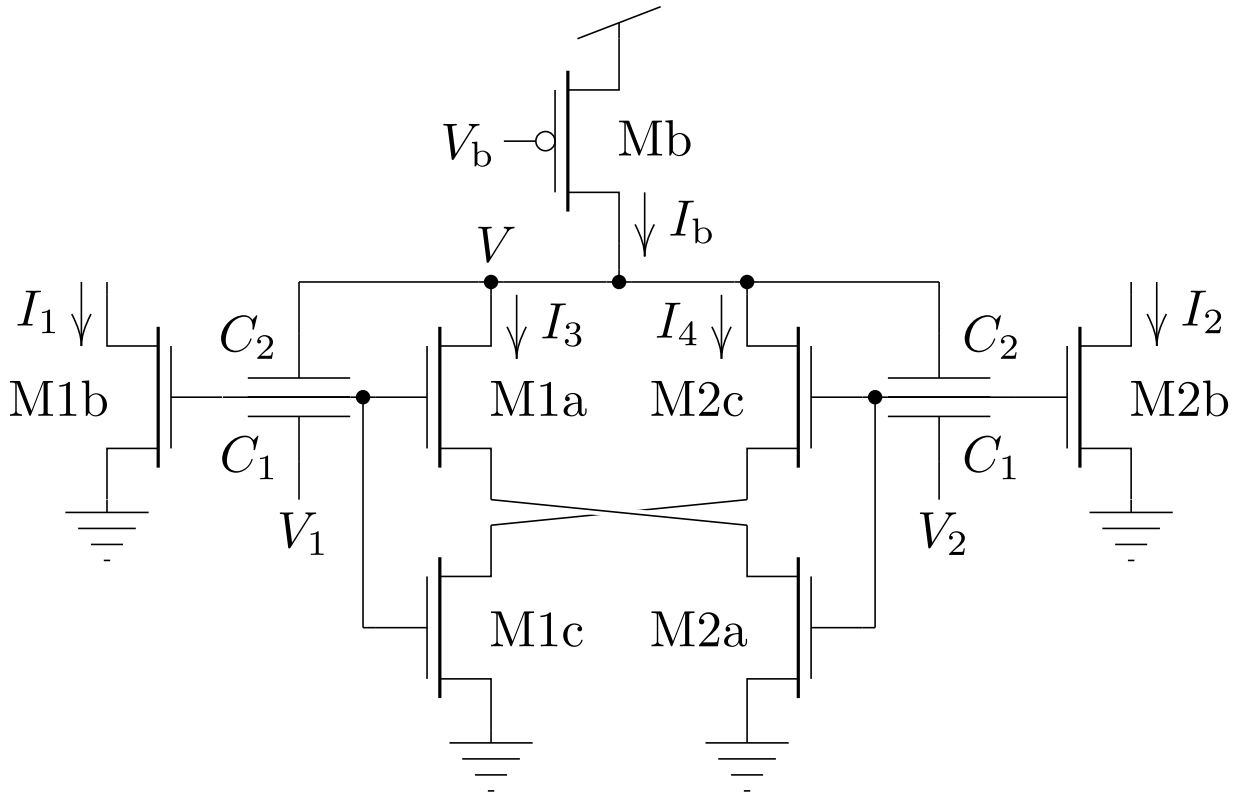

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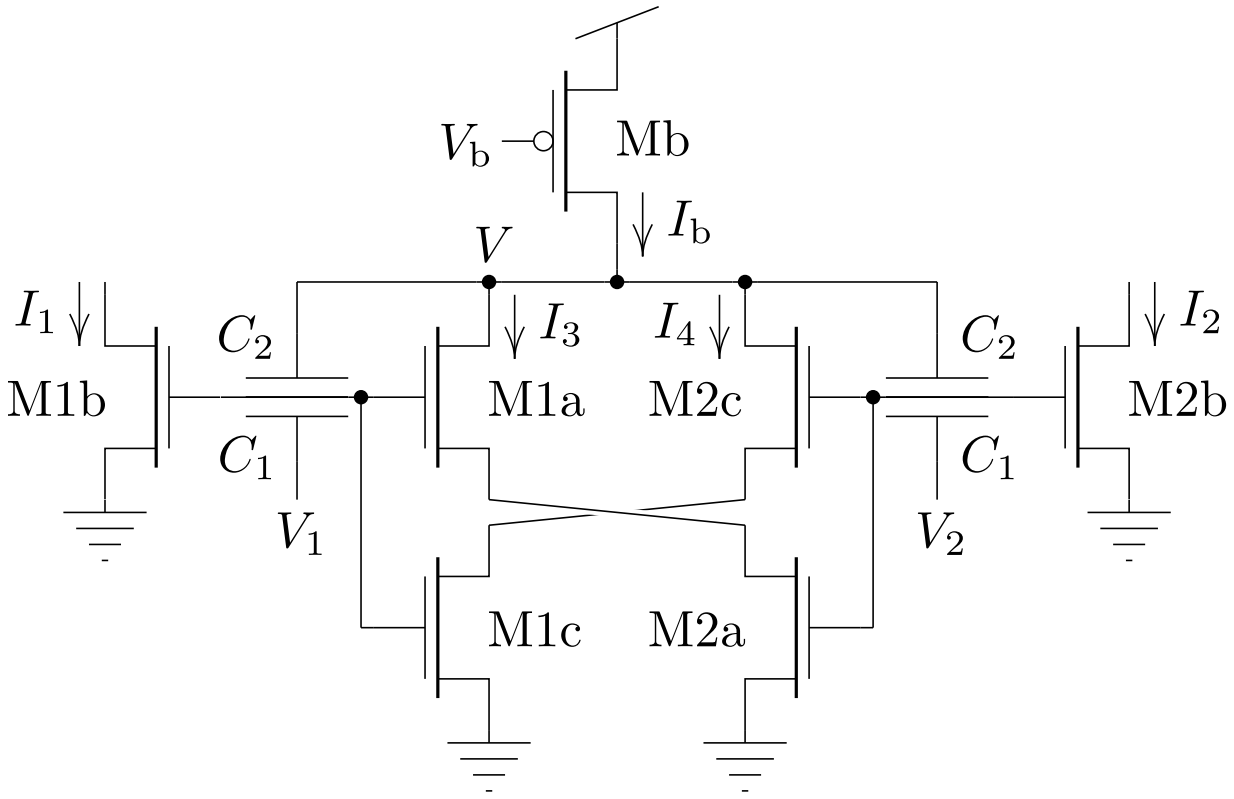

