

Bahan Ajar

Chapter 5



Materi Pembelajaran

Matakuliah :

DESAIN DAN SIMULASI RANGKAIAN ELEKTRONIKA

Kode Matakuliah : SKO 20425

Prodi : SISTEM KOMPUTER

Dosen Pengampu Matakuliah:

Bayu Nugroho, S.Kom., M.Eng

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- Transformator
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Tugas Mandiri

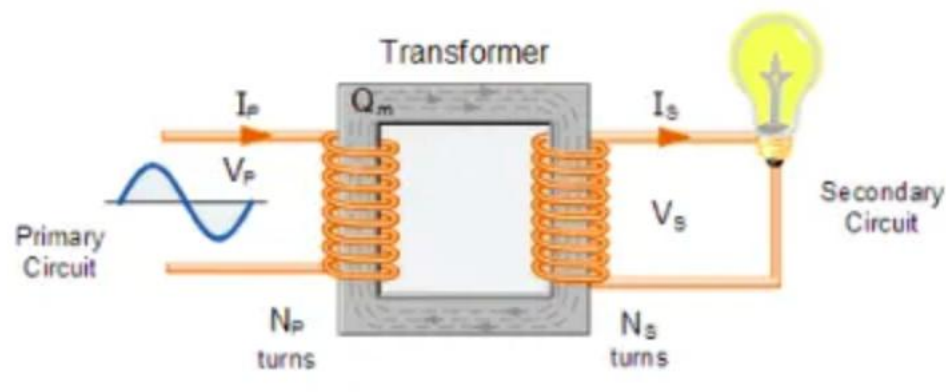


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Component Device

Transformer

A transformer is defined as a passive electrical device that transfers electrical energy from one circuit to another through the process of electromagnetic induction. It is most commonly used to increase ('step up') or decrease ('step down') voltage levels between circuits

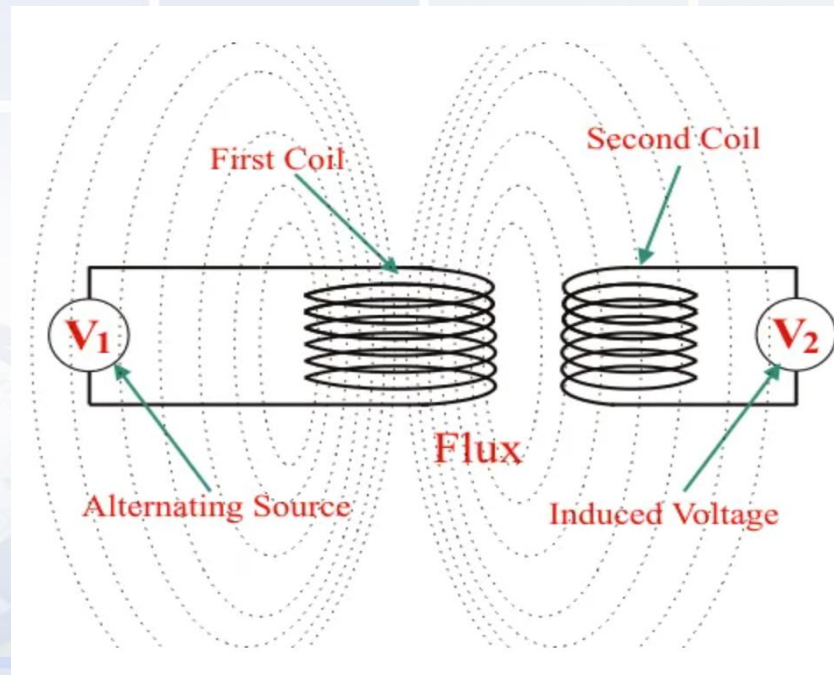


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Component Device

Transformer

Mutual induction between two or more windings (also known as coils) allows for electrical energy to be transferred between circuits.

