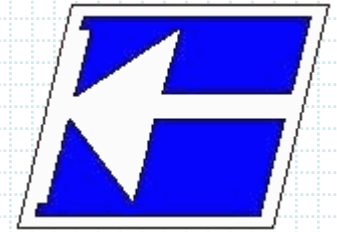


Instituto Federal de Educação, Ciência e Tecnologia de Santa Catarina
Departamento Acadêmico de Eletrônica
Osciladores e Multivibradores



Oscilador de Relaxação

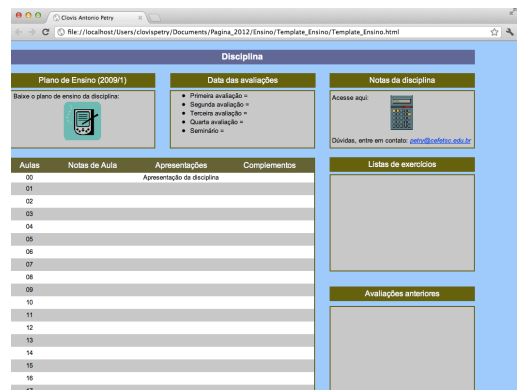
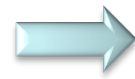
Prof. Clóvis Antônio Petry

Florianópolis, fevereiro de 2013.

Bibliografia para esta aula



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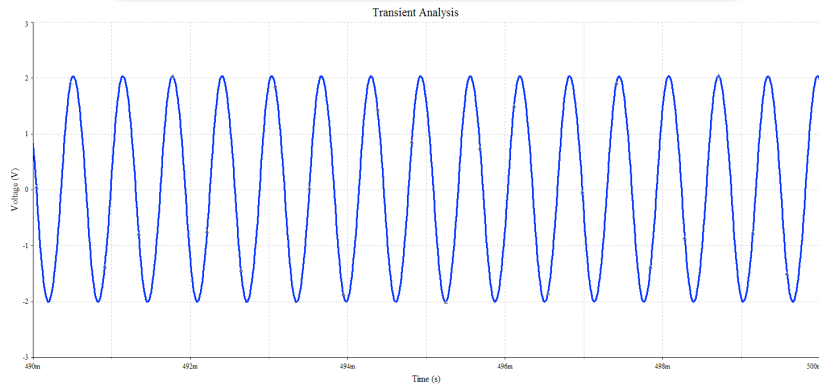


Disciplina				
Plano de Ensino (2009/1)		Data das avaliações		Notas da disciplina
Baixe o plano de ensino da disciplina:		• Primeira avaliação = • Segunda avaliação = • Terceira avaliação = • Quarta avaliação = • Semifinal =		Accesse aqui: Dividas, entre em contato: petry@ufsc.br
Aulas	Notas de Aula	Apresentações	Complementos	Listas de exercicios
00		Apresentação da disciplina		
01				
02				
03				
04				
05				
06				
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08				
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11				
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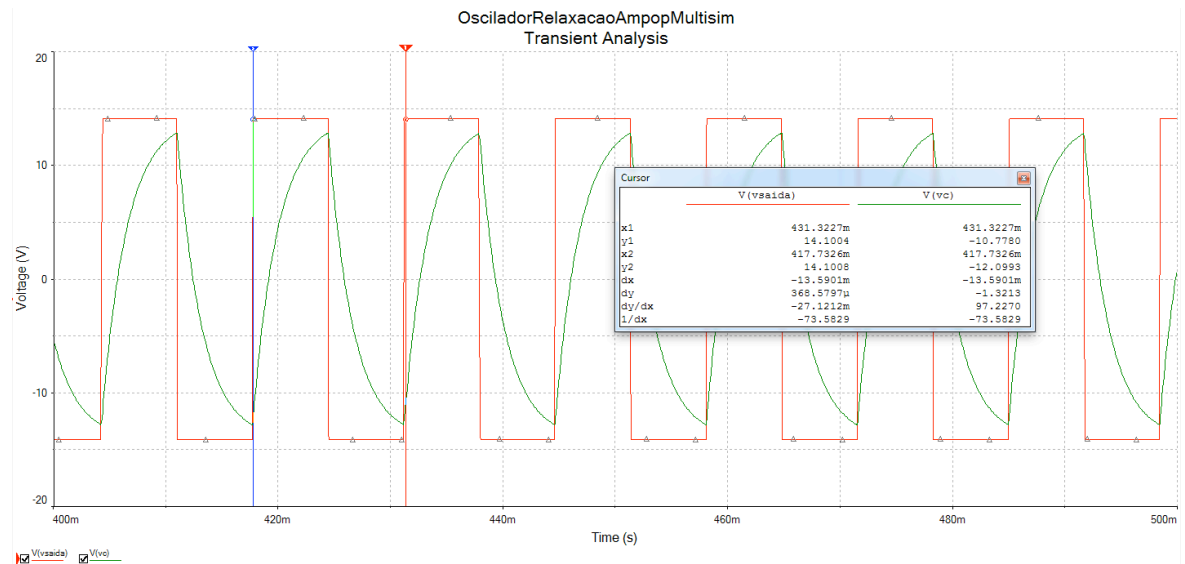
Oscilador com controle automático de ganho:

1. Considerações iniciais;
2. Transistor Unijunção;
3. Oscilador de relaxação com UJT;
4. Oscilador de relaxação com AmpOp.