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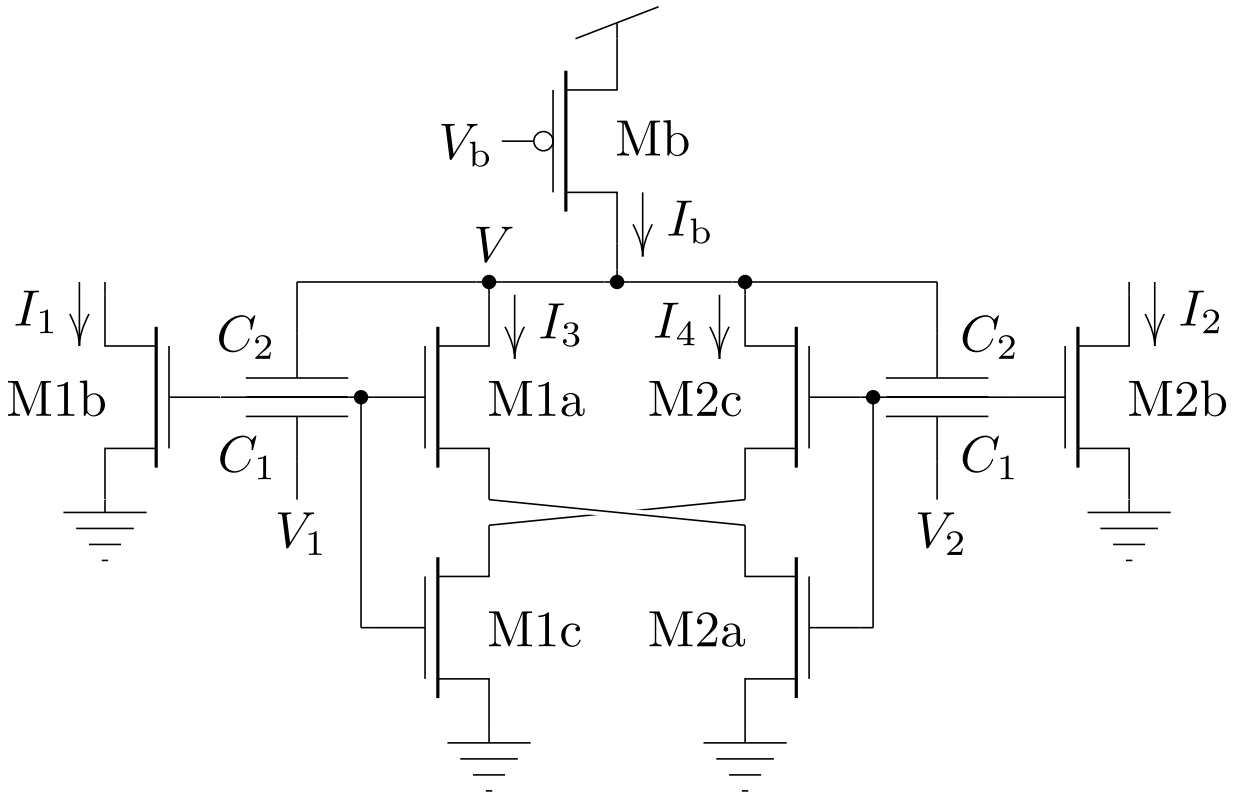

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