

# Rectifier Tables: Monophasic Uncontrolled

Diego Trapero

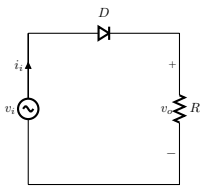
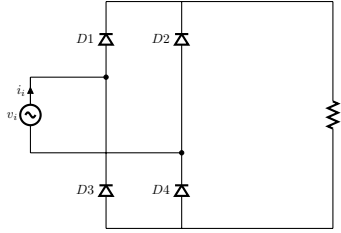
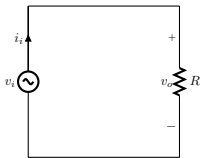
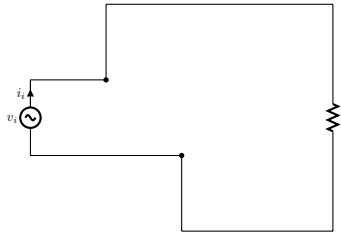
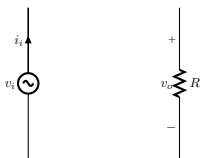
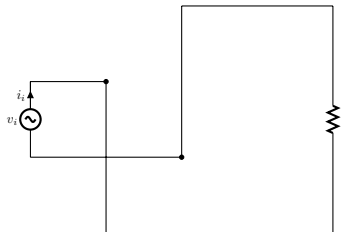
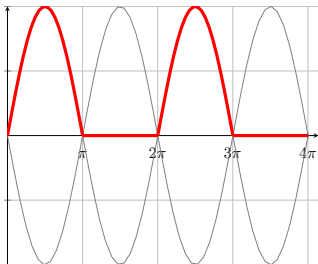
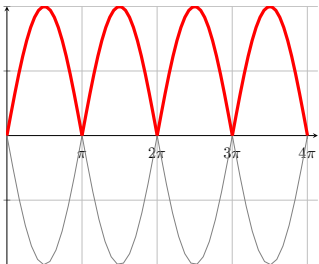
## Table of contents

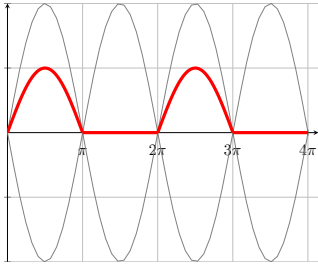
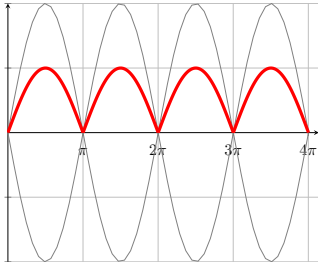
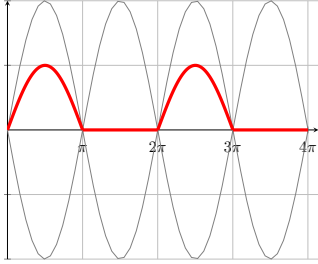
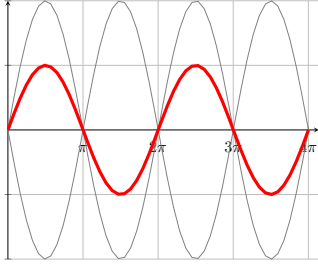
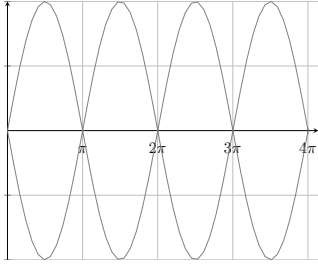
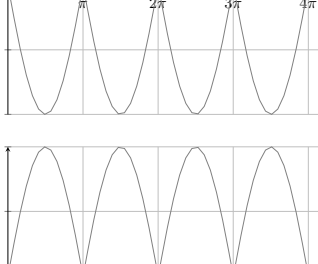
<b>1</b>	<b>Rectifier Tables</b>	<b>2</b>
1.1	Monophasic Uncontrolled Rectifiers with R load . . . . .	3
1.2	Monophasic Uncontrolled Full Wave Rectifier loads . . . . .	5

