台灣自行開發的繪圖軟體畫analog circuit的結果

李家同

以下的圖都是由靜宜大學的學生用Violet繪圖軟體畫的，Violet繪圖軟體是靜宜大學吳賦哲教授發展出來的。每一張圖都有一個是原來李家同教授用Visio畫的，這是李教授analog circuit講義中的圖。我們可以說，吳教授所發展的系統絕對可以和Visio相比，毫無遜色。希望全國需要畫圖的人，都用本土發展的Violet繪圖軟體。在以下的網站可以找到Violet繪圖軟體

<http://toreal.github.io/Violet/intro.html>

吳賦哲教授的E-mail是fcwu@pu.edu.tw

[Chapter 01 The Metal-Oxide Semiconductor Field Effect Transistors.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU5LzAvNDY0NjkxMi9TVUIwMDM3UU8vWlowMDM5TzEu&fobj_name=Chapter+01+The+Metal-Oxide+Semiconductor+Field+Effect+Transistors.doc)

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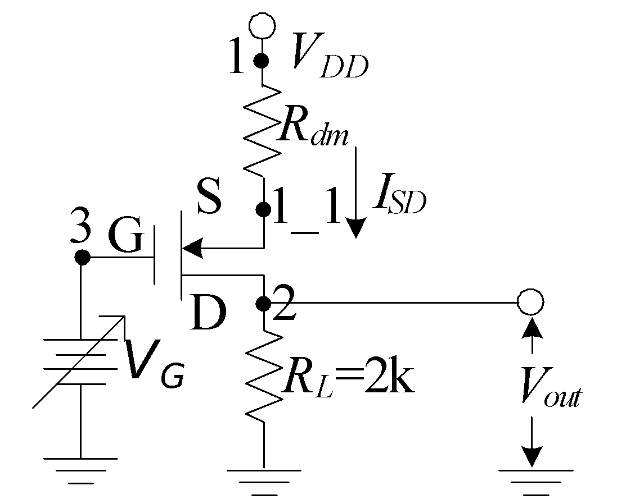
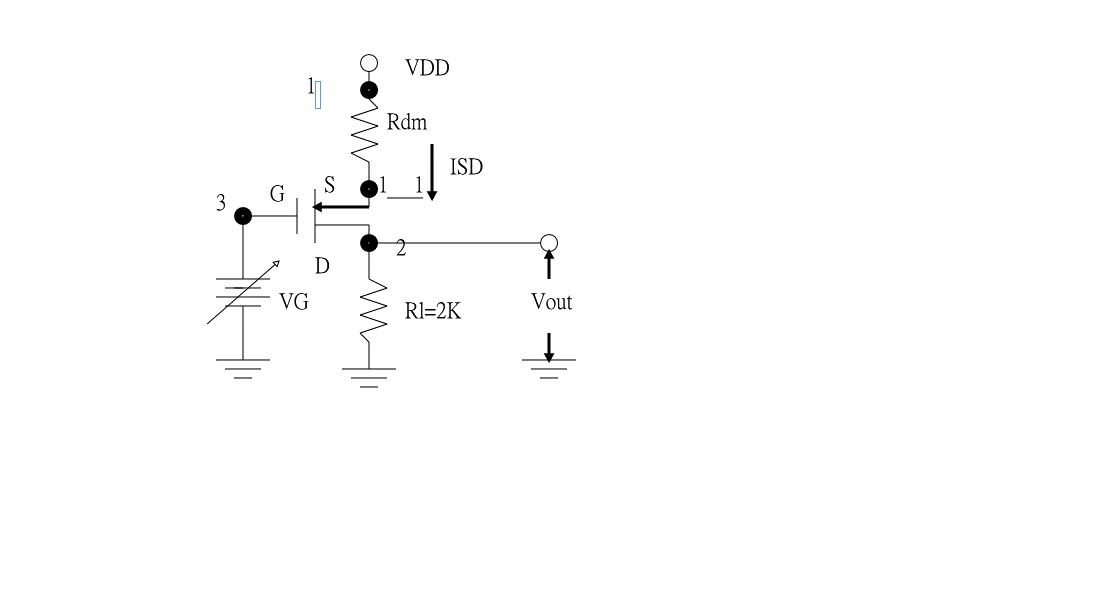


Fig. 1.6-19  A PMOS circuit for Experiment 1.6-8

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[Chapter 02 MOSFET Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU5LzAvNjI5MTQ1Ni9TVUIwMDM3UU8vWlowMDM5TzIu&fobj_name=Chapter+02+MOSFET+Amplifiers.doc)

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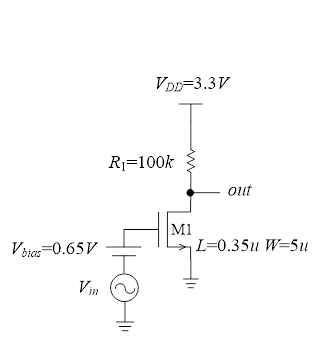
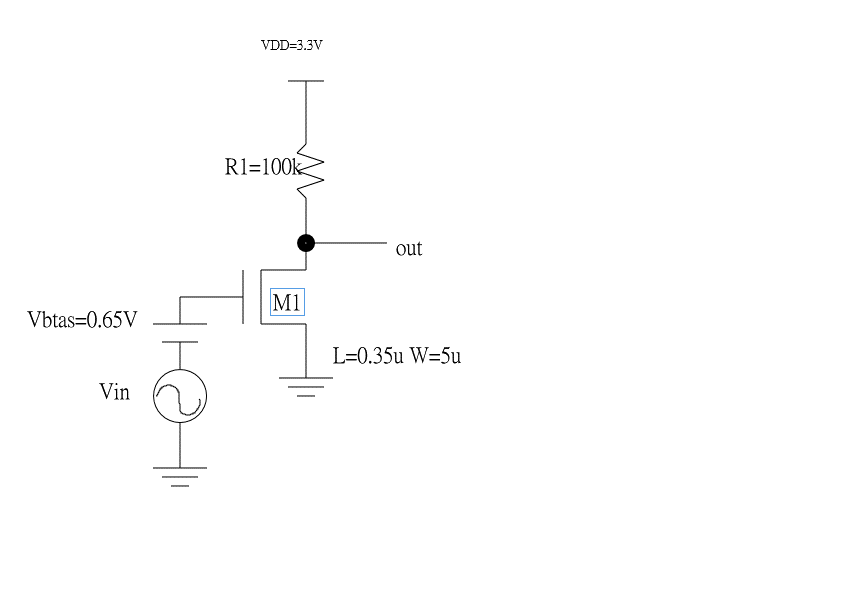


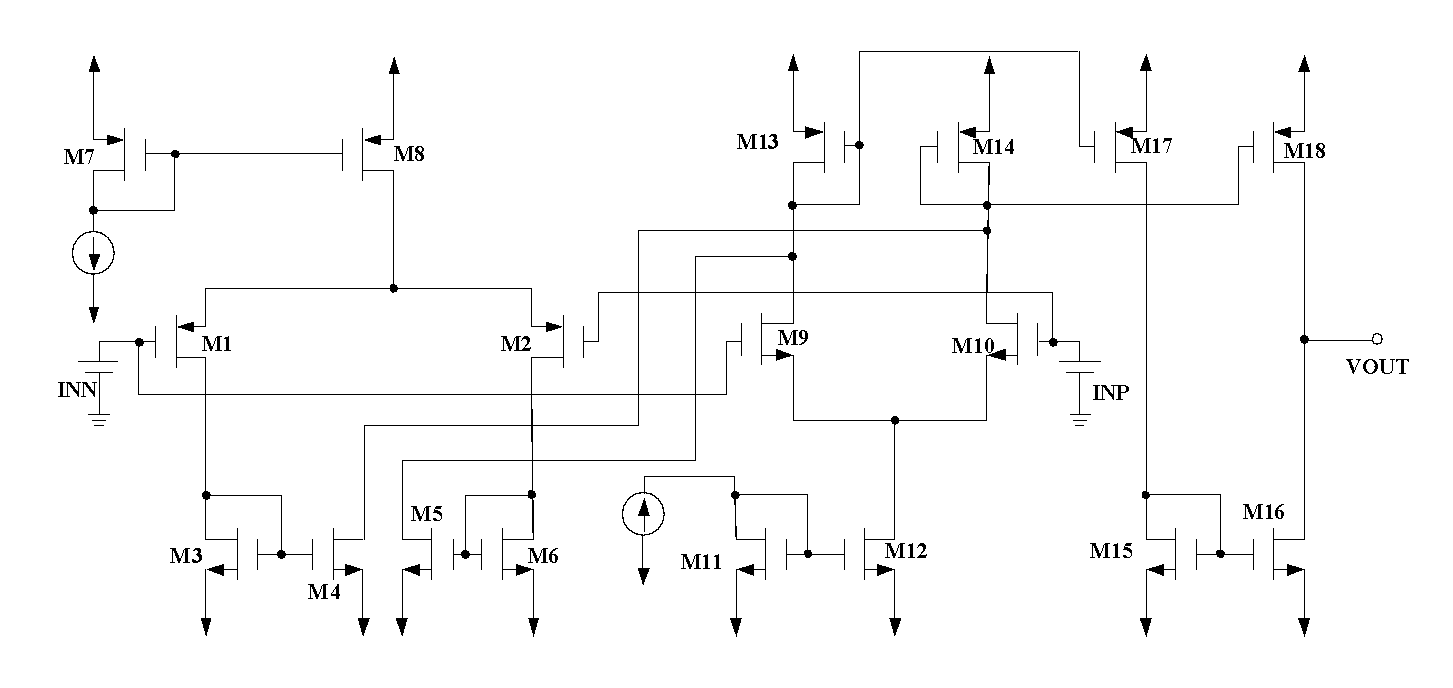
Fig. 2.5-2  The amplifier circuit with https://lh3.googleusercontent.com/7UcNbm_WbJ1urxRT2SPYdqEH6snQpkzVq3uxabj4Dkagtg-b5uKChFBdVtEv0vEj4ZEiMSrVFbiyJ20o8bsWSPFwfwtJvXea71g_UtCAlHSL5qGwUmjxRZla5wSCo3gbWSaatDjecZASxv-cNQ for Experiment 2.5-1

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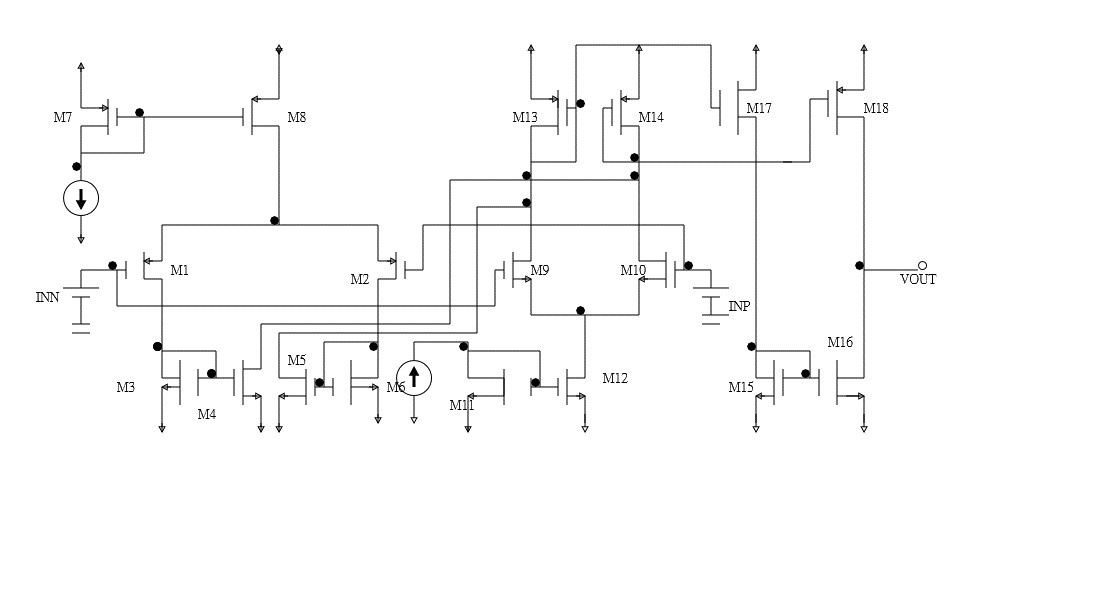