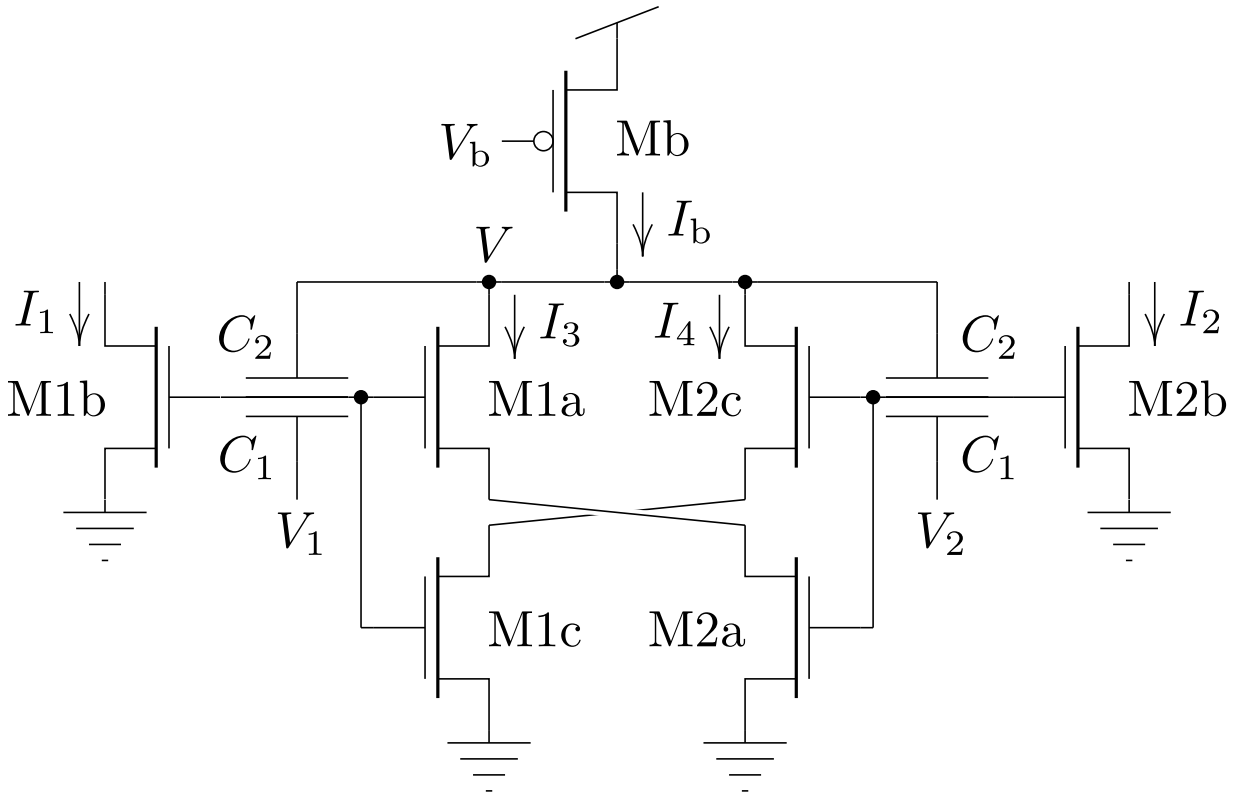

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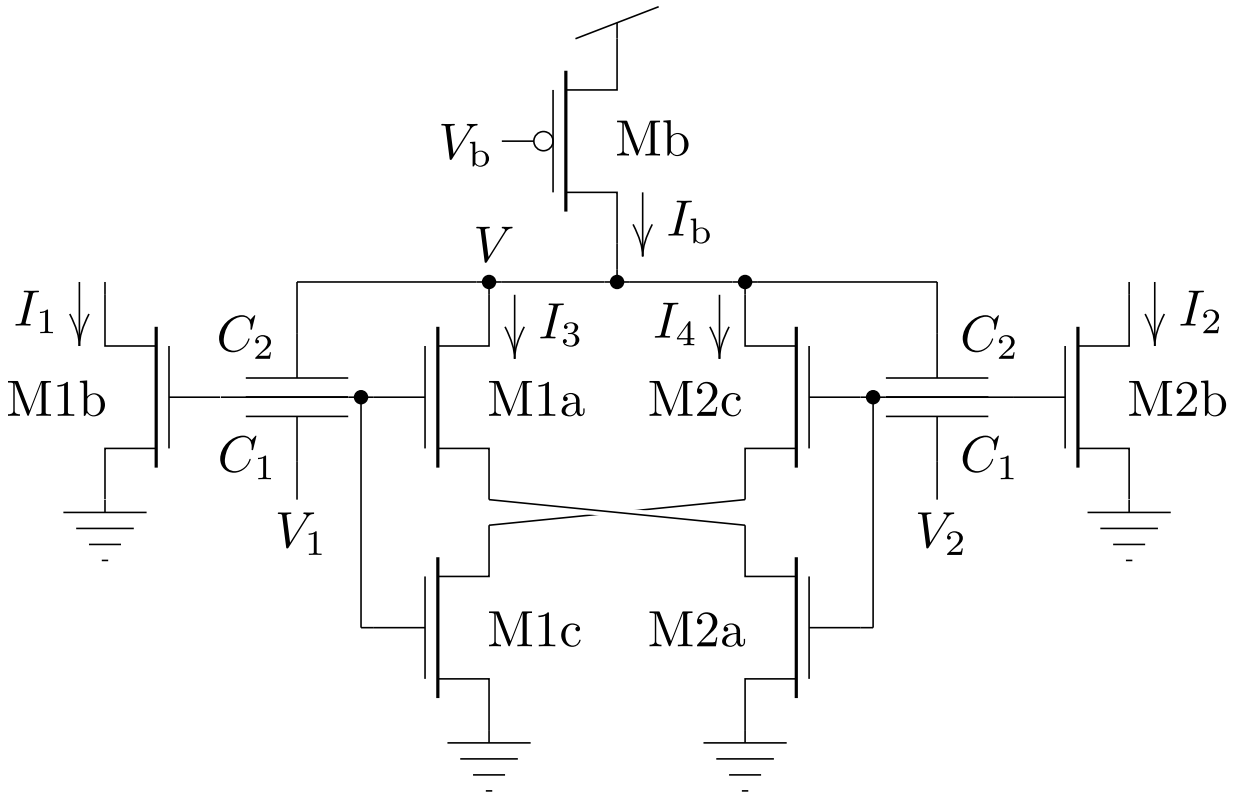

