

Experiment 6 : Oscillators

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1. Experiment Objectives

1.1. Be familiar with the Barkhausen criterion and various kinds of oscillators.

2. Experiment Setups

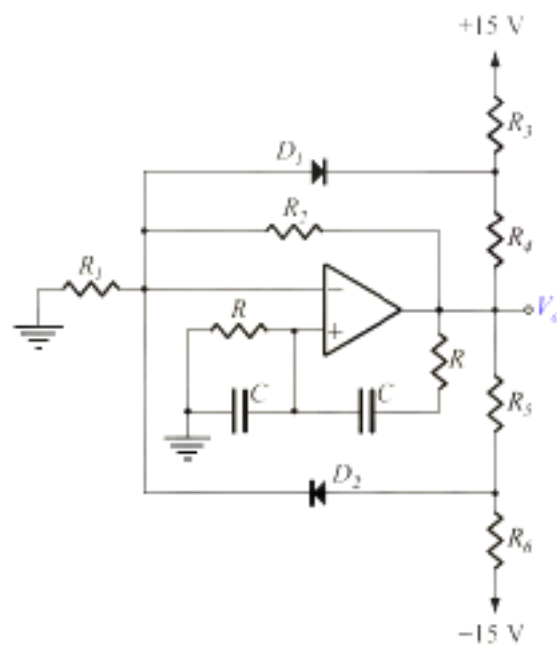


Fig. 3 Wien-bridge oscillator sinusoidal generator

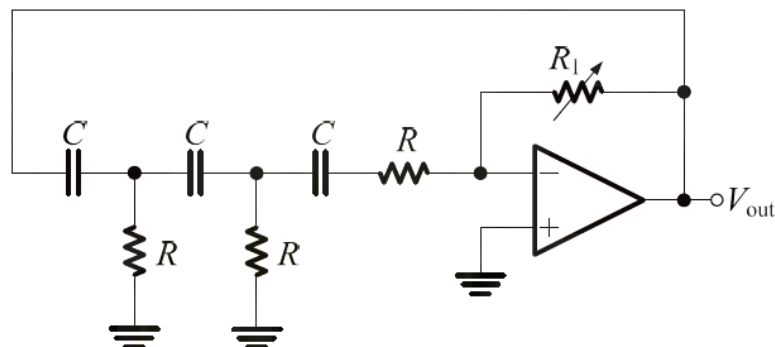


Fig. 4 Phase-shift oscillator sinusoidal generator

3. Labs Work

3.1. The sinusoidal oscillators: Wien-bridge oscillator

Vout (p-p)	f (Hz)	R2 (k Ω)	R2/R1
11.8 V	487.5 Hz	6.866 k Ω	2.09

3.2. The sinusoidal oscillators: Phase-shift oscillator

Vout (p-p)	f (Hz)	R1 (k Ω)	R1/R
9.641V	474.7 Hz	9.956 k Ω	37.4