[Chapter 03 Amplifiers with Active Loads – CMOS Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU5LzAvNTYwMzg0MC9TVUIwMDM3UU8vWlowMDM5Tlgu&fobj_name=Chapter+03+Amplifiers+with+Active+Loads+%E2%80%93+CMOS+Amplifiers.doc)

參考圖:

 Fig. 3.10-2  A rail to rail comparator

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[Chapter 04 The Differential Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjYzLzAvMTYyNTgwNDgvU1VCMDAzN1FPL1paMDAzOU8wLg==&fobj_name=Chapter+04+The+Differential+Amplifiers.doc)

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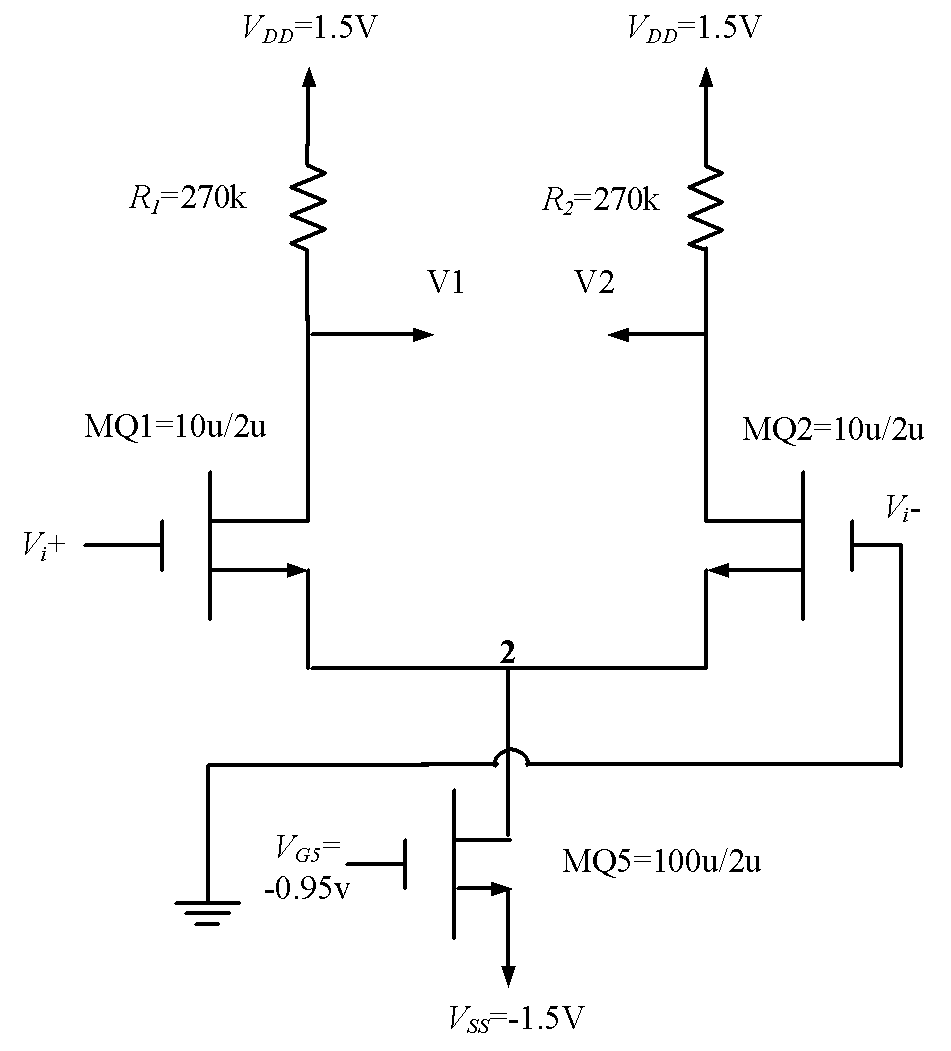
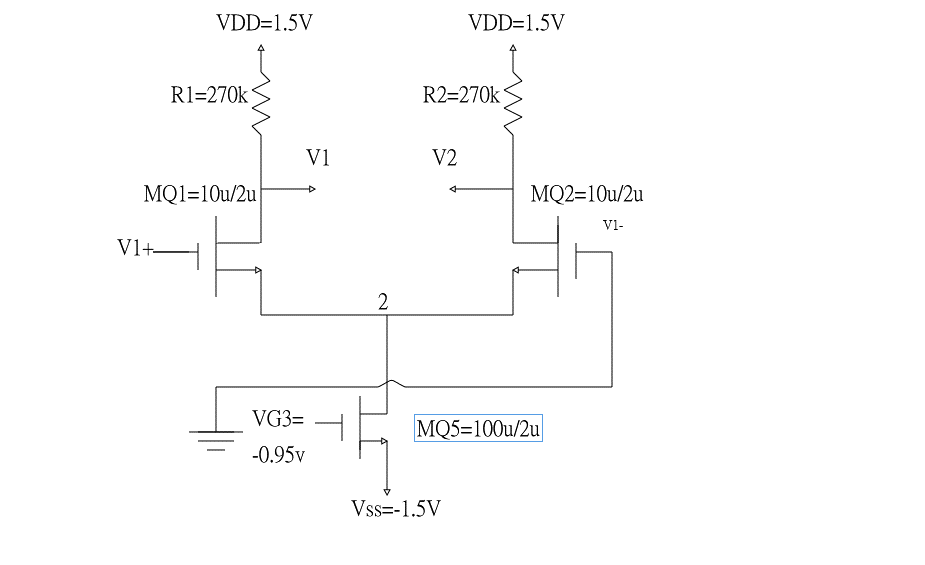


Fig. 4.1-11  The differential amplifier circuit for Experiment 4.1-1

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[Chapter 05 The Multi-Stage Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU3LzAvMjA5MzA1Ni9TVUIwMDM3UU8vWlowMDM5Tlcu&fobj_name=Chapter+05+The+Multi-Stage+Amplifiers.doc)

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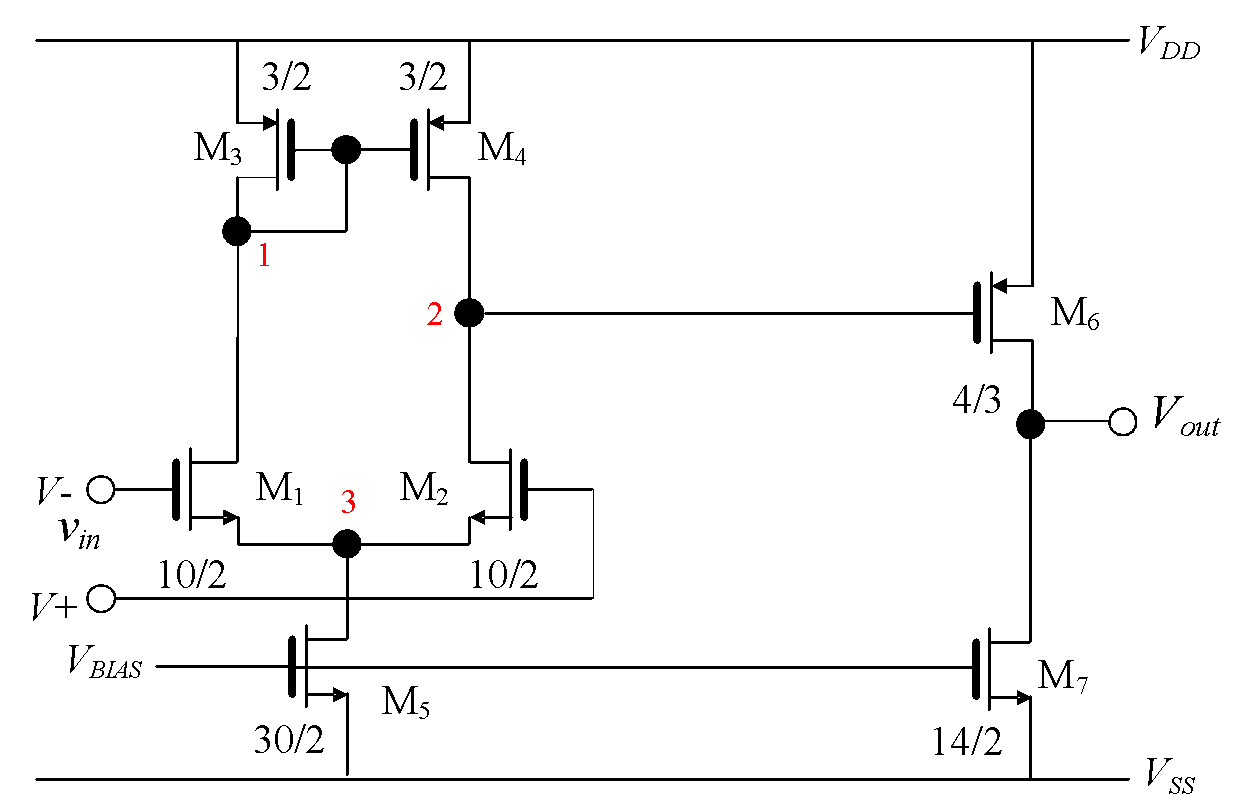
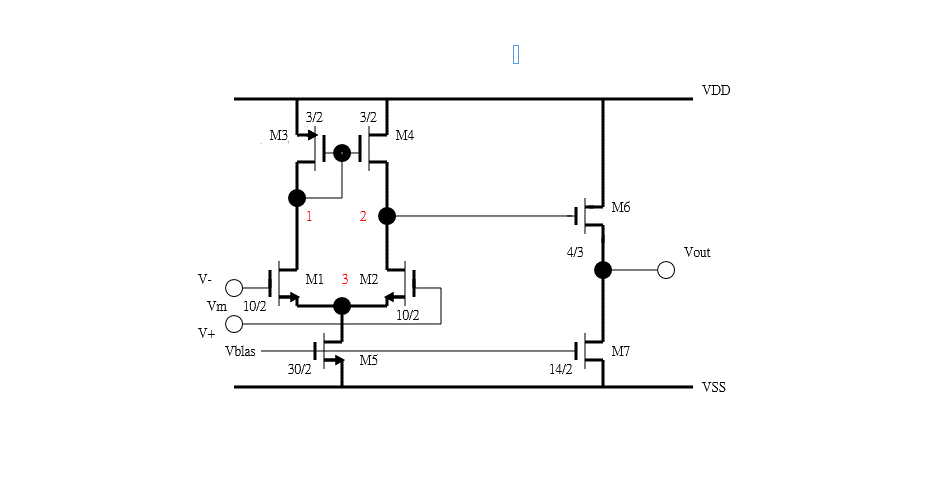