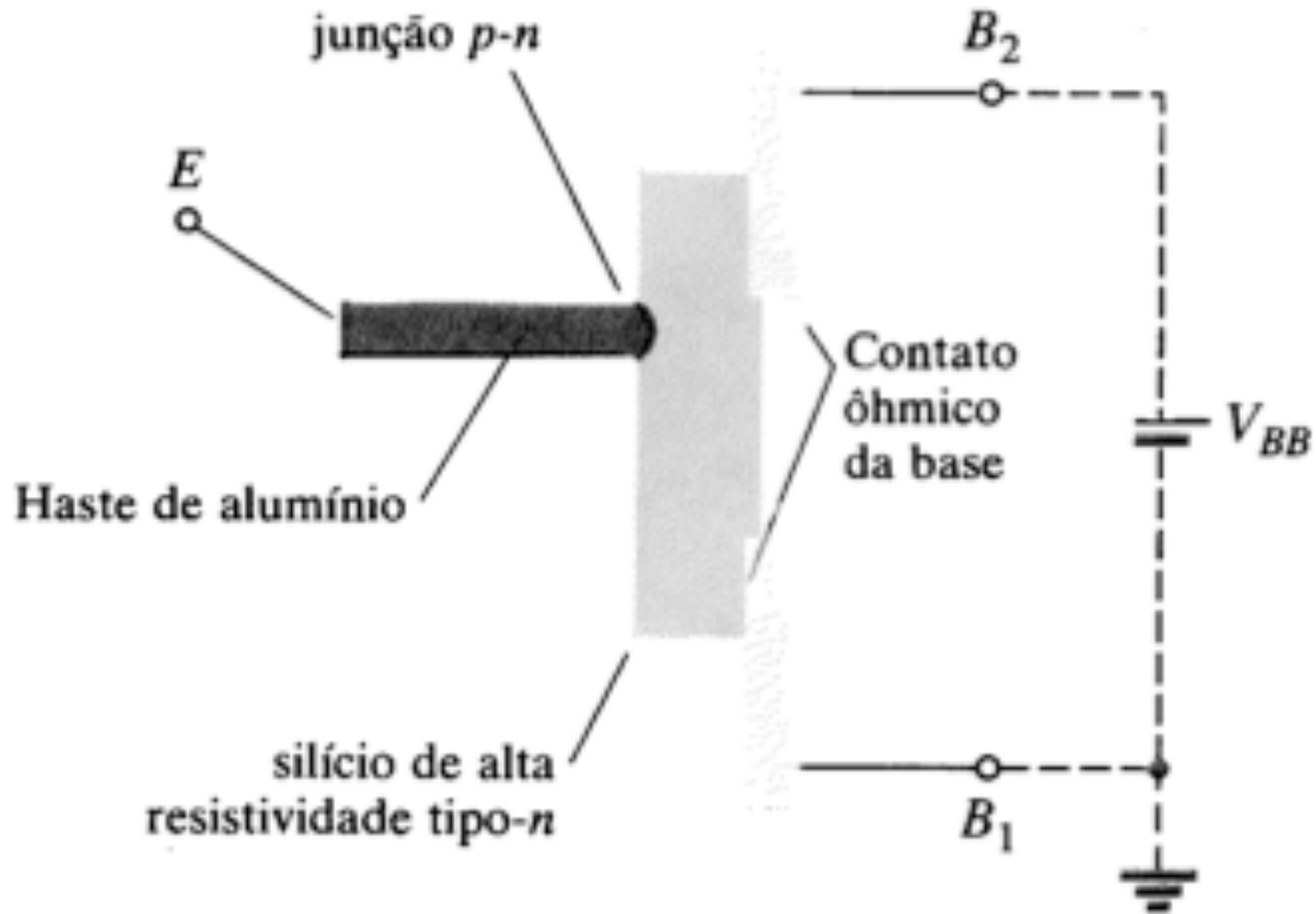
Osciladores lineares



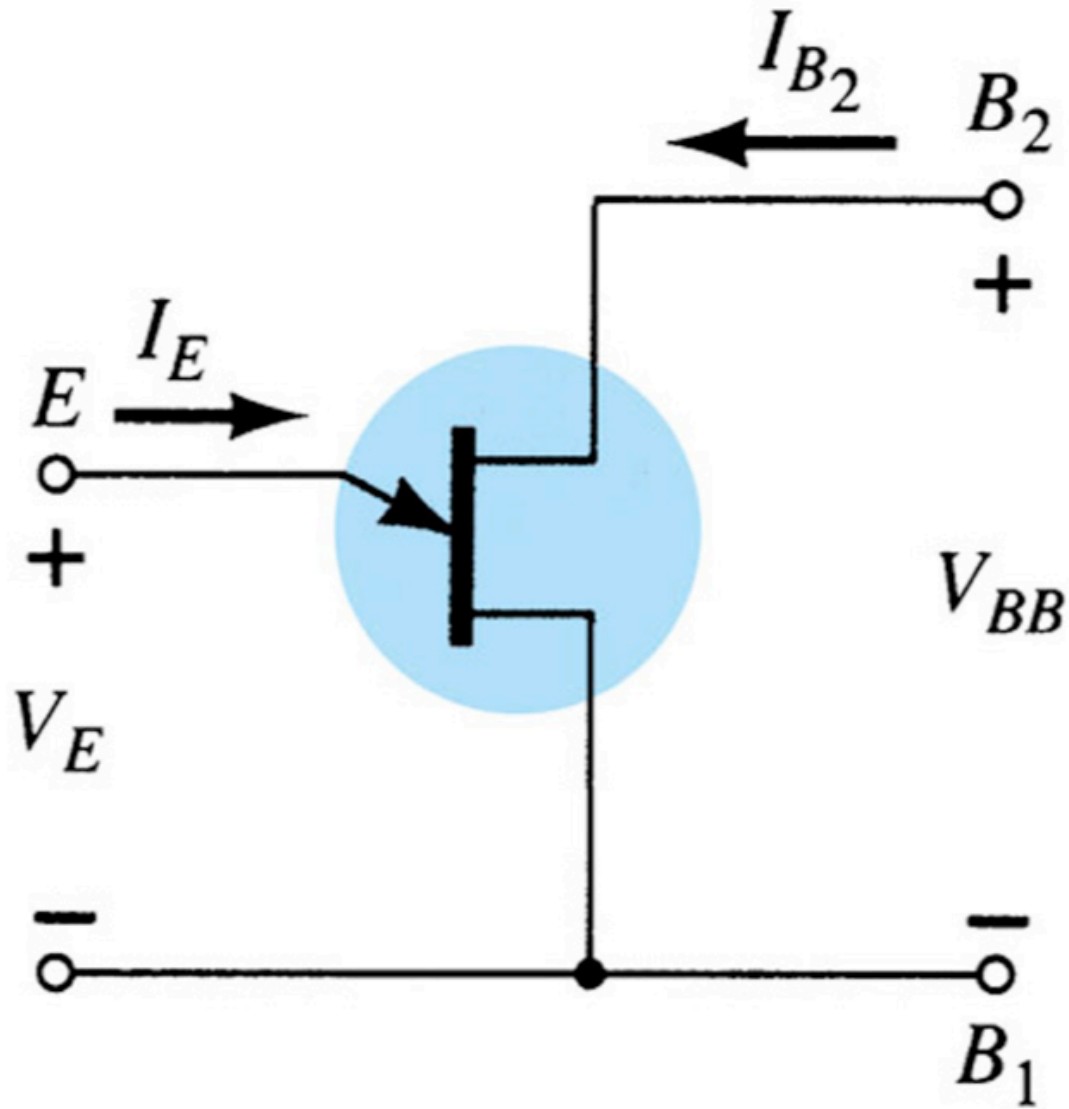
Osciladores não-lineares



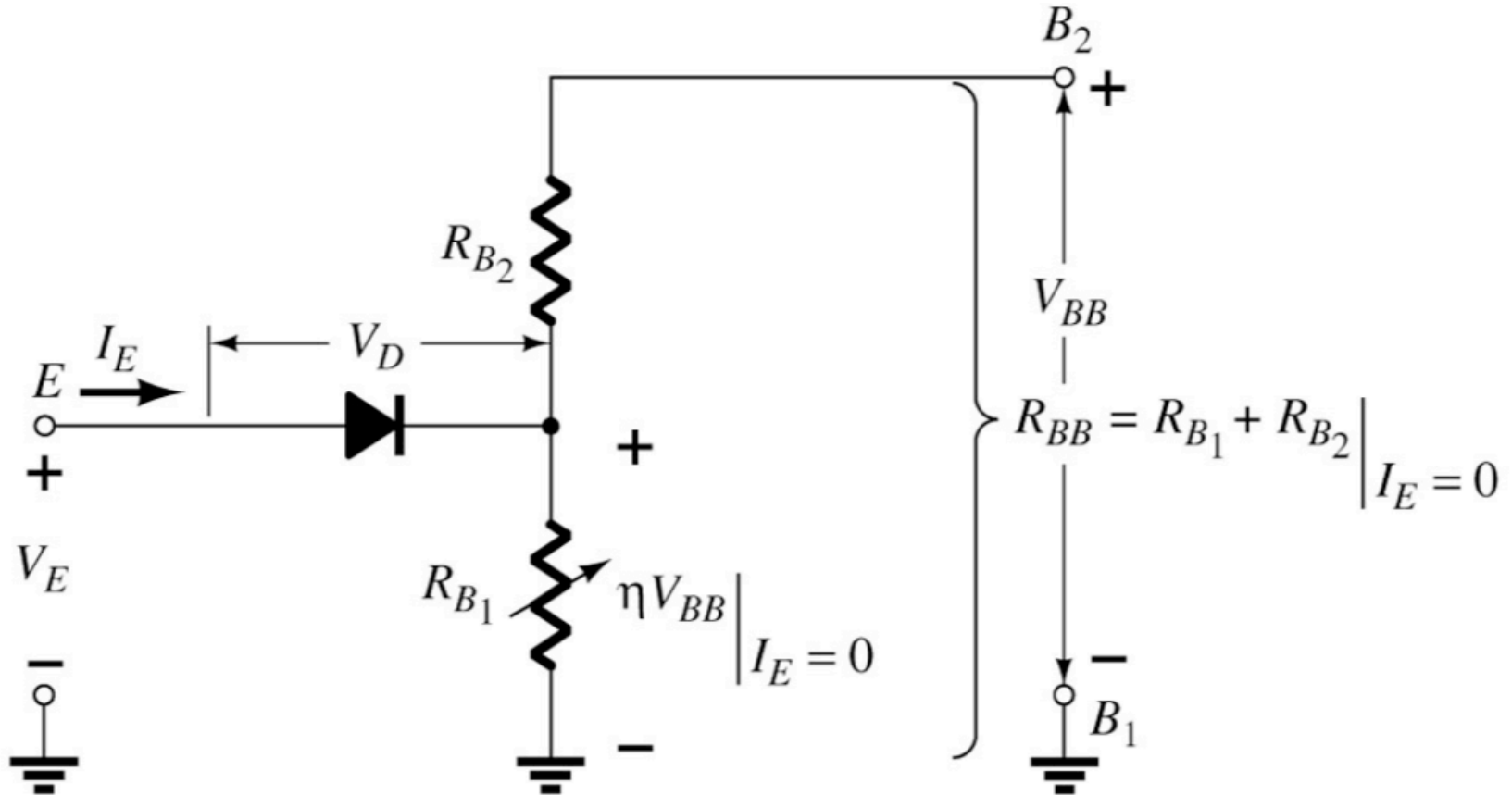