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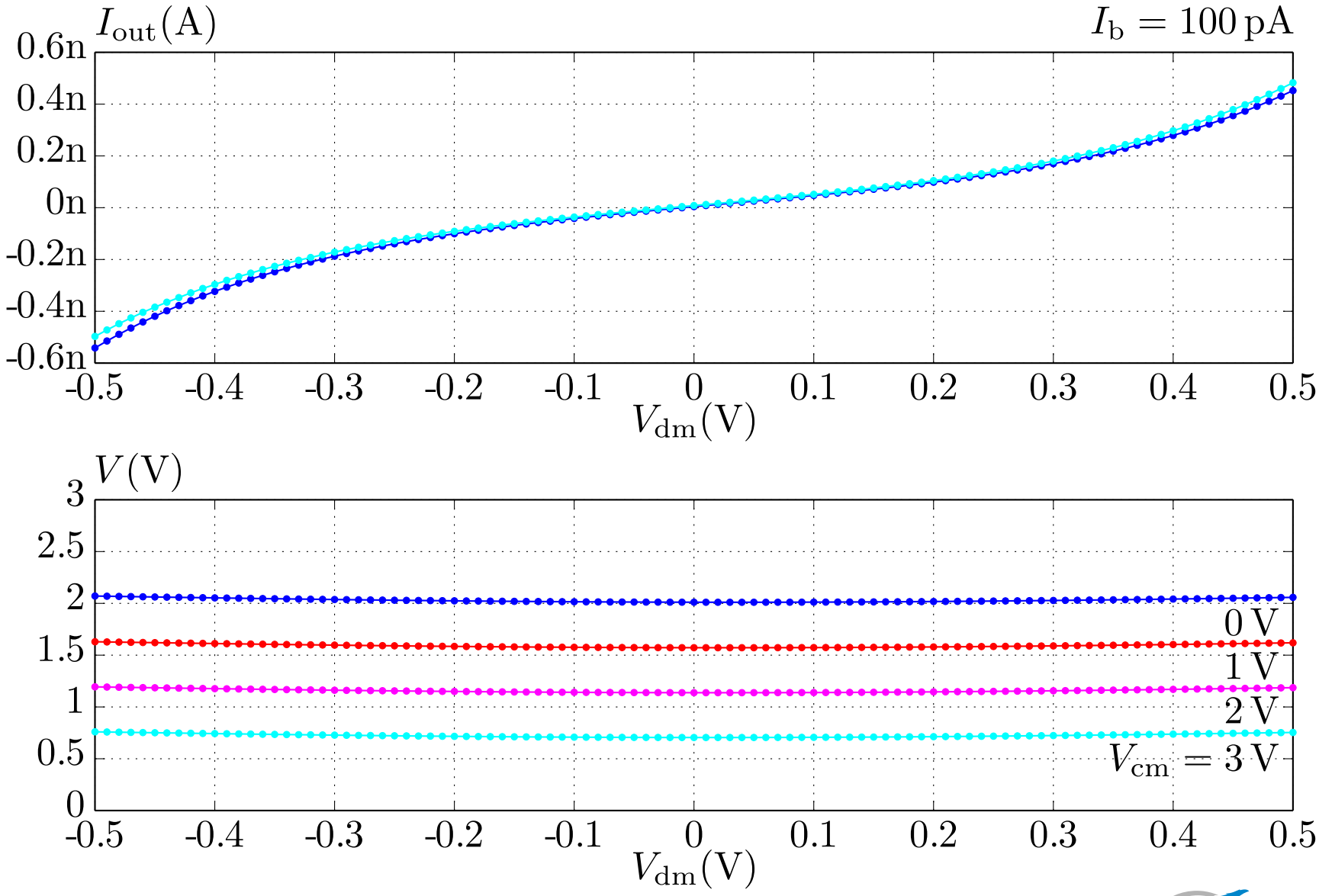