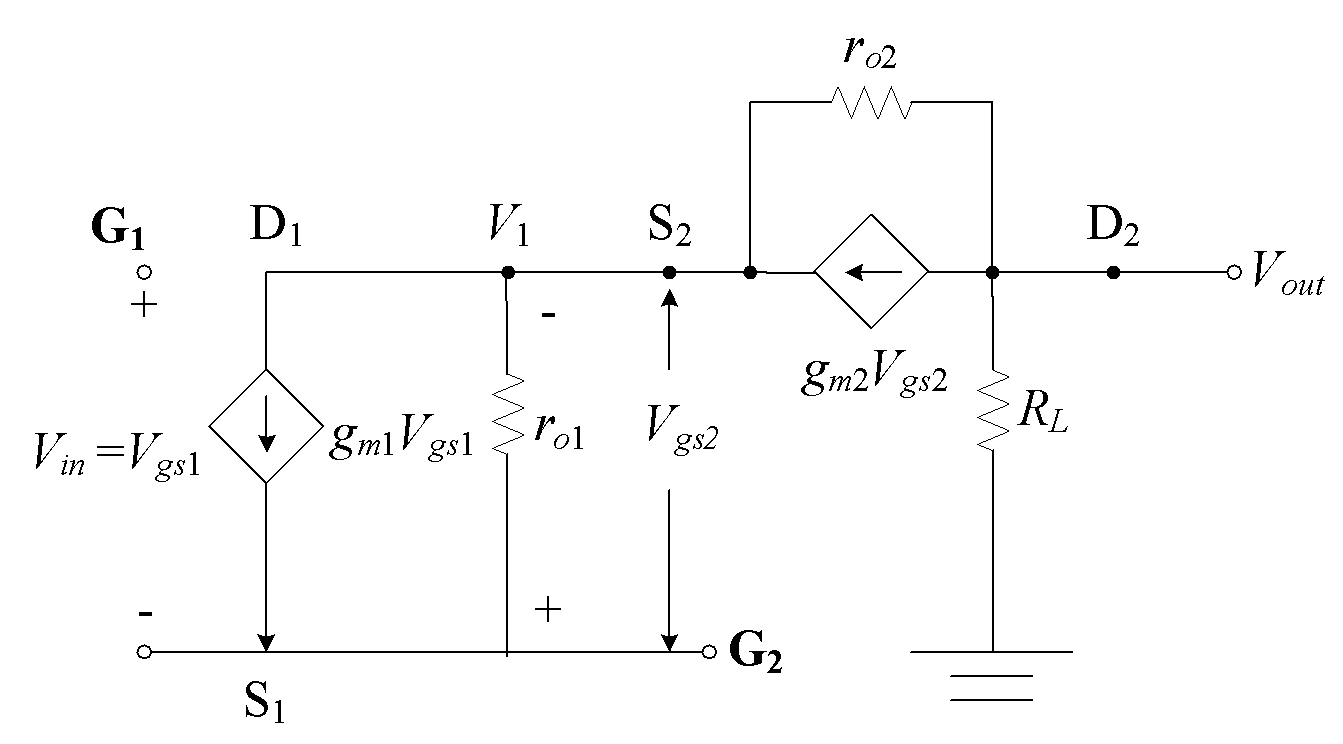
Fig. 5.2-1 A two-stage differential amplifier

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[Chapter 06 Cascode Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU3LzAvNTk5MzQ3Mi9TVUIwMDM3UU8vWlowMDM5Tlou&fobj_name=Chapter+06+Cascode+Amplifiers.doc)

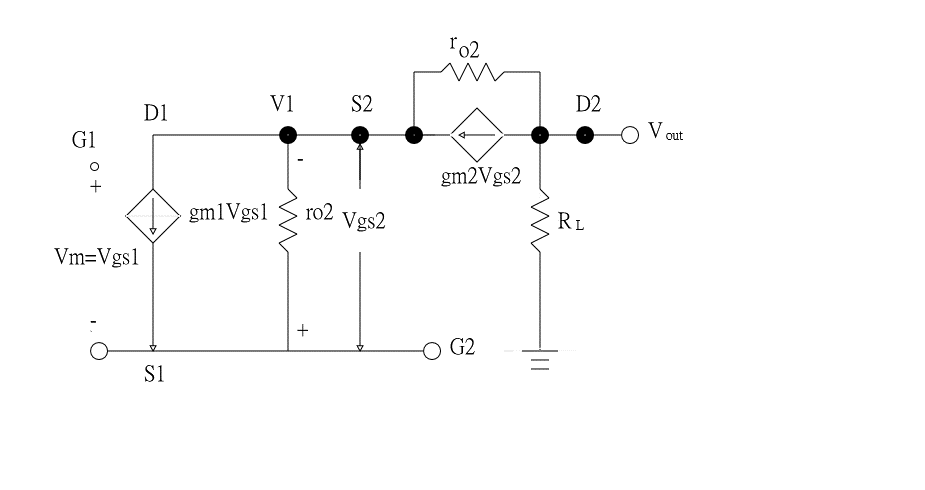
參考圖:



(b) The small signal equivalent circuit for the cascoded amplifier

Fig. 6.2-1  The AC analysis of the cascoded amplifier

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[Chapter 07 The Inverters.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU0LzAvNjczNzkyL1NVQjAwMzdRTy9aWjAwMzlOWS4=&fobj_name=Chapter+07+The+Inverters.doc)

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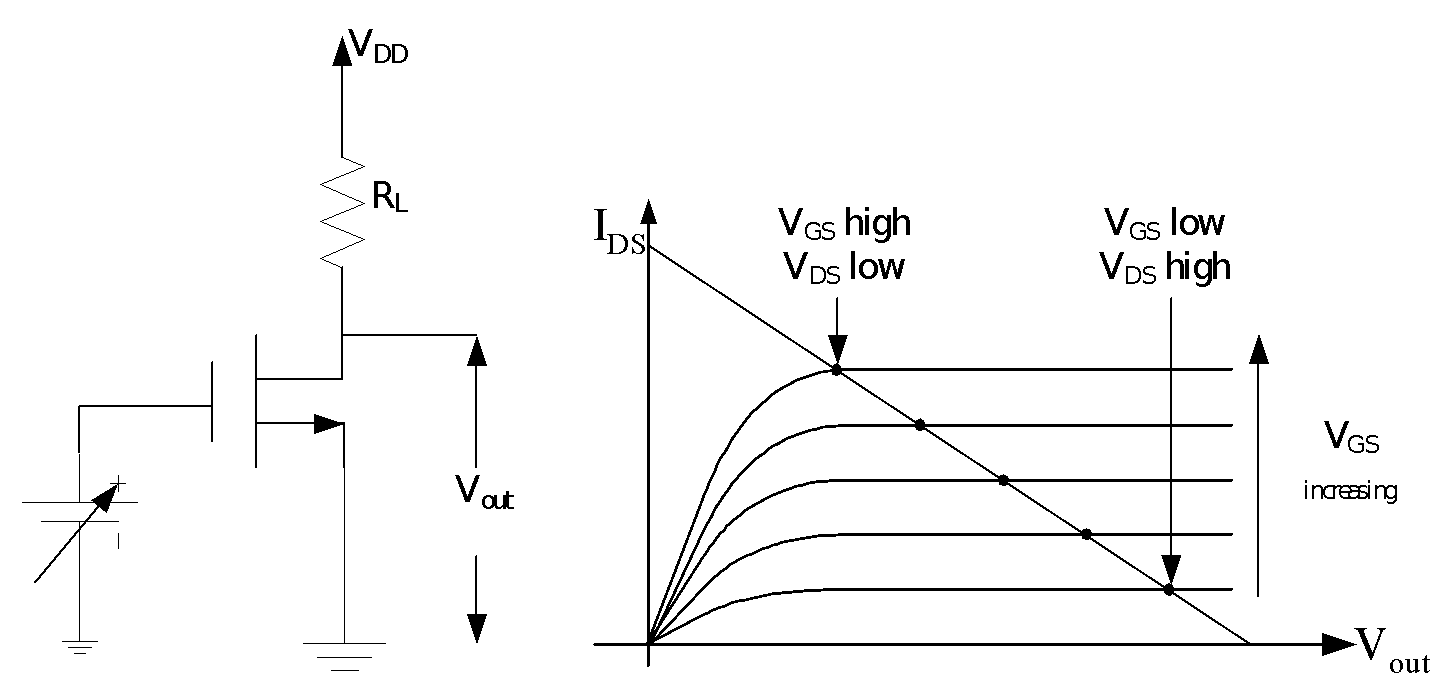
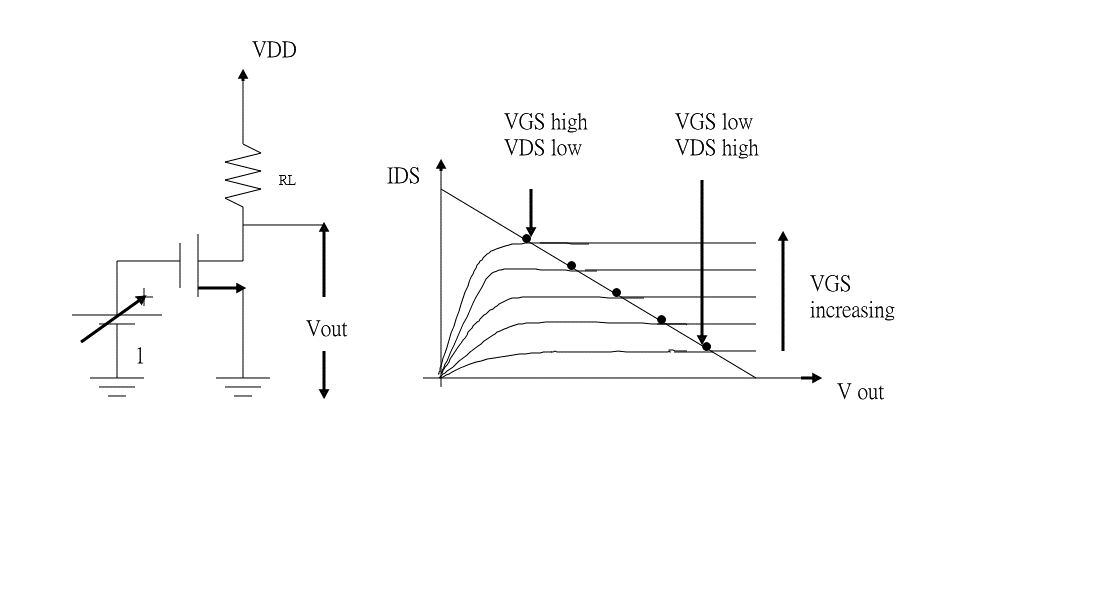


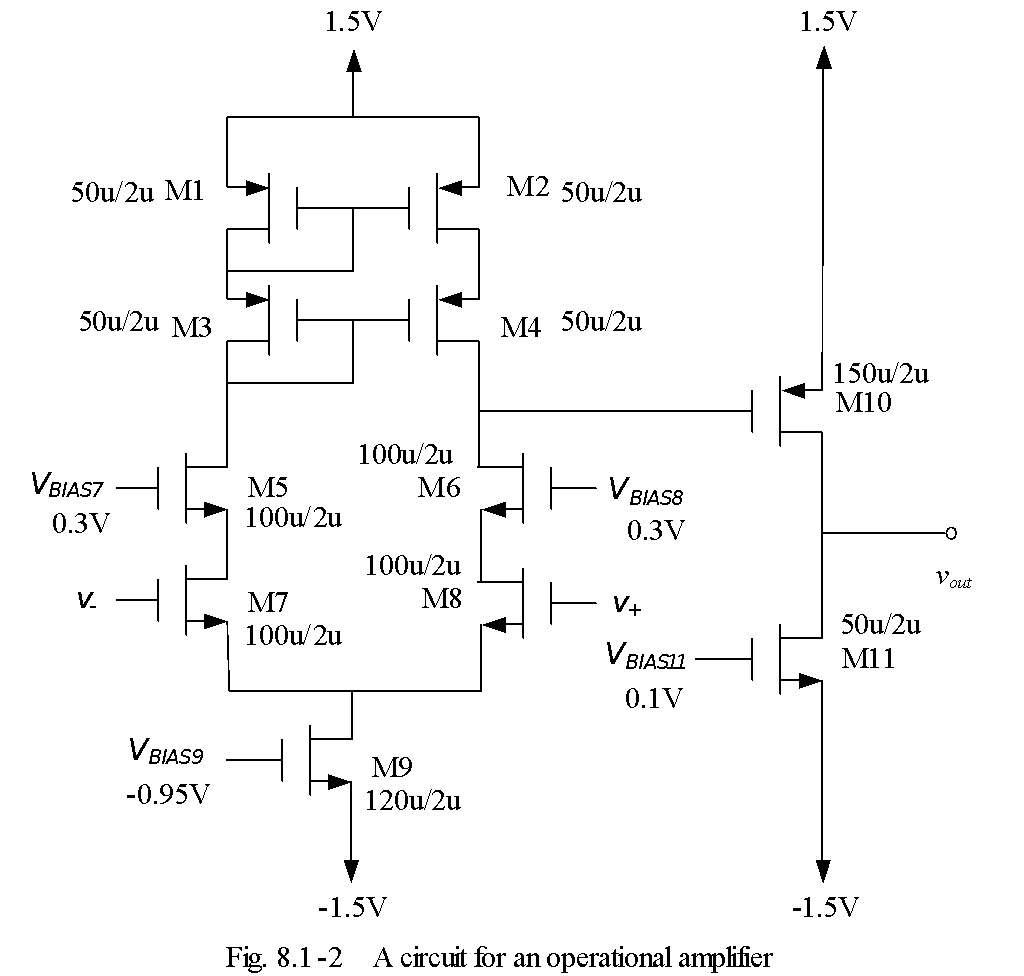
Fig.7.1-1. A transistor circuit as an inverter.

