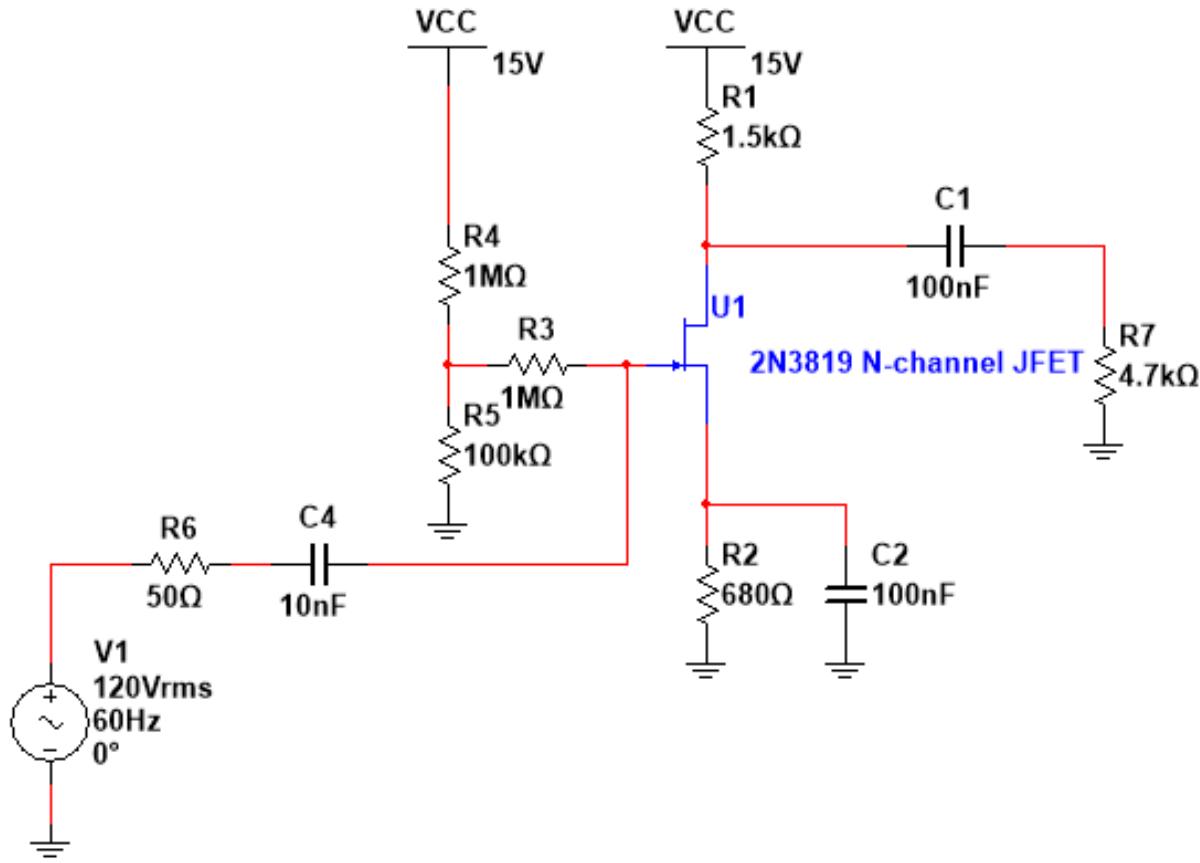