Transistor Unijunção



Transistor Unijunção



Transistor Unijunção



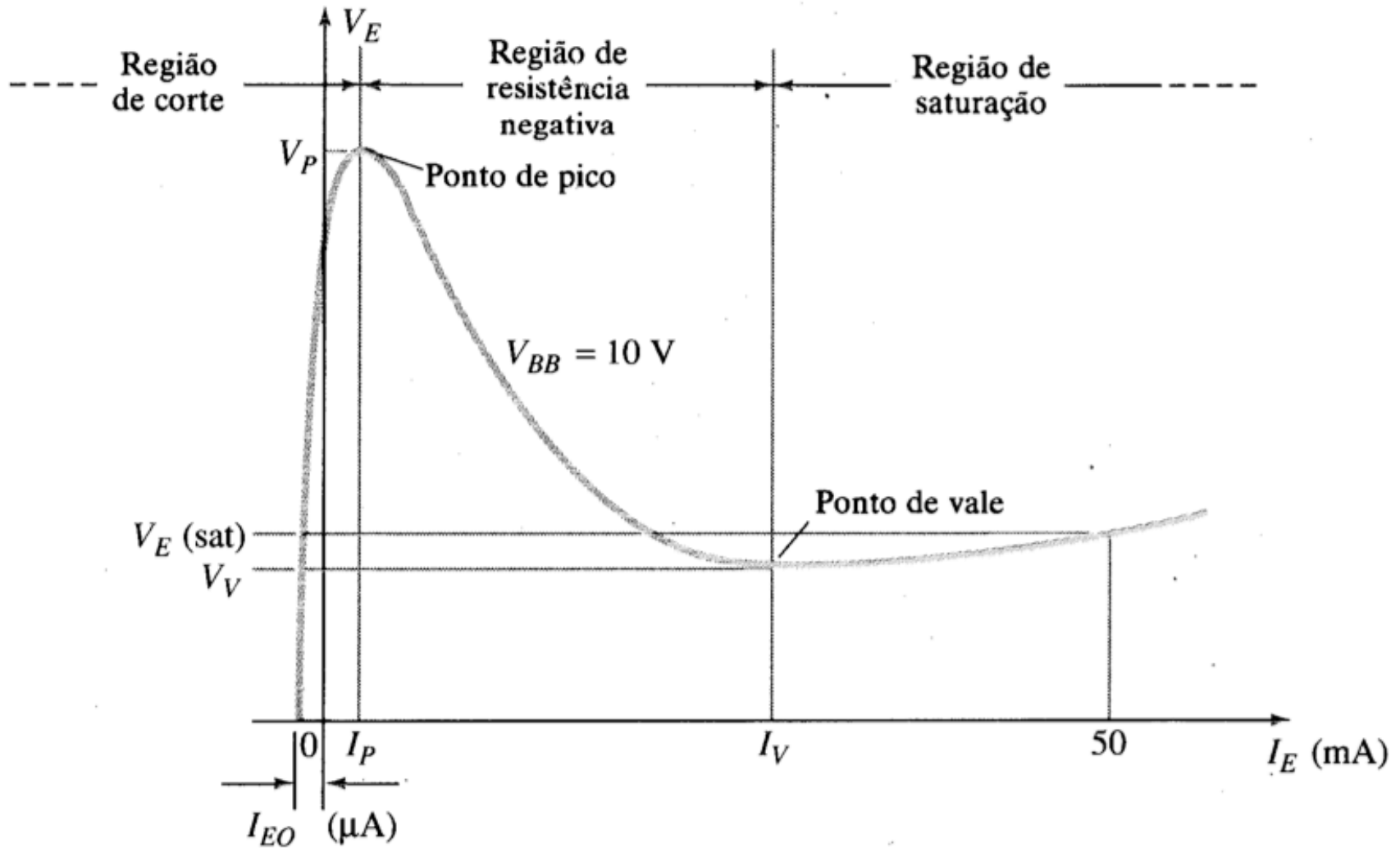
Off

$$V_E < 0,7 + V_{RB1}$$