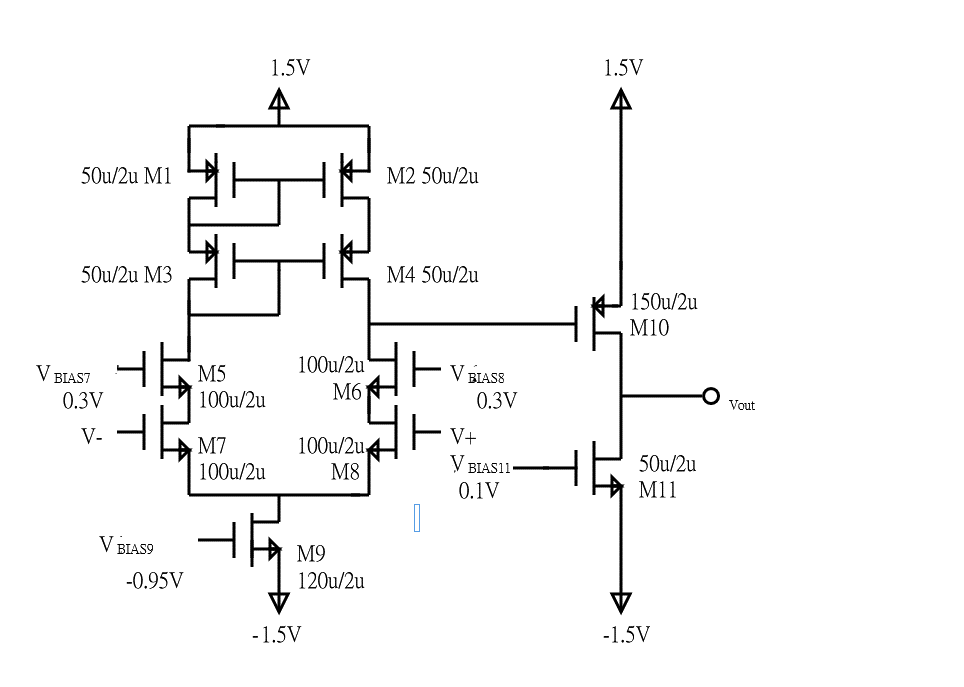
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[Chapter 08 The Operational Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU0LzAvMjg5MzYxOTIvU1VCMDAzN1FPL1paMDAzOU5WLg==&fobj_name=Chapter+08+The+Operational+Amplifiers.doc)

參考圖:

  
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[Chapter 09 Square Wave Generators.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjQ3LzAvMTkyNzYyODgvU1VCMDAzN1FPL1paMDAzQ1BXLg==&fobj_name=Chapter+09+Square+Wave+Generators.doc)

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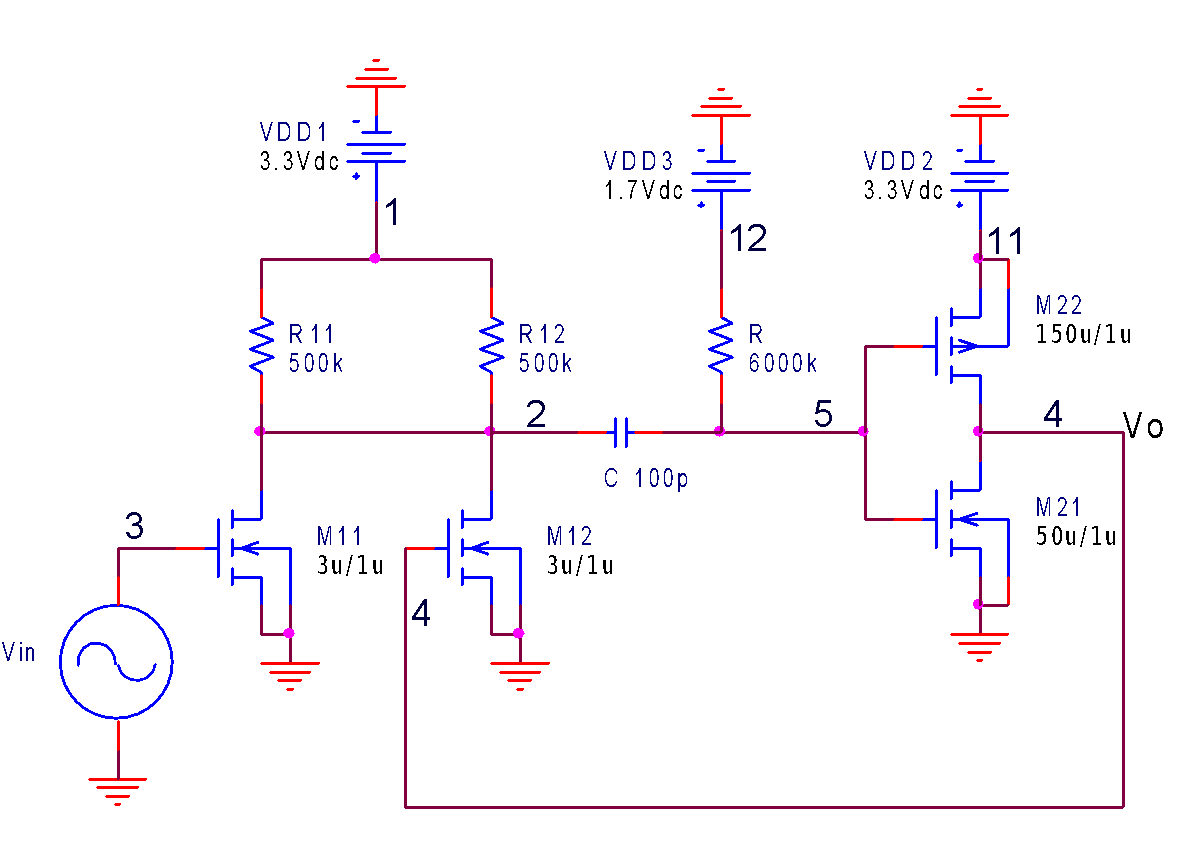
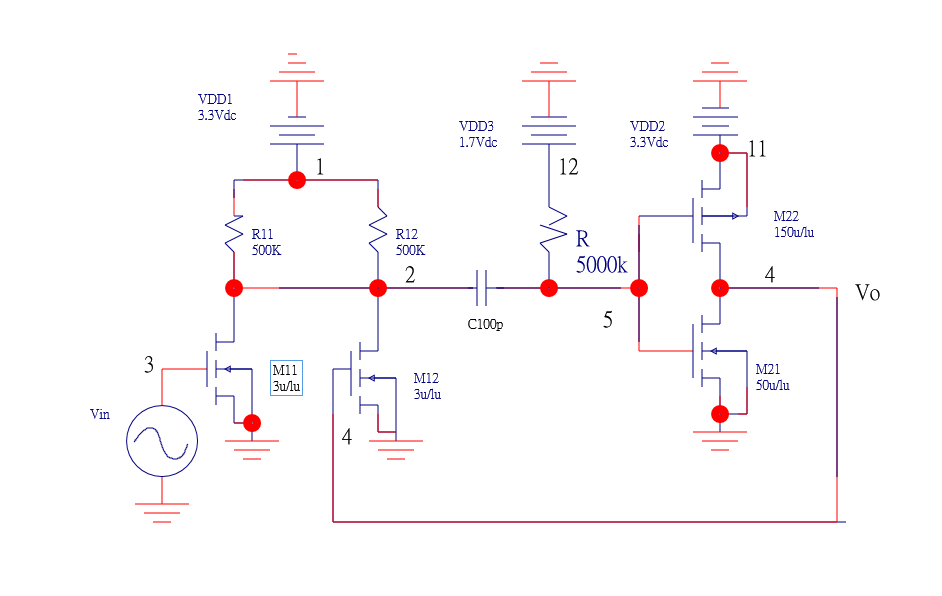


Fig. 9.1-12 The one-shot circuit for Experiment 9.1-3

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[Chapter 10 The Sinusoidal Oscillators.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjQ3LzAvODU0OTg4OC9TVUIwMDM3UU8vWlowMDNBMjgu&fobj_name=Chapter+10+The+Sinusoidal+Oscillators.doc)

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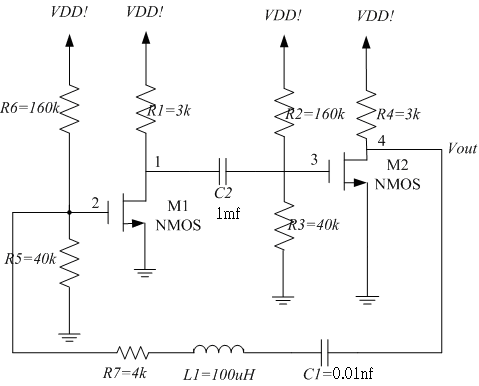
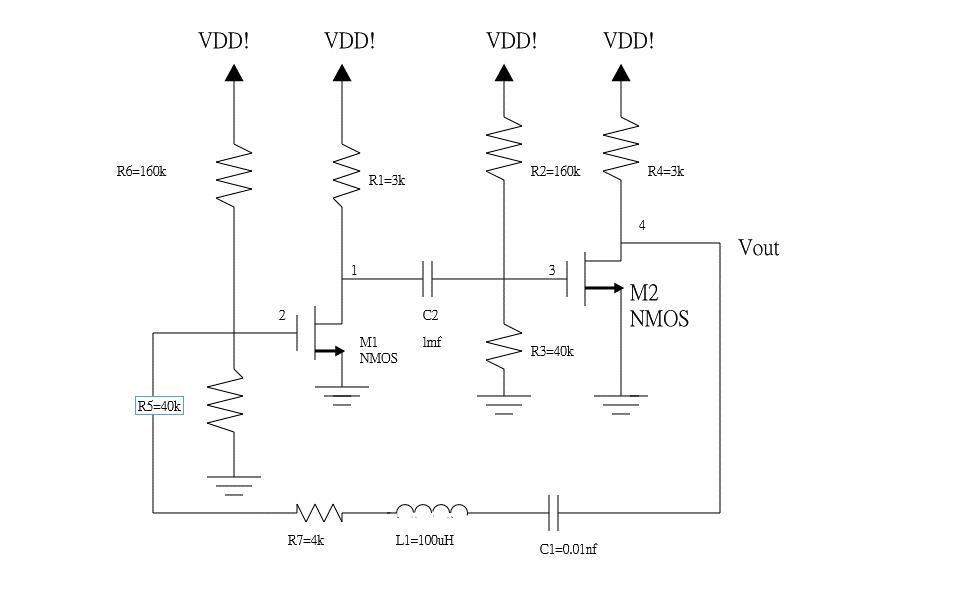


Fig. 10.2-1  A simple sinusoidal oscillator circuit with *RLC* feedback

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[Chapter 11 Filters.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjQ3LzAvMzY1MjA5Ni9TVUIwMDM3UU8vWlowMDNBMkIu&fobj_name=Chapter+11+Filters.doc)