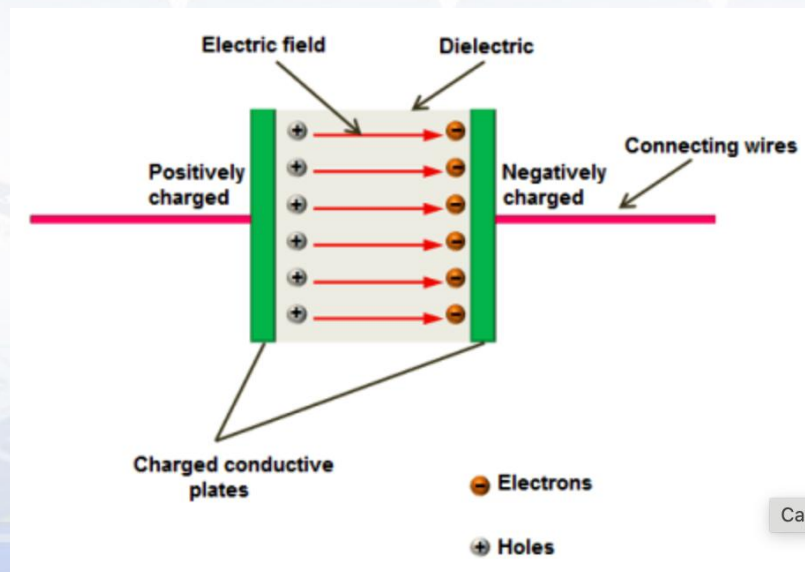


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Component Device

Filter (Elco)

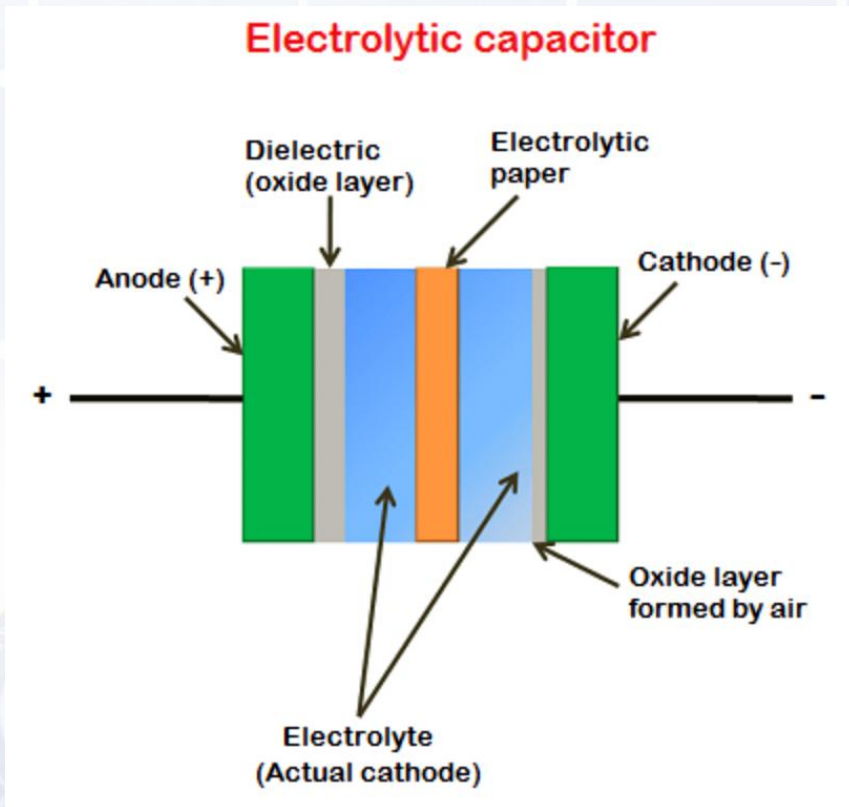
An electrolytic capacitor is a type of capacitor that uses an electrolyte to achieve a larger capacitance than other capacitor types. An electrolyte is a liquid or gel containing a high concentration of ions.