Measured Transconductor Characteristics



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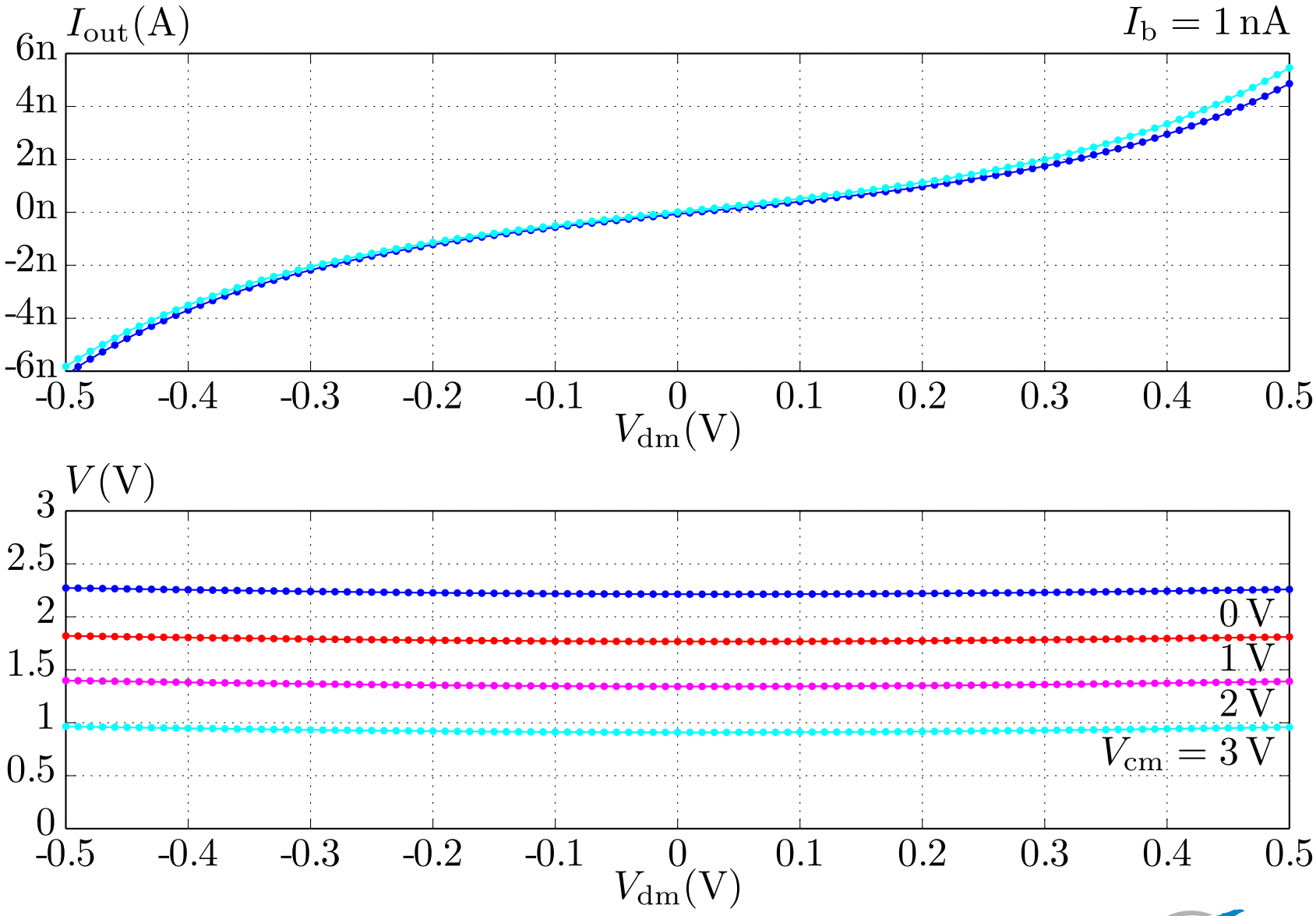