$$V_{RB1} = \eta \cdot V_{BB}$$

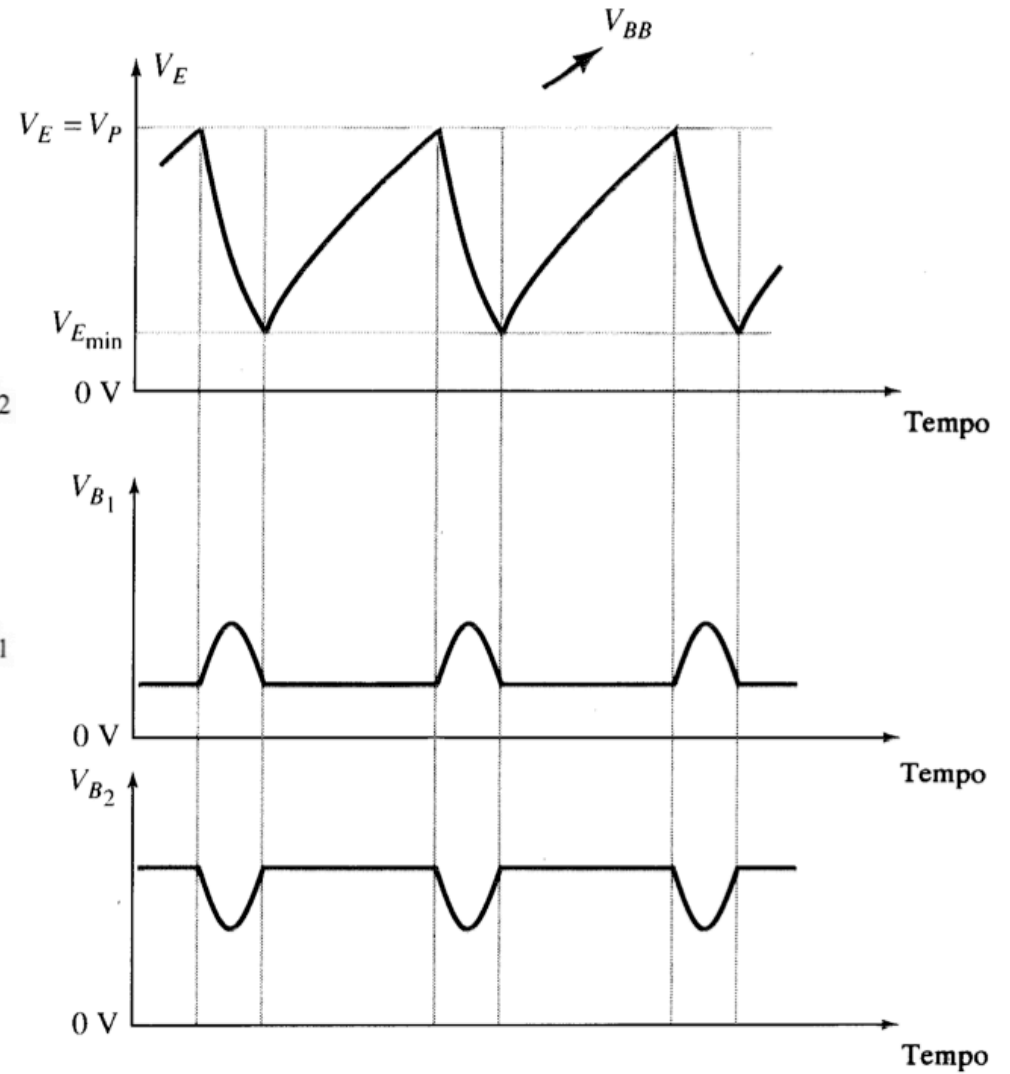
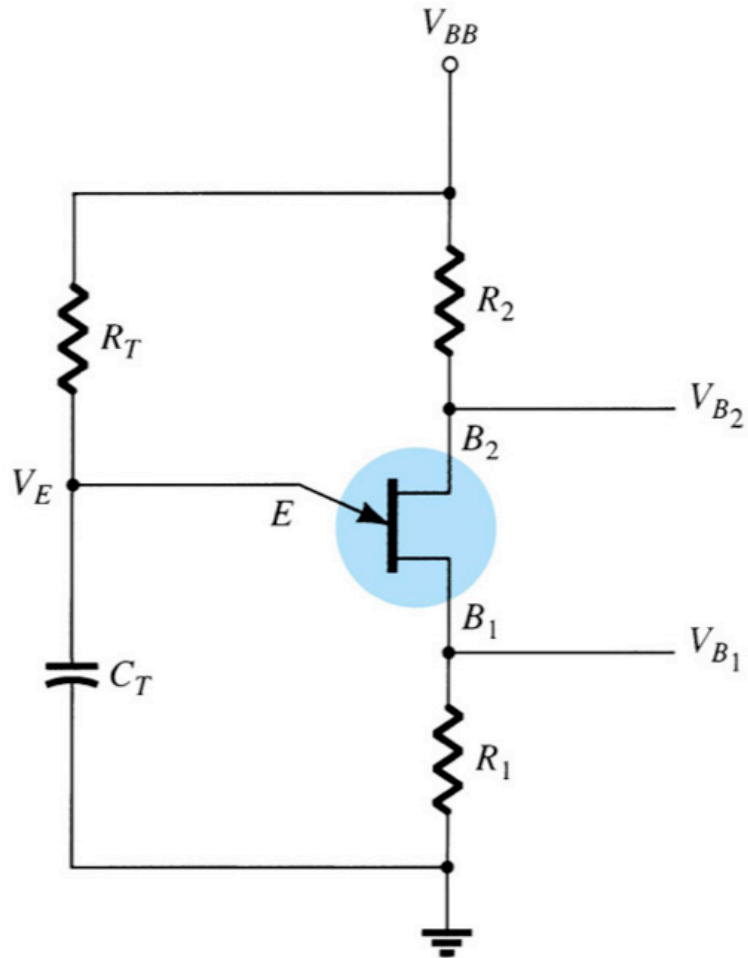
$$V_E = 0,7 + \eta \cdot V_{BB} = V_P$$