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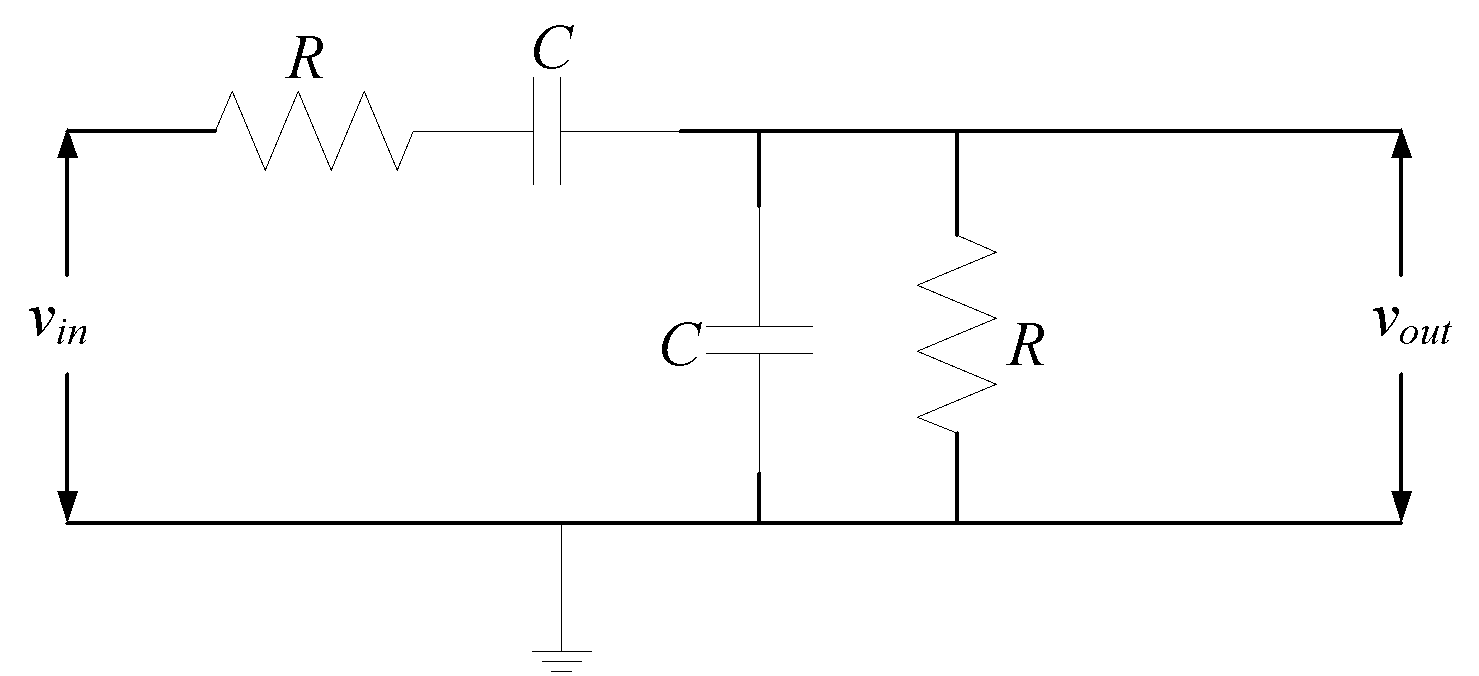
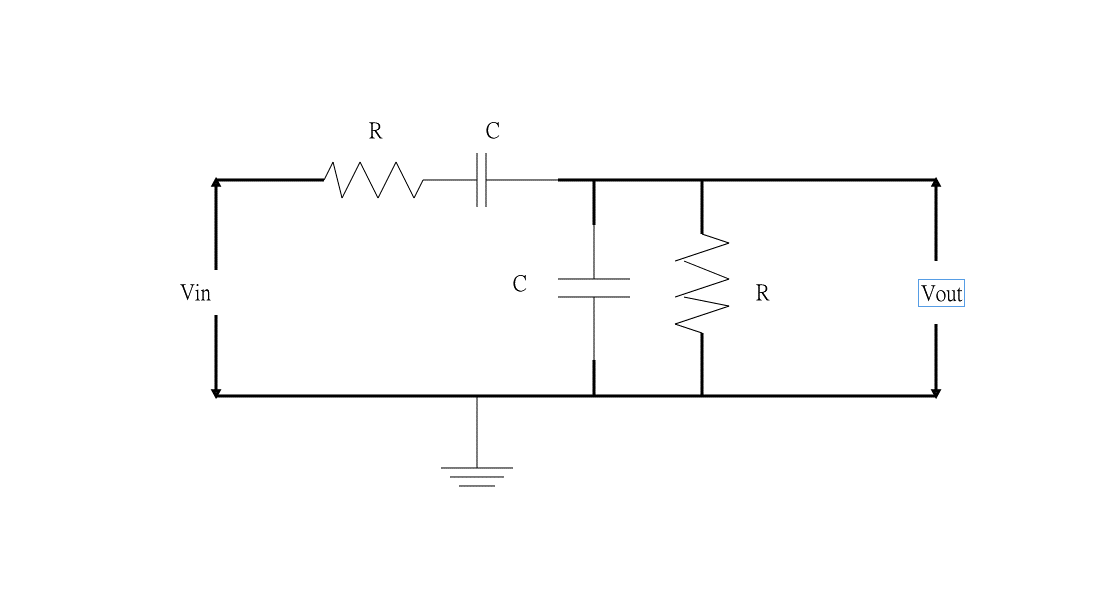


Fig. 11.1-3 An *RC* band-pass filter

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[Chapter 12 The Frequency Response of Amplifiers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjQ3LzAvMTAyODYwOC9TVUIwMDM3UU8vWlowMDNBMkEu&fobj_name=Chapter+12+The+Frequency+Response+of+Amplifiers.doc)

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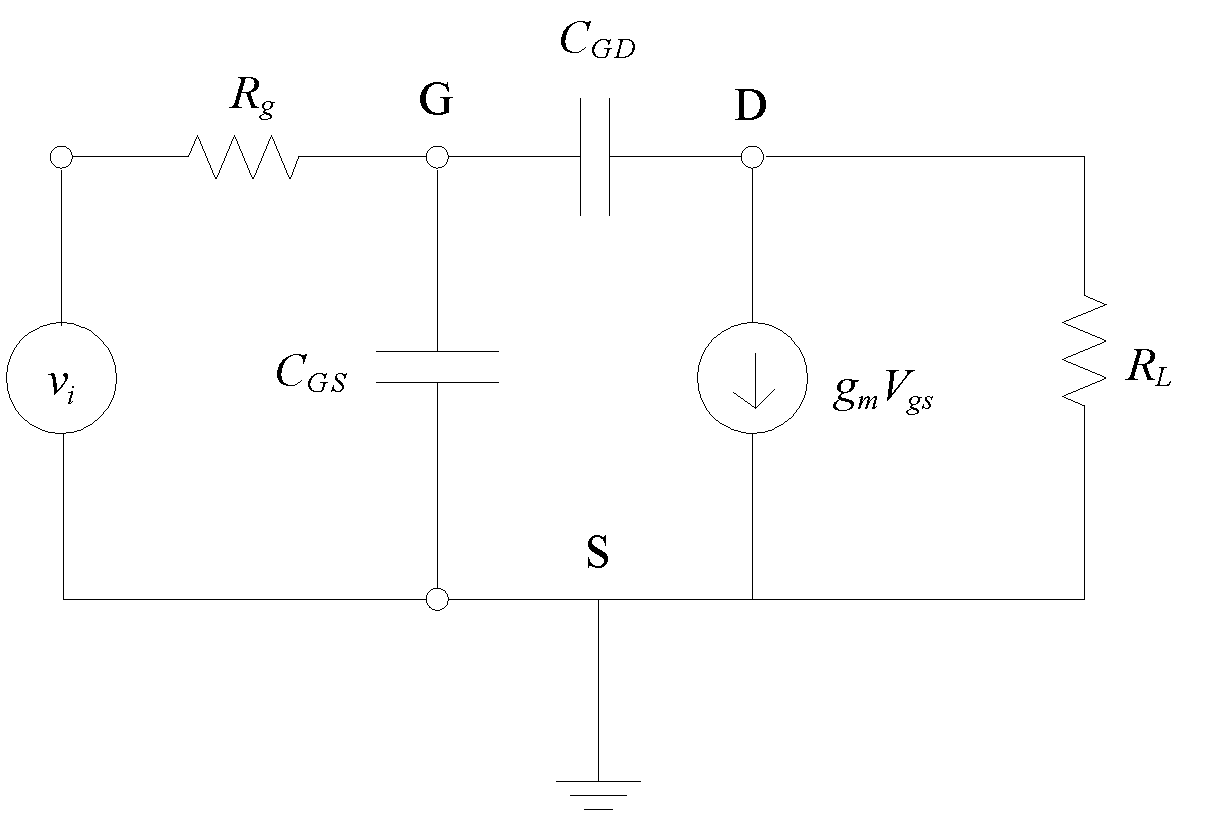
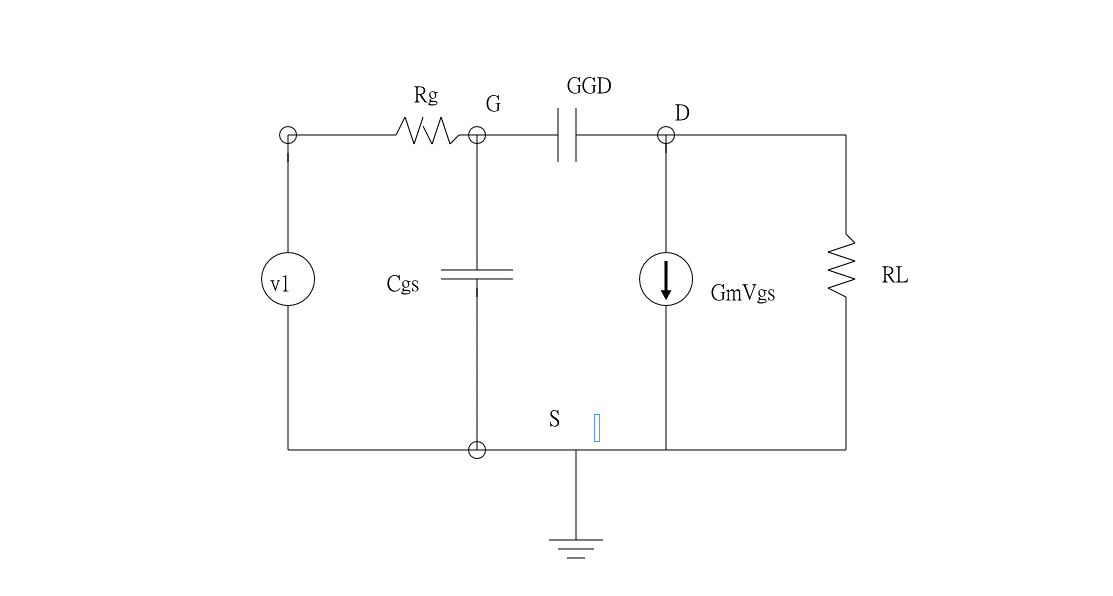