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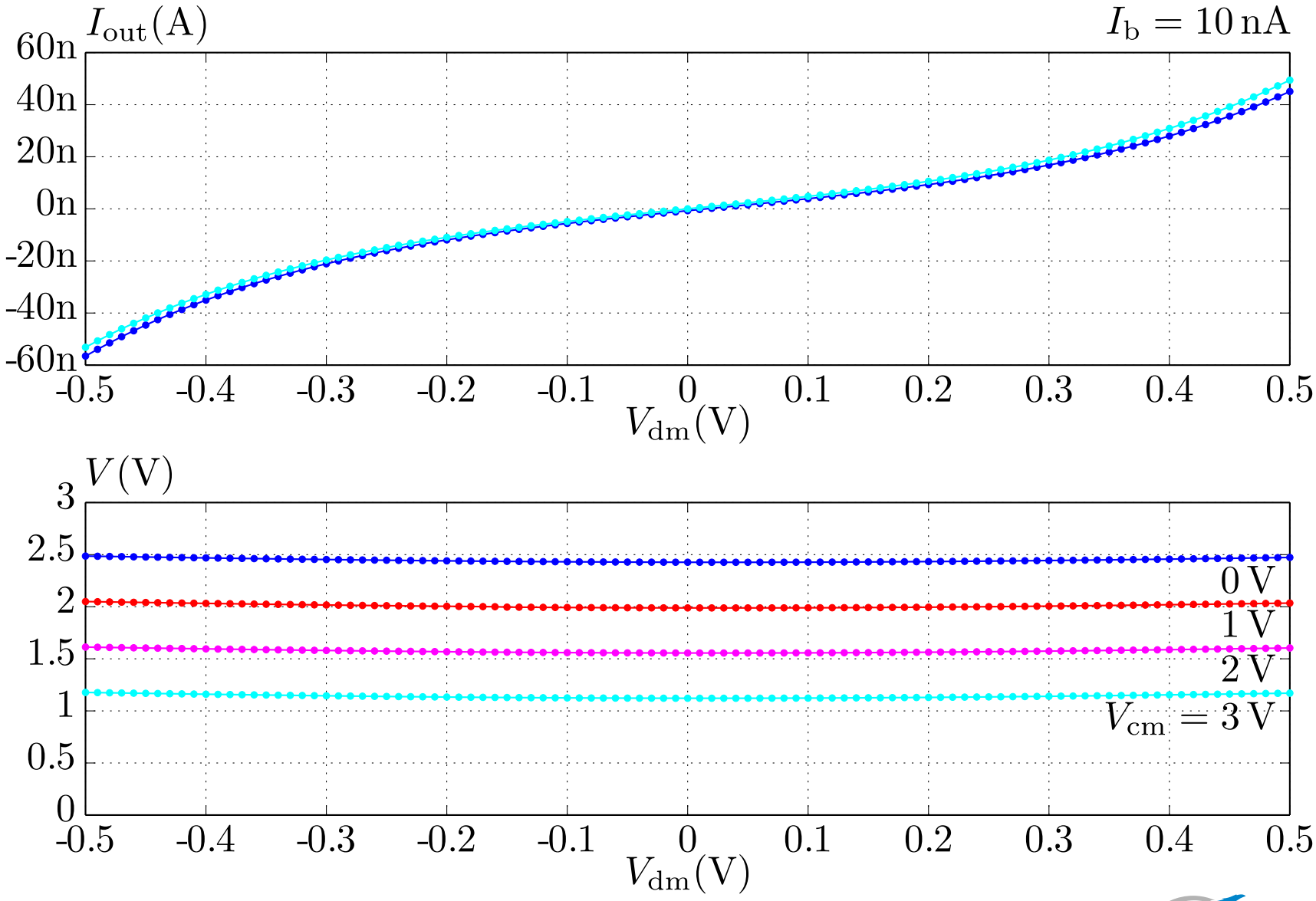

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