On

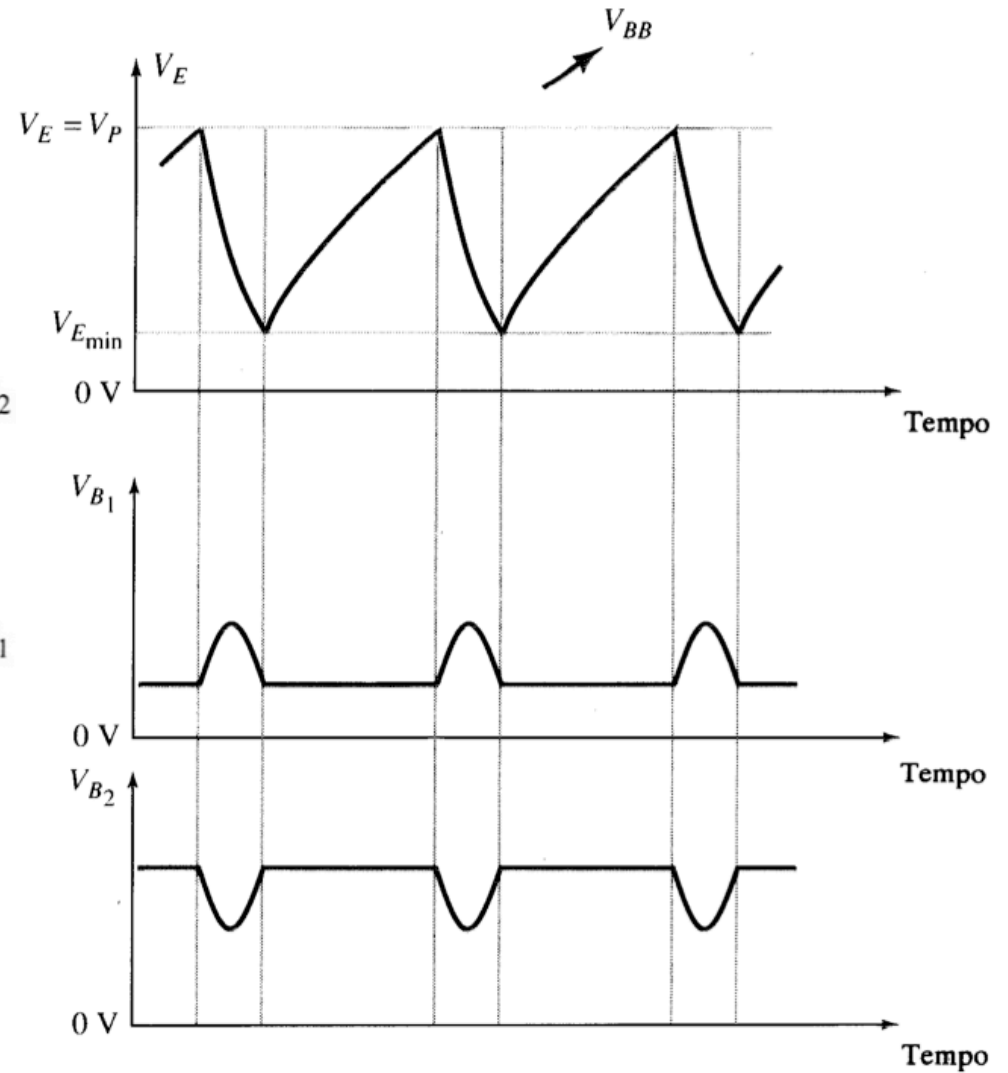
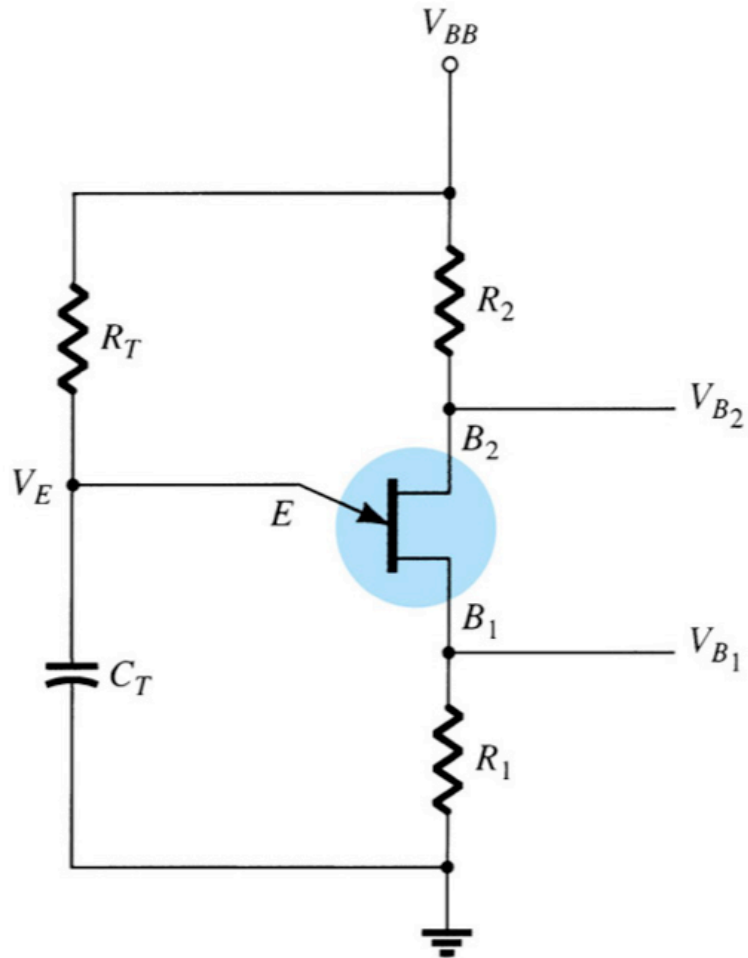
Transistor Unijunção