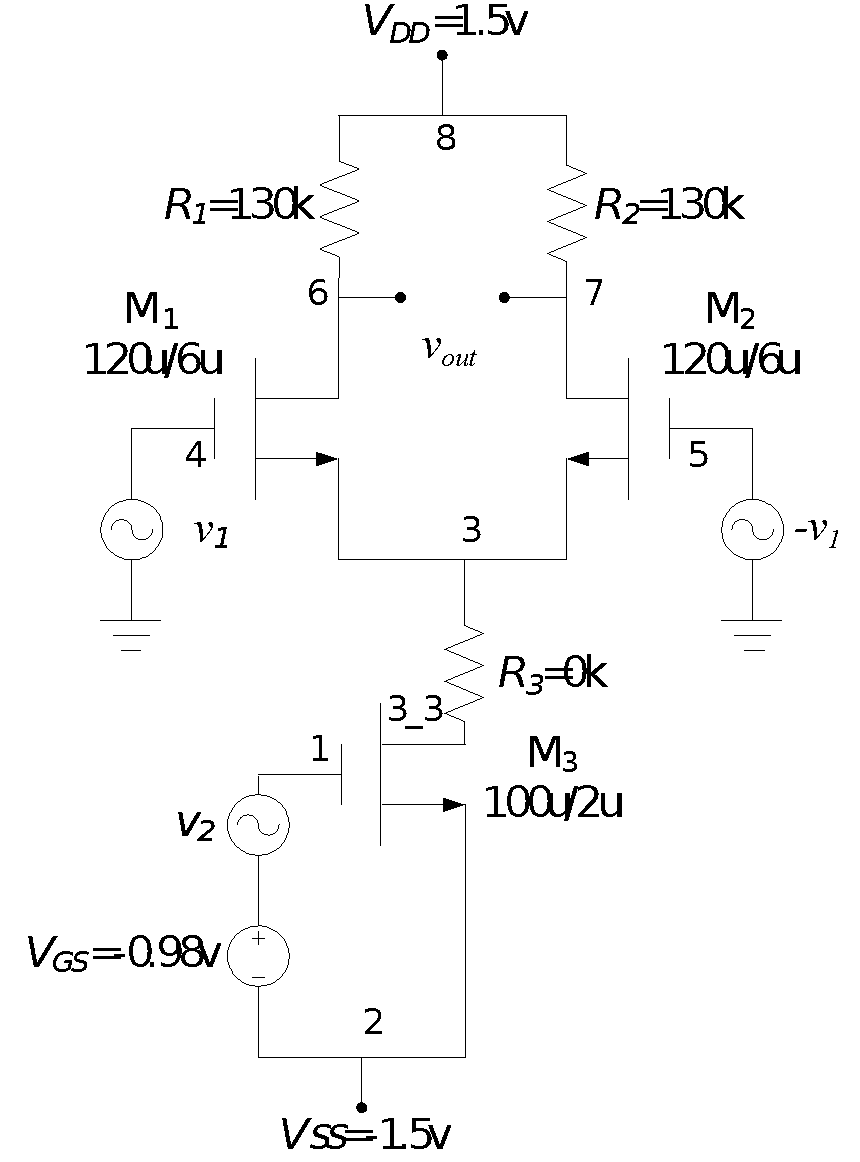
Fig. 12.1-2  A small signal equivalent circuit with capacitors considered

Violet:

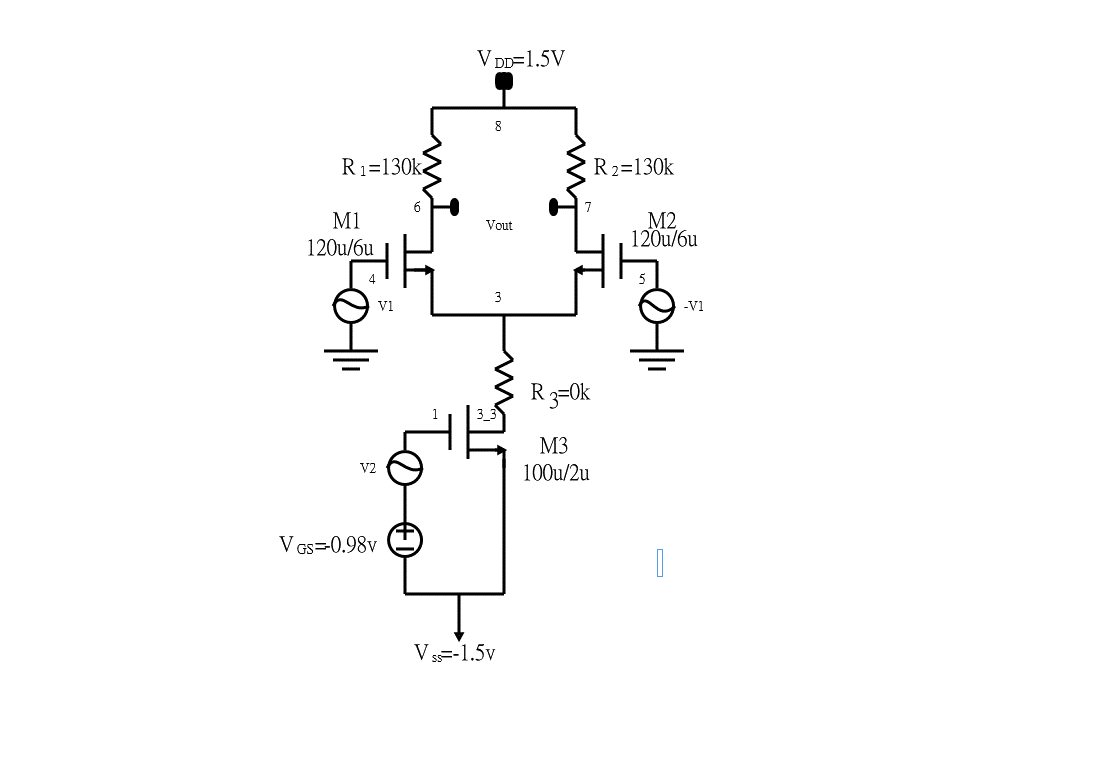


[Chapter 13 The Mixers.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjU5LzAvNDYzNjE2MC9TVUIwMDM3UU8vWlowMDNBMjku&fobj_name=Chapter+13+The+Mixers.doc)

參考圖:

   
Fig. 13.1-1  A mixer with carrier circuit

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[Chapter 14 The Digital Circuits.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjM2LzAvODk5NDgxNi9TVUIwMDM3UU8vWlowMDNBMjcu&fobj_name=Chapter+14+The+Digital+Circuits.doc)

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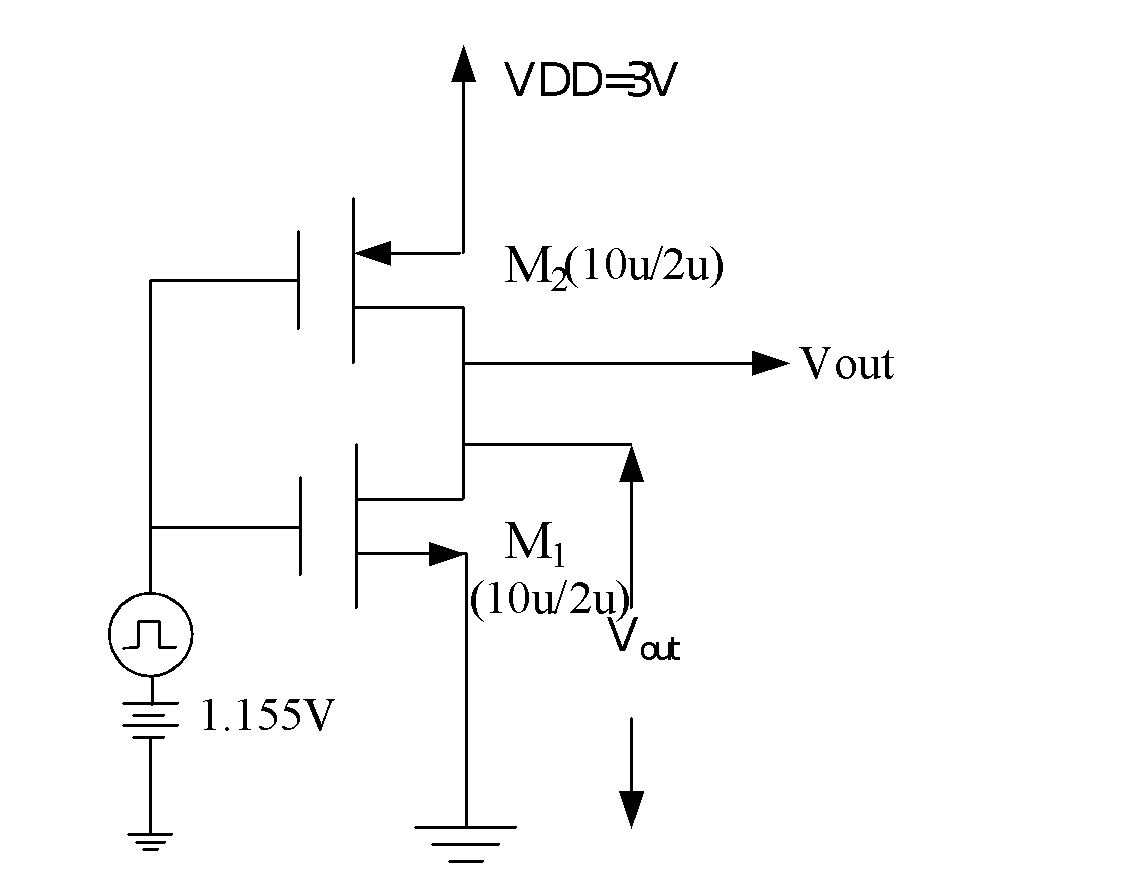
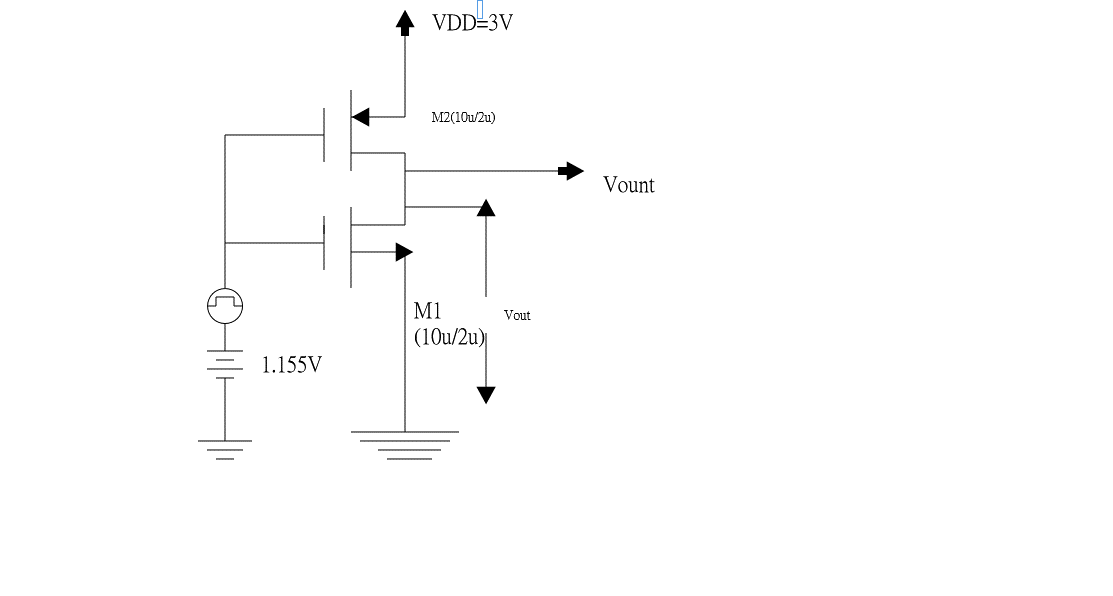


Fig. 14.1-1  An inverter circuit

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[Chapter 15 The Frequency Divider.doc](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NjM2LzAvODczOTg0MC9TVUIwMDM3UU8vWlowMDNBMjYu&fobj_name=Chapter+15+The+Frequency+Divider.doc)