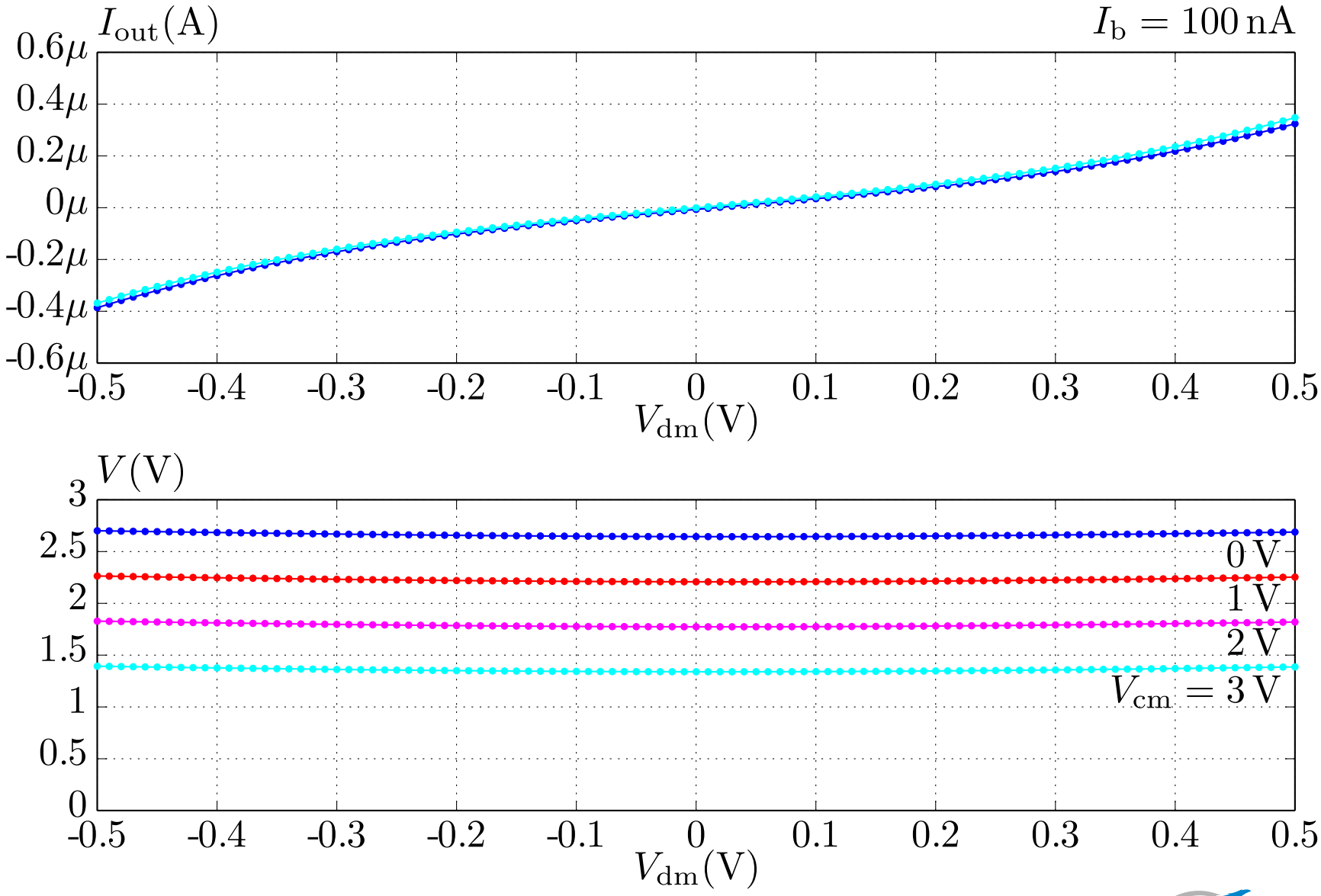

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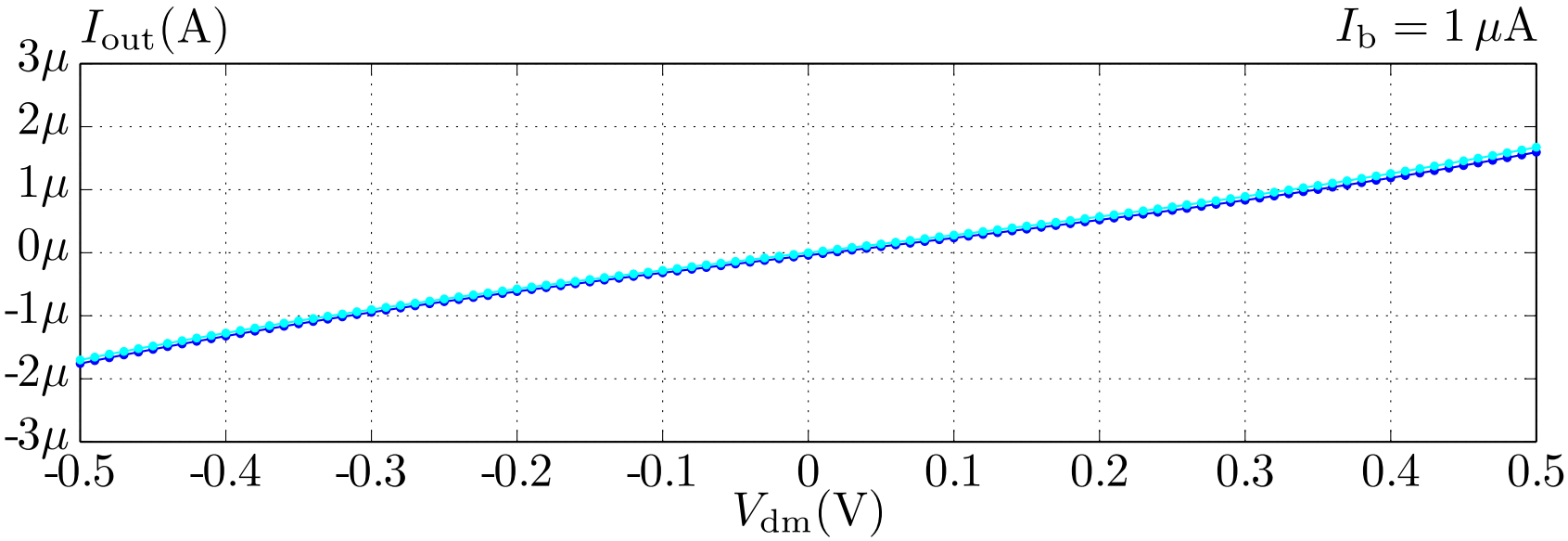