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Component Device

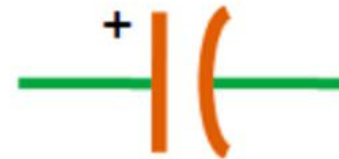
Filter (Elco)



European standard symbol



American standard symbol

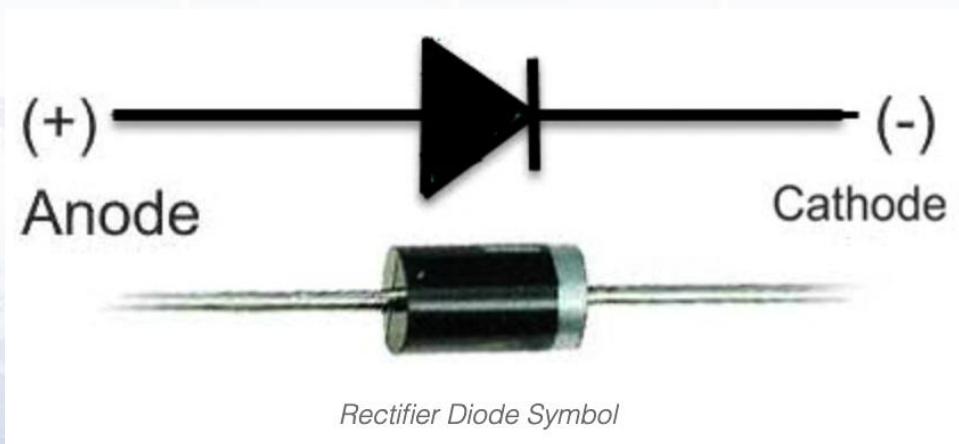


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Component Device

Rectifier (Dioda)

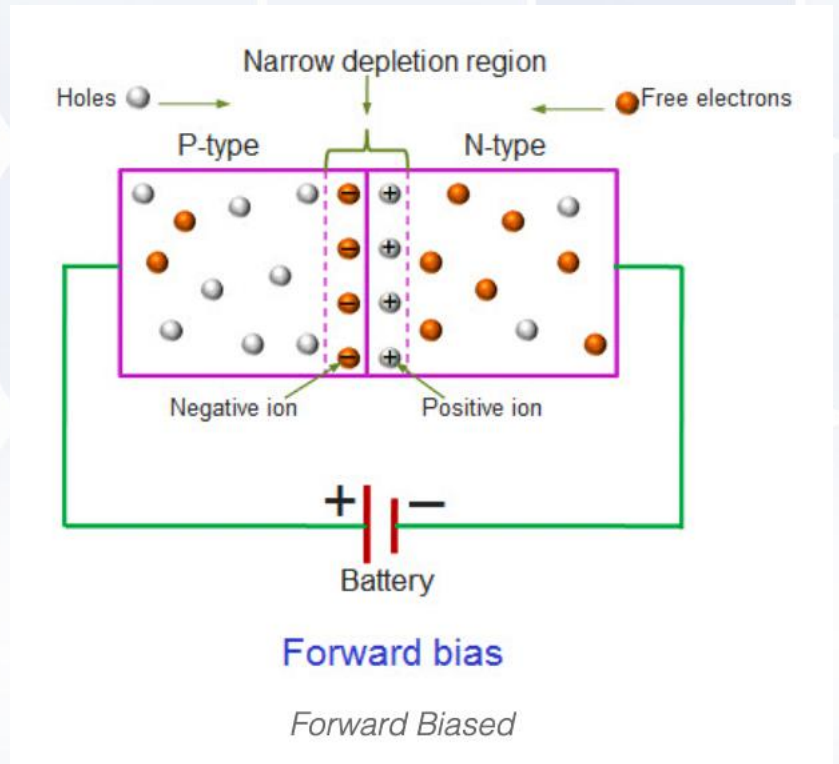
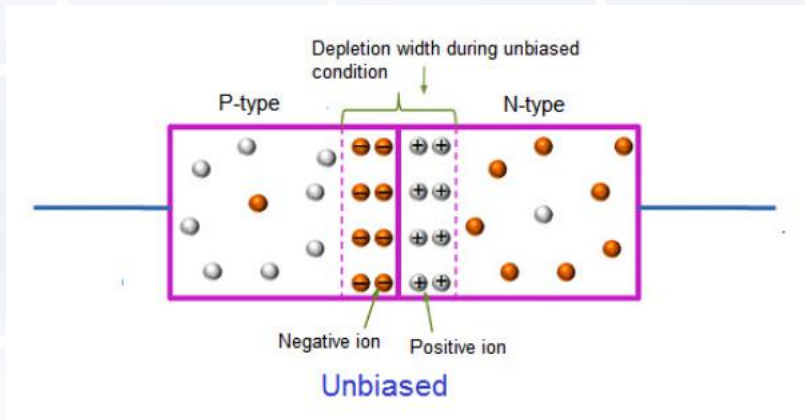
A rectifier diode is a semiconductor diode, used to rectify AC (alternating current) to DC (direct current) using the rectifier bridge application. The alternative of rectifier diode through the Schottky barrier is mainly valued within digital electronics.