Oscilador com UJT

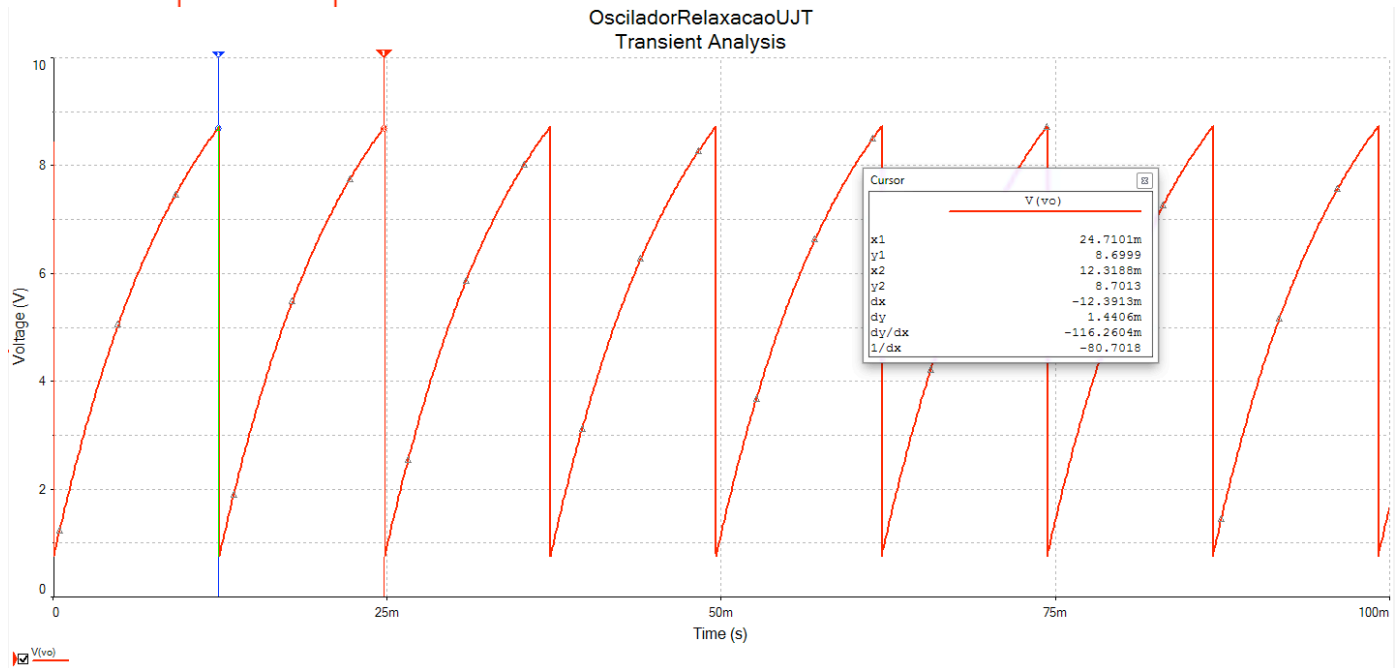
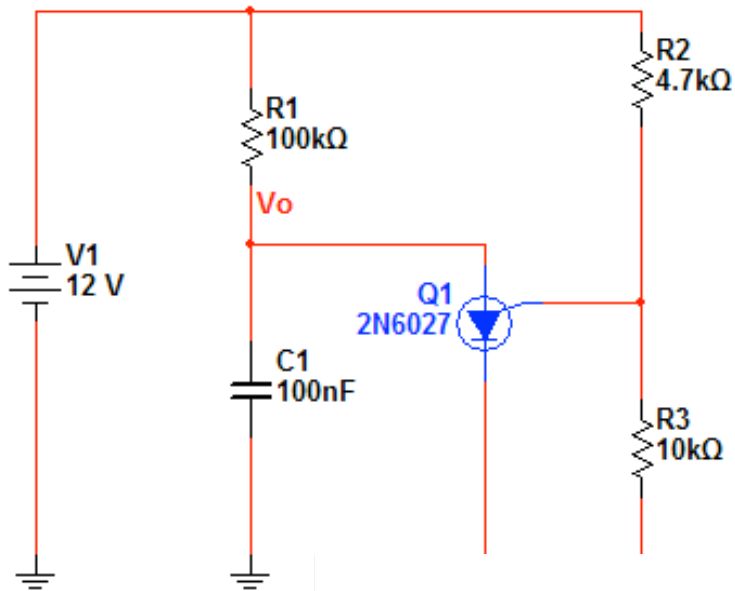