# 1 Rectifier Tables

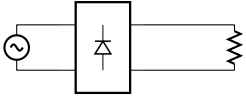
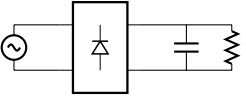
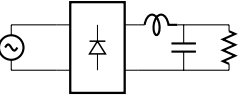
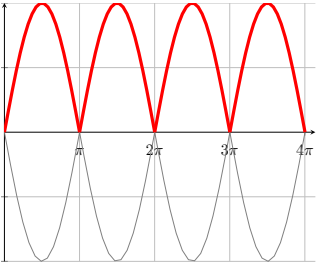
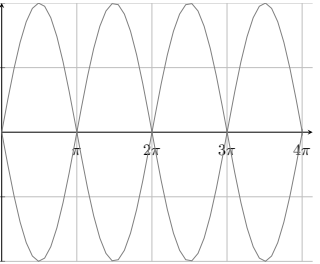
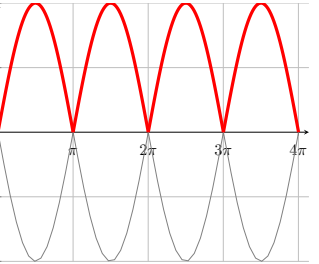
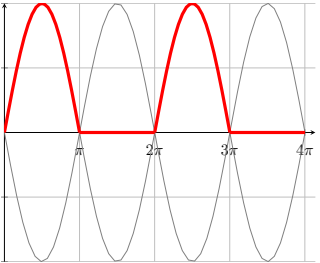
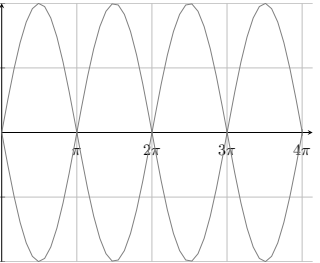
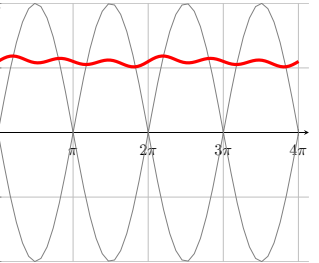
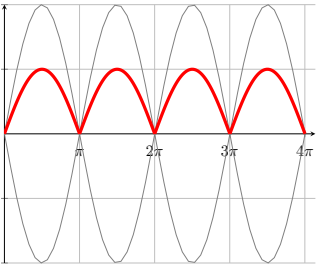
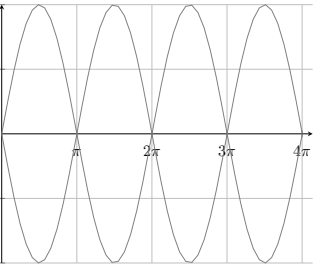
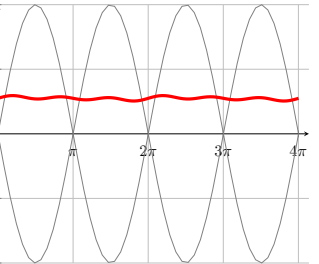
1. **Monophasic Uncontrolled Rectifiers with R load**
2. **Monophasic Uncontrolled Full Wave Rectifier loads**
3. Monophasic Controlled Full Wave Rectifier, R vs RL load
4. Triphasic Uncontrolled Rectifiers with R load
5. Triphasic Controlled Half Wave Rectifier, R vs RL load
6. Triphasic Controlled Full Wave Rectifier, R vs RL load

## 1.1 Monophasic Uncontrolled Rectifiers with R load

What	Half Wave Rectifier	Full Wave Rectifier
Circuit Diagram		
$v_i > 0$ equivalent		
$v_i < 0$ equivalent		
Diode table		
$v_o$		
$\bar{v}_o$	$\bar{v}_o = \frac{V_{ip}}{\pi}$	$\bar{v}_o = \frac{2V_{ip}}{\pi}$

$i_o = i_R$		
$i_i$		
Diodes Voltage $v_D$		

## 1.2 Monophasic Uncontrolled Full Wave Rectifier loads

What	R load	RC load	RLC load
Circuit Diagram			
$v_o$			
$v_R$			
$\bar{v}_R$	$\bar{v}_R = \frac{2}{\pi} V_{ip}$	$\bar{v}_R = V_{ip} - \frac{1}{2} \Delta v_R$	$\bar{v}_R = \frac{2}{\pi} V_{ip}$
$v_R$ ripple	Not considered	Triangular approximation $\Delta v_R = \frac{V_{ip} T}{2RC}$	Considering only 1st harmonic $\Delta v_R = HV_1$
$i_R$			
$i_o$	