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Component Device

Rectifier (Dioda)

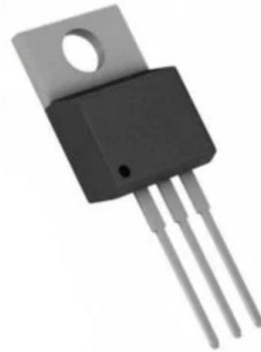


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Component Device

IC Voltage Regulator

A regulated voltage (without fluctuations & noise levels) is very important for the smooth functioning of many digital electronic devices. A common case is with microcontrollers, where a smooth regulated input voltage must be supplied for the microcontroller to function smoothly

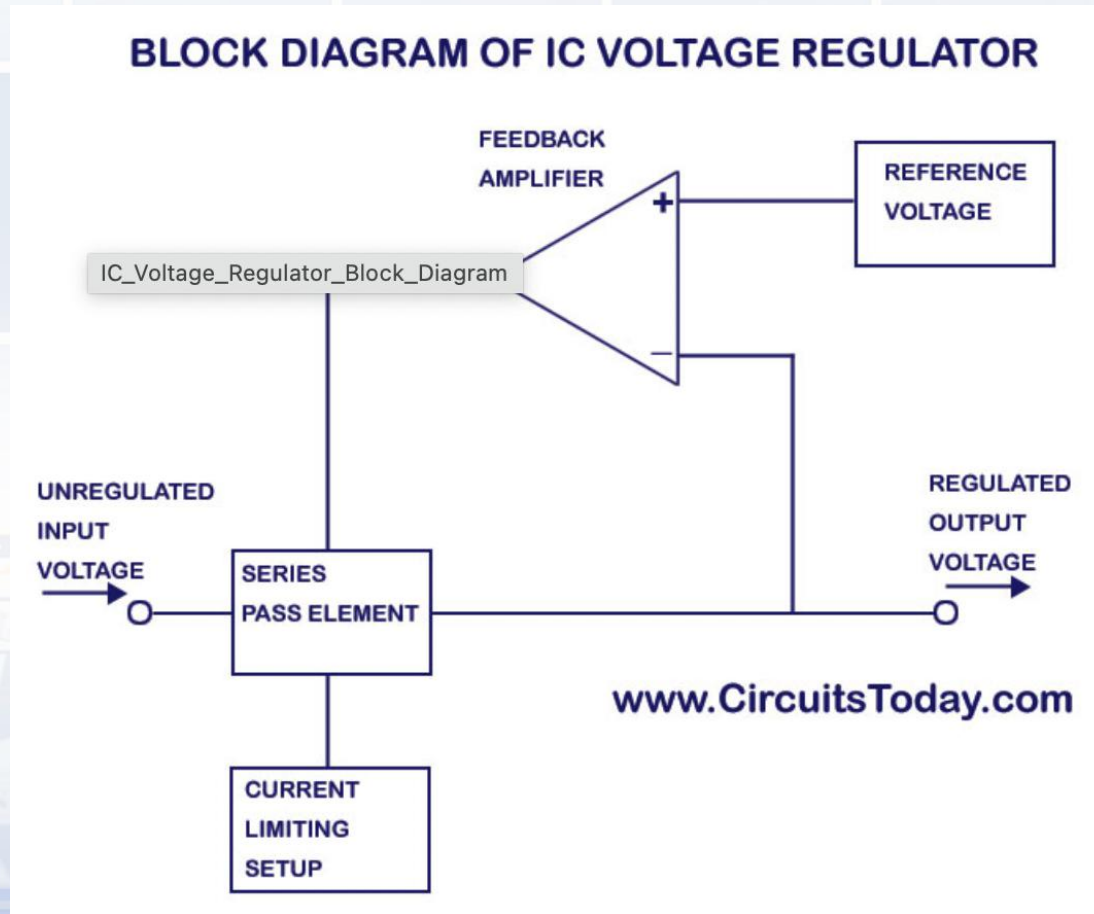


Voltage Regulator IC in TO-220 package

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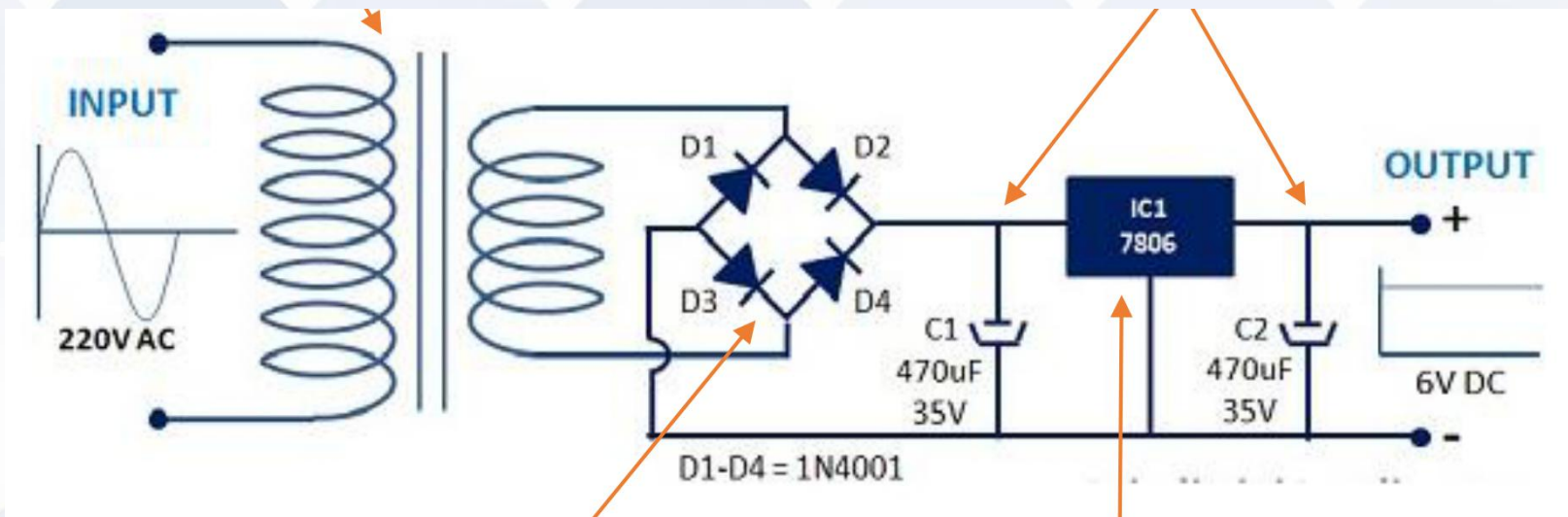
Component Device

IC Voltage Regulator



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Power Supply Scheme



Chapter 5

Tugas Mandiri (teori):

Lakukan pembuatan skema Power Suply sederhana menggunakan software simulator

Tugas Mandiri (prakt):

Lakukan Simulasi Power Suply sederhana menggunakan software simulator dan jelaskan tahapan simulasinya.

end

