

**MP309**

Experiment 4

Frequency Response of BJT-CE  
Amplifier

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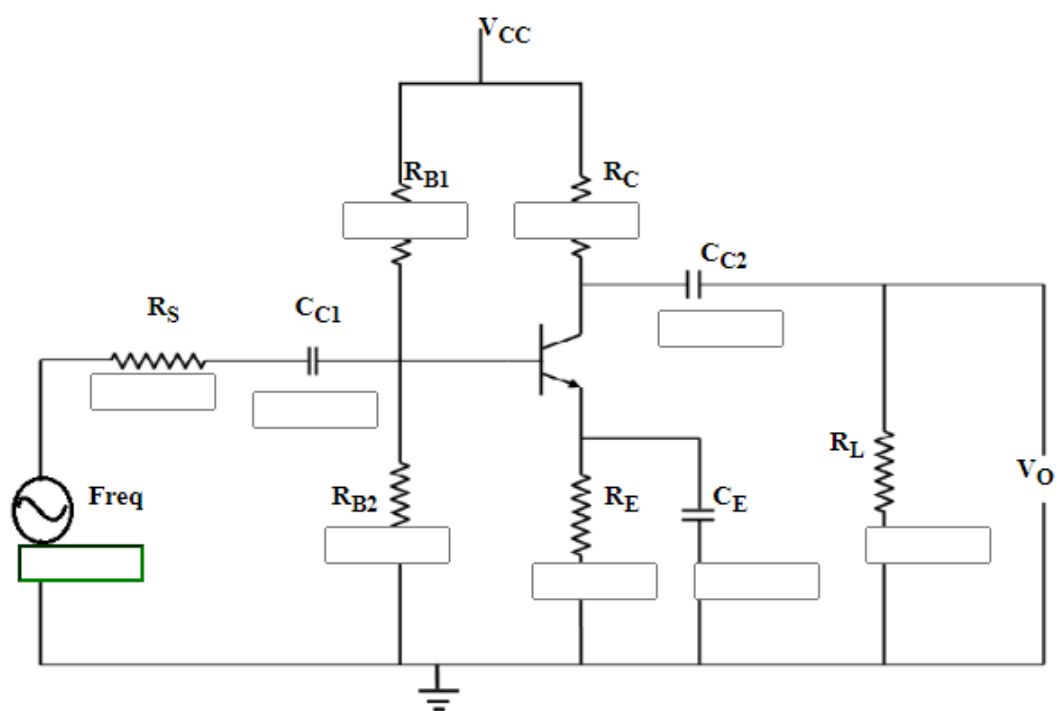


Figure 1: Circuit Diagram ( BJT-CE Transistor as an Amplifier )