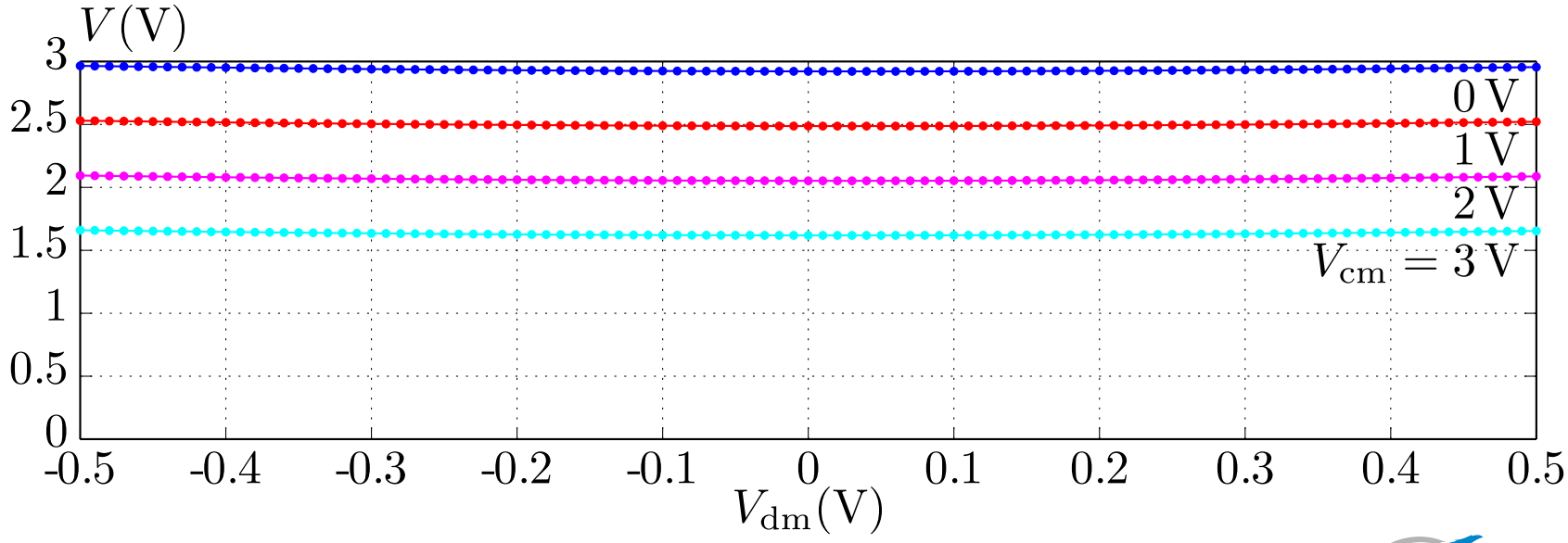

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Transconductance Gain vs. Common-Mode