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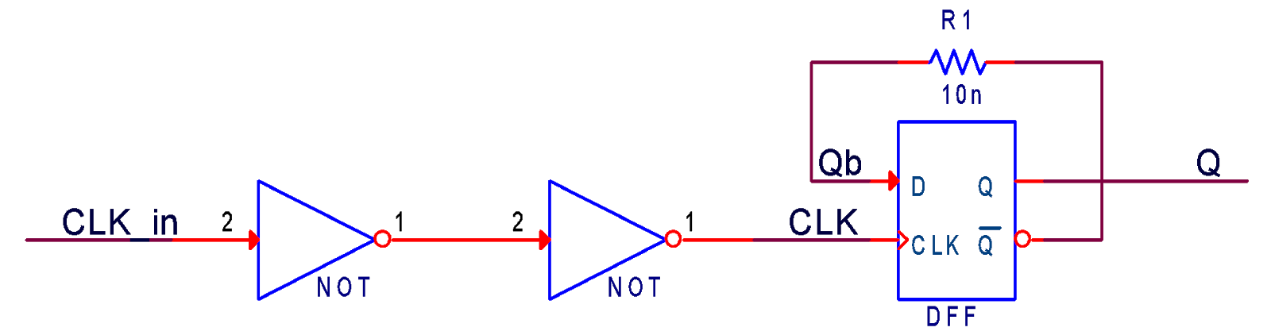
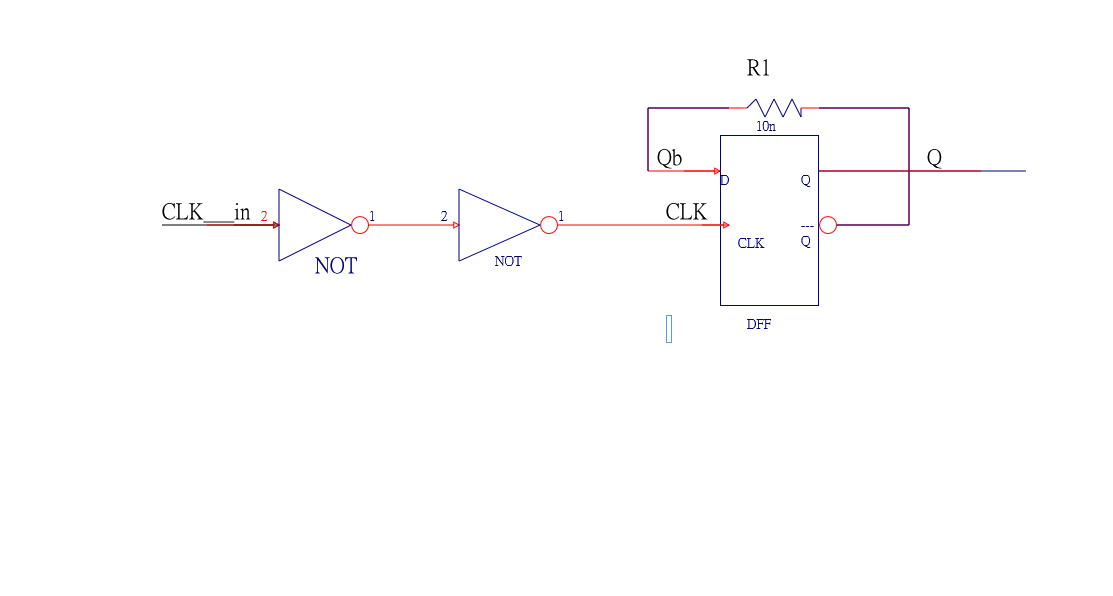


Fig. 15.1-6  The divide by 2 frequency divider with

two inverters added after the clock

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[Chapter 16 Phase Lock Loop.docx](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NTY1LzAvNDYxNjg5My9TVUIwMDM3UU8vWlowMDNBMjUu&fobj_name=Chapter+16+Phase+Lock+Loop.docx)

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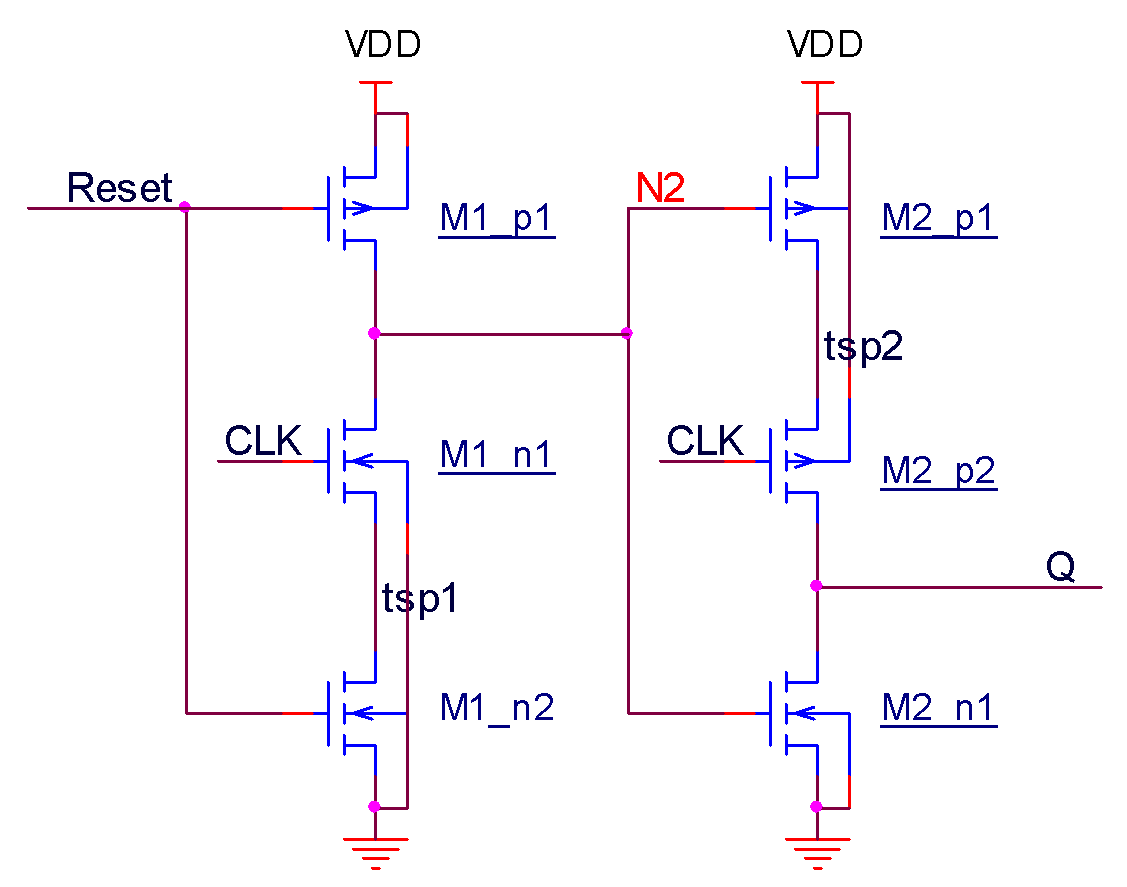
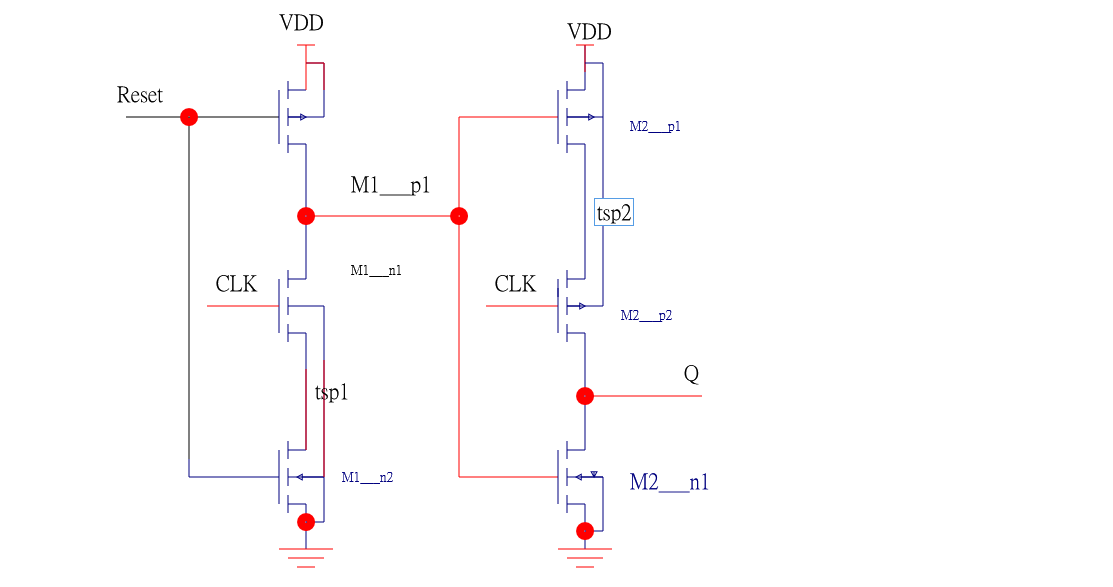


Fig. 16.1-5  Half-transparent register (HT register)

Table. 16.1-2 shows the state diagram of the HT register circuit.

Violet:



[Chapter 17 Low Drop Out.docx](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NTU5LzAvMTgyNTk4Mi9TVUIwMDM3UU8vWlowMDNBMjQu&fobj_name=Chapter+17+Low+Drop+Out.docx)

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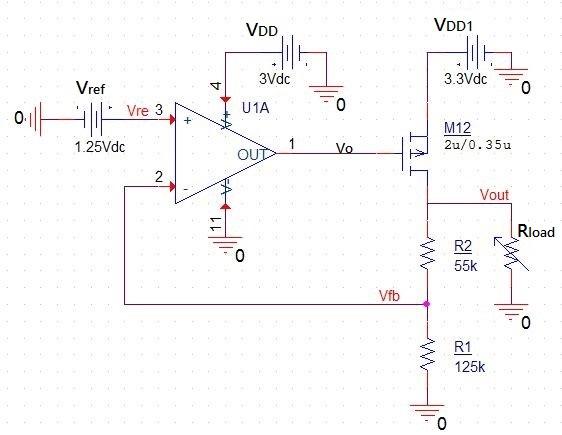
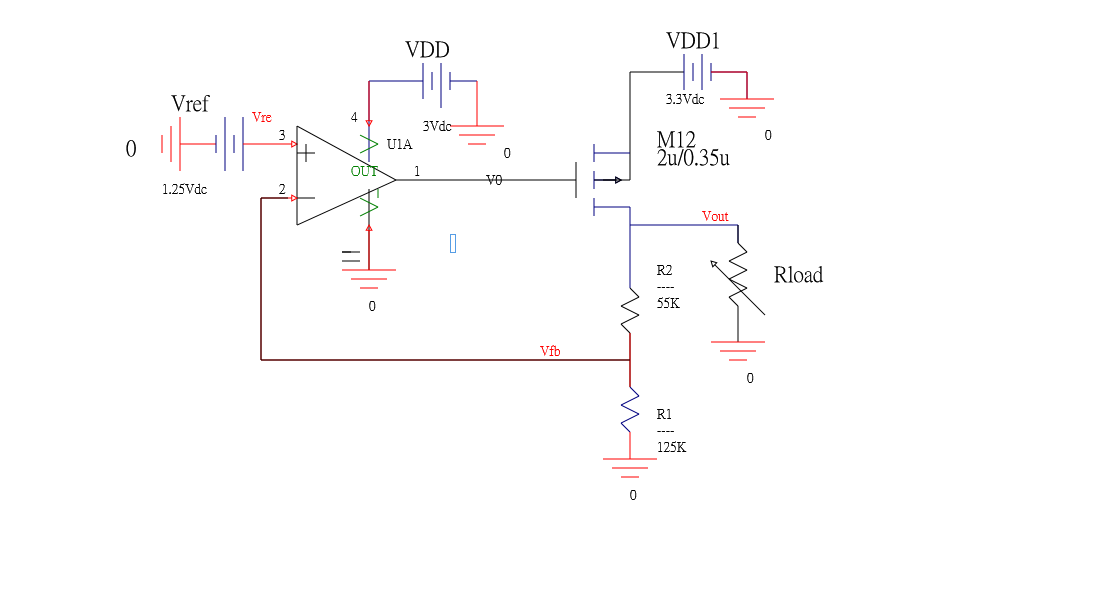


Fig. 17-1  The basic low drop out circuit

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[Chapter 18 Ideal Buck Converter.docx](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NTU5LzAvMzQyMzAzNi9TVUIwMDM3UU8vWlowMDM5TzQu&fobj_name=Chapter+18+Ideal+Buck+Converter.docx)