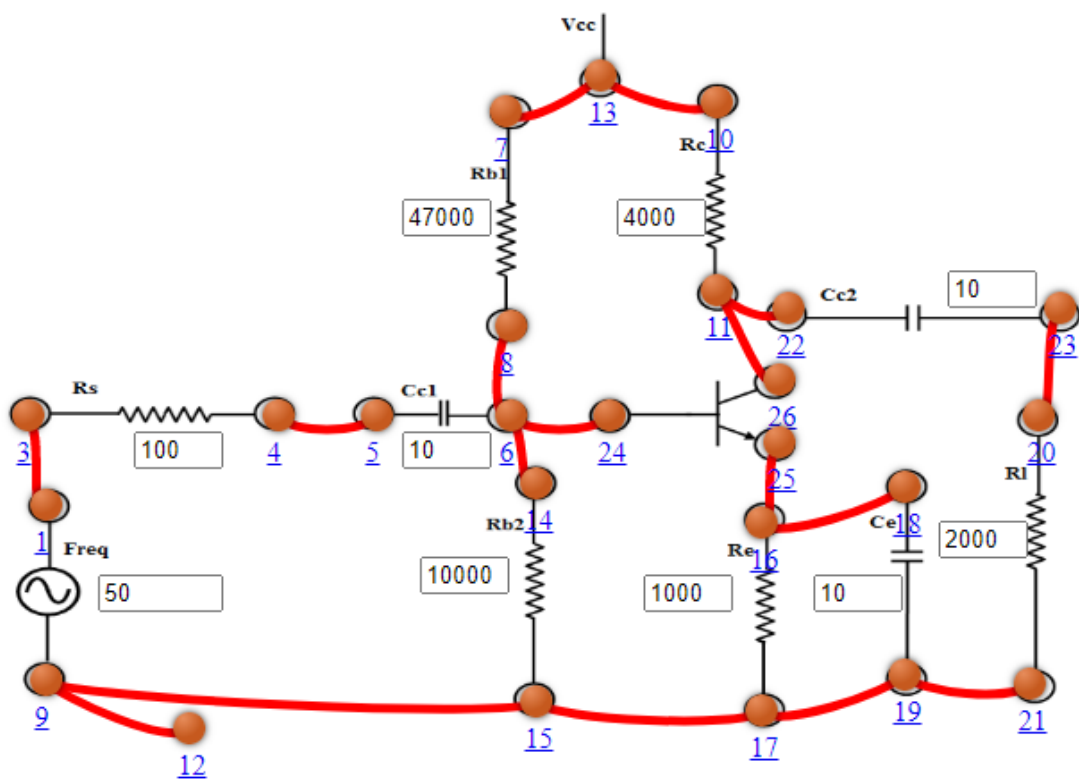


Figure 2: Connections ( BJT-CE Transistor as an Amplifier )

EXPERIMENTAL TABLE		
Serial No.	Frequency(Hz)	Magnitude(dB)
1	50	10.599
2	105	16.708099999999998
3	200	22.0672
4	459	28.2892
5	959	32.0726
6	2197	33.8414
7	4186	34.2308
8	8746	34.3518
9	16666	34.3784
10	38179	34.386
11	79766	34.3858
12	166656	34.3782
13	348193	34.343599999999995
14	797664	34.1576
15	1519920	33.603
16	3175560	31.6804
17	6634680	27.5956
18	13861800	21.9594
19	26413100	16.5434
20	50329200	10.99534

Figure 3: Observation table

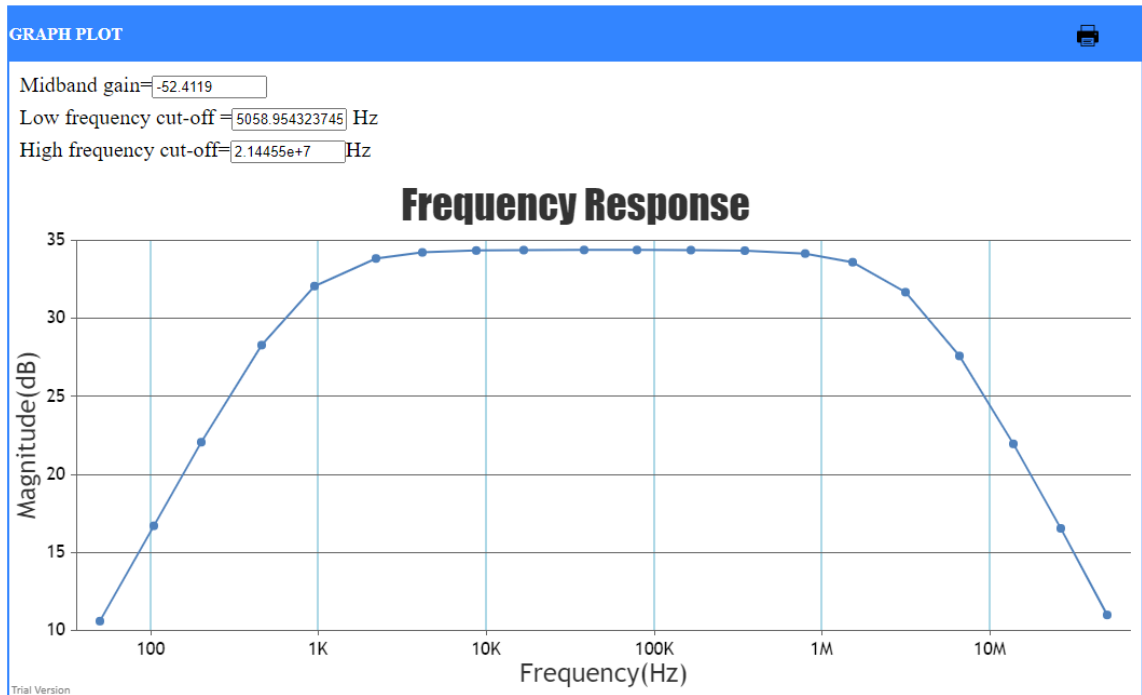


Figure 4: Magnitude (decibel) Vs Frequency (Hz)

$$\begin{aligned}
 \text{Bandwidth} &= f_{max} - f_{min} \\
 &= 2.14455 \times 10^7 \text{ Hz} - 5058.95 \text{ Hz} \\
 &= 21,440,441.05 \text{ Hz}
 \end{aligned}$$