Oscilador com UJT

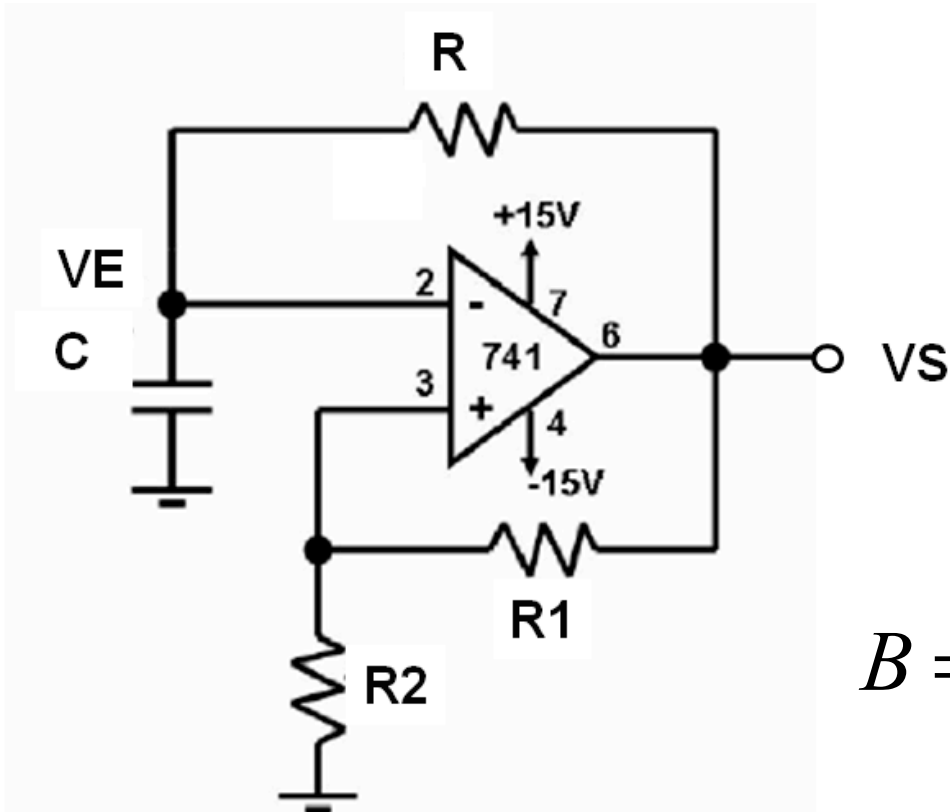


$$F_o = \frac{1}{R \cdot C \cdot \ln\left(\frac{1}{1-\eta}\right)}$$

Simulação do Oscilador com UJT



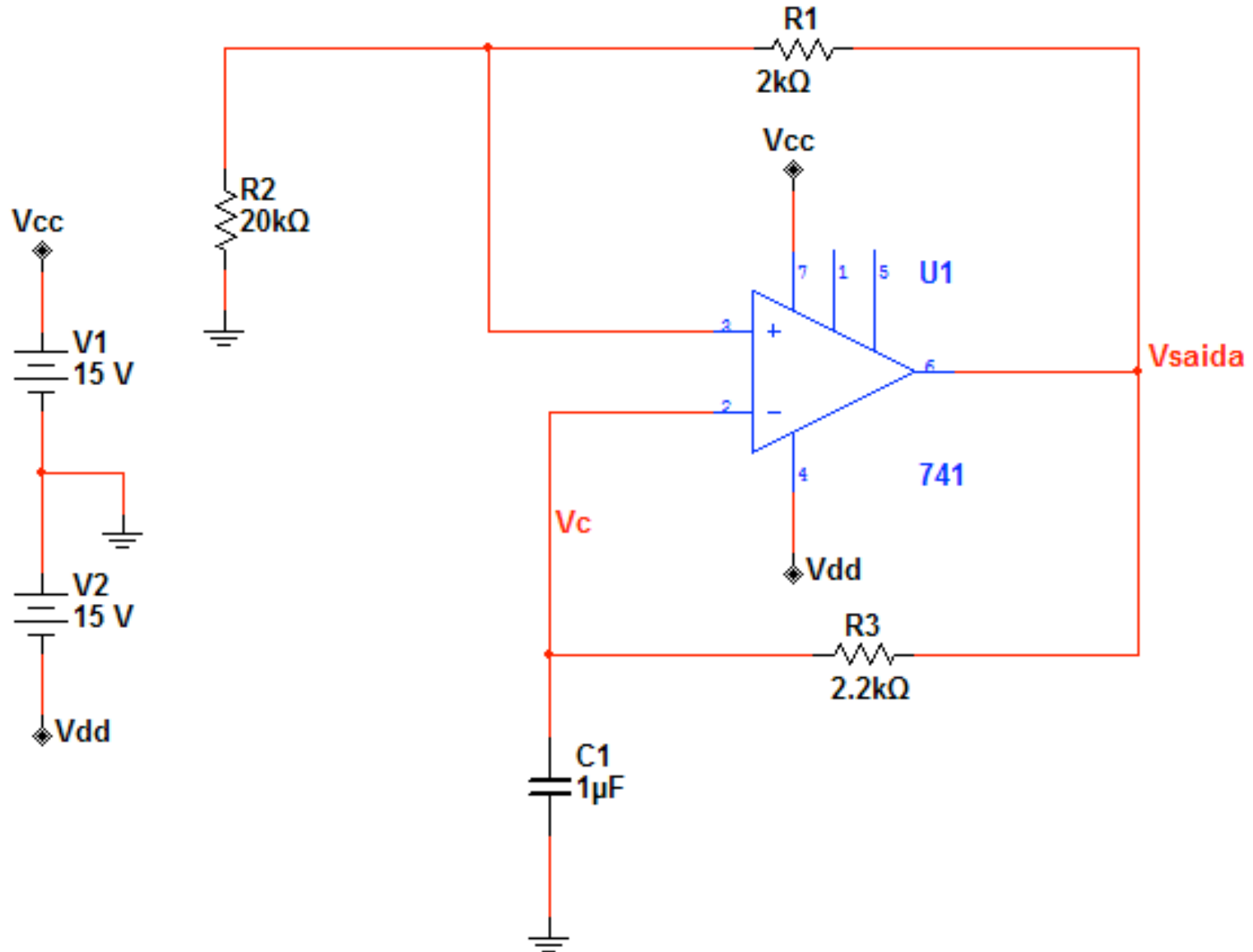
Oscilador com AmpOp



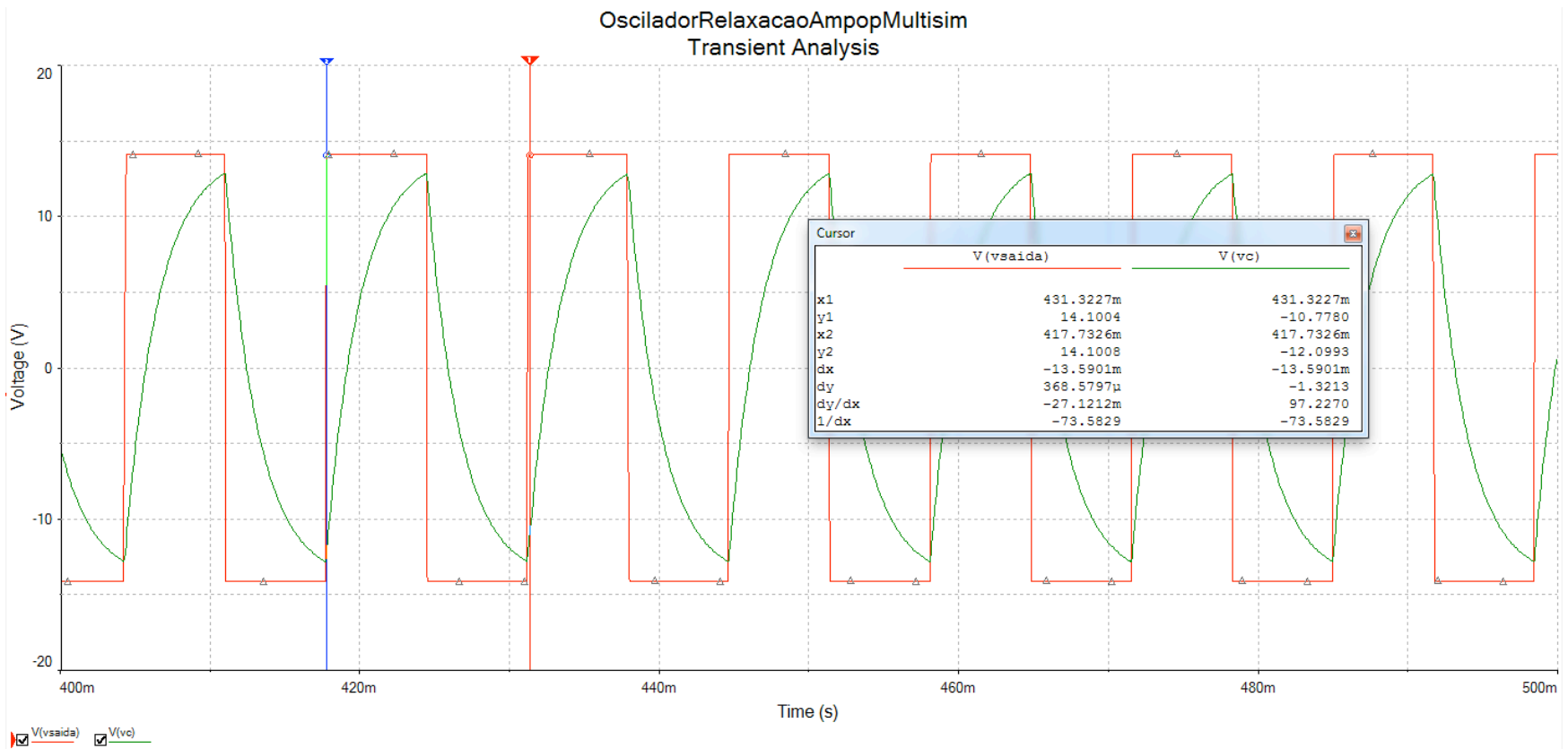
$$B = \frac{R_2}{R_1 + R_2}$$

$$F_o = \frac{1}{2 \cdot R \cdot C \cdot \ln \left(\frac{1+B}{1-B} \right)}$$

Simulação do Oscilador com AmpOp



Simulação do Oscilador com AmpOp



Multivibradores.