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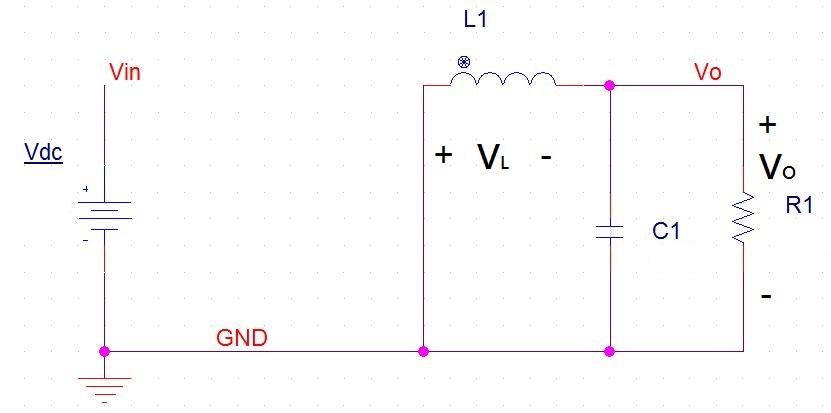
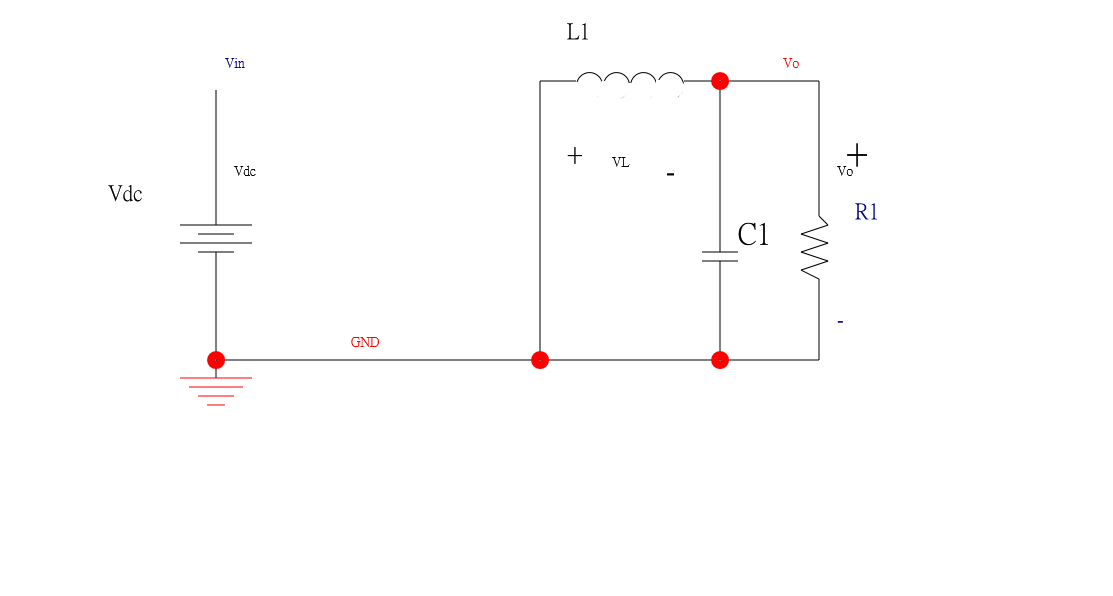


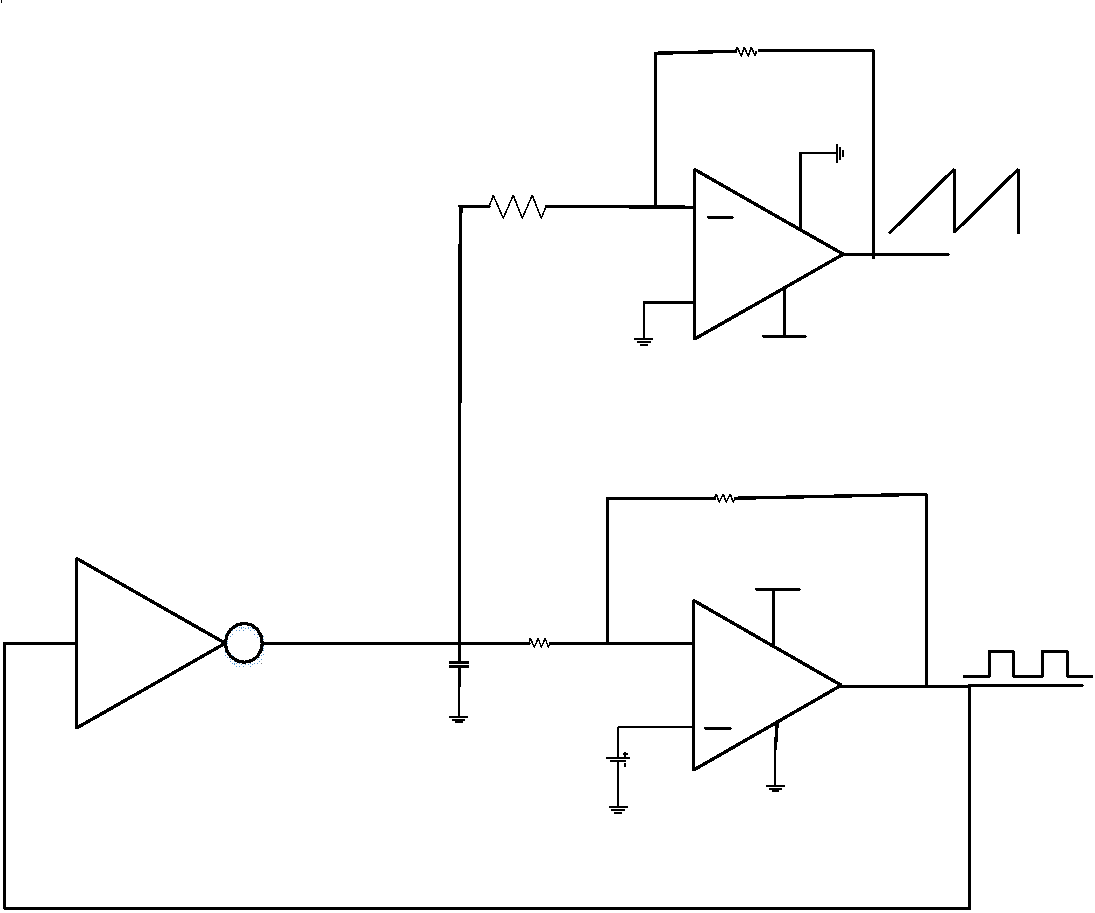
Fig 18.1-5 The circuit for Case 2

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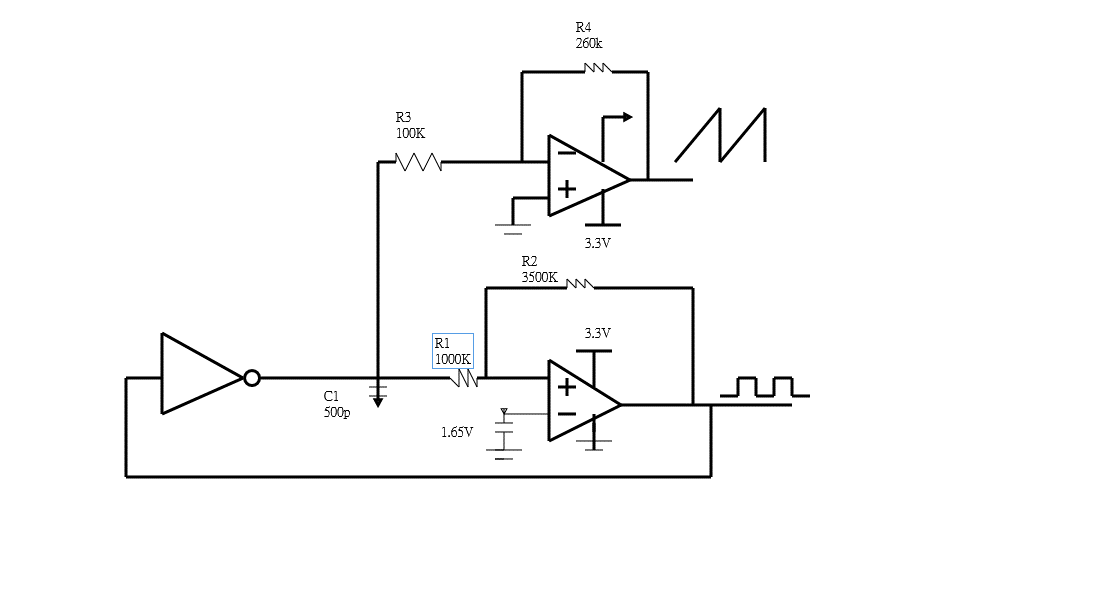


[Chapter 19 Power MOSFET Buck Converter.docx](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NTU5LzAvODg5ODYwMy9TVUIwMDM3UU8vWlowMDM5TzMu&fobj_name=Chapter+19+Power+MOSFET+Buck+Converter.docx)

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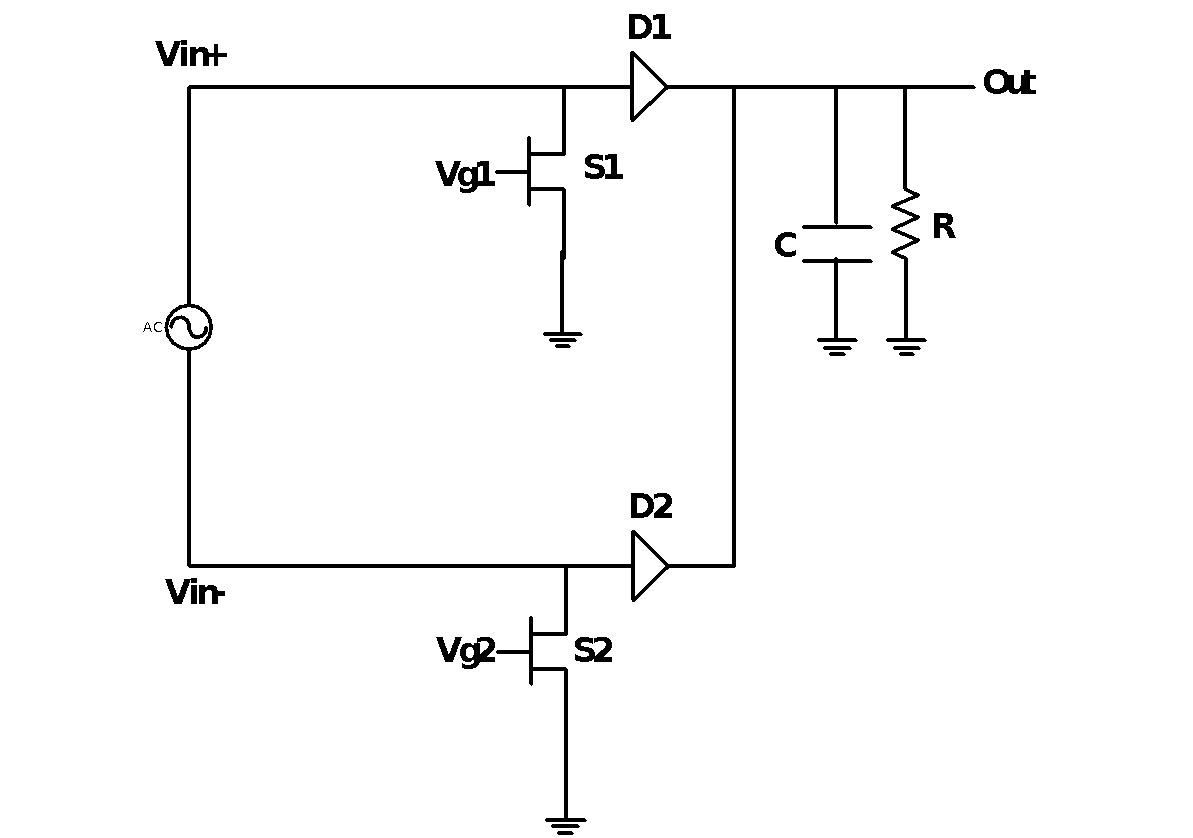


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Fig 19.2-3  A **Saw-tooth Wave Generator**

[Chapter 20 Rectifiers.docx](http://t14.ecp168.net/file_view.php?fobj_path=vgMi83My8xNTU1NTU5LzAvMzI1ODQ1NS9TVUIwMDM3UU8vWlowMDNDUFgu&fobj_name=Chapter+20+Rectifiers.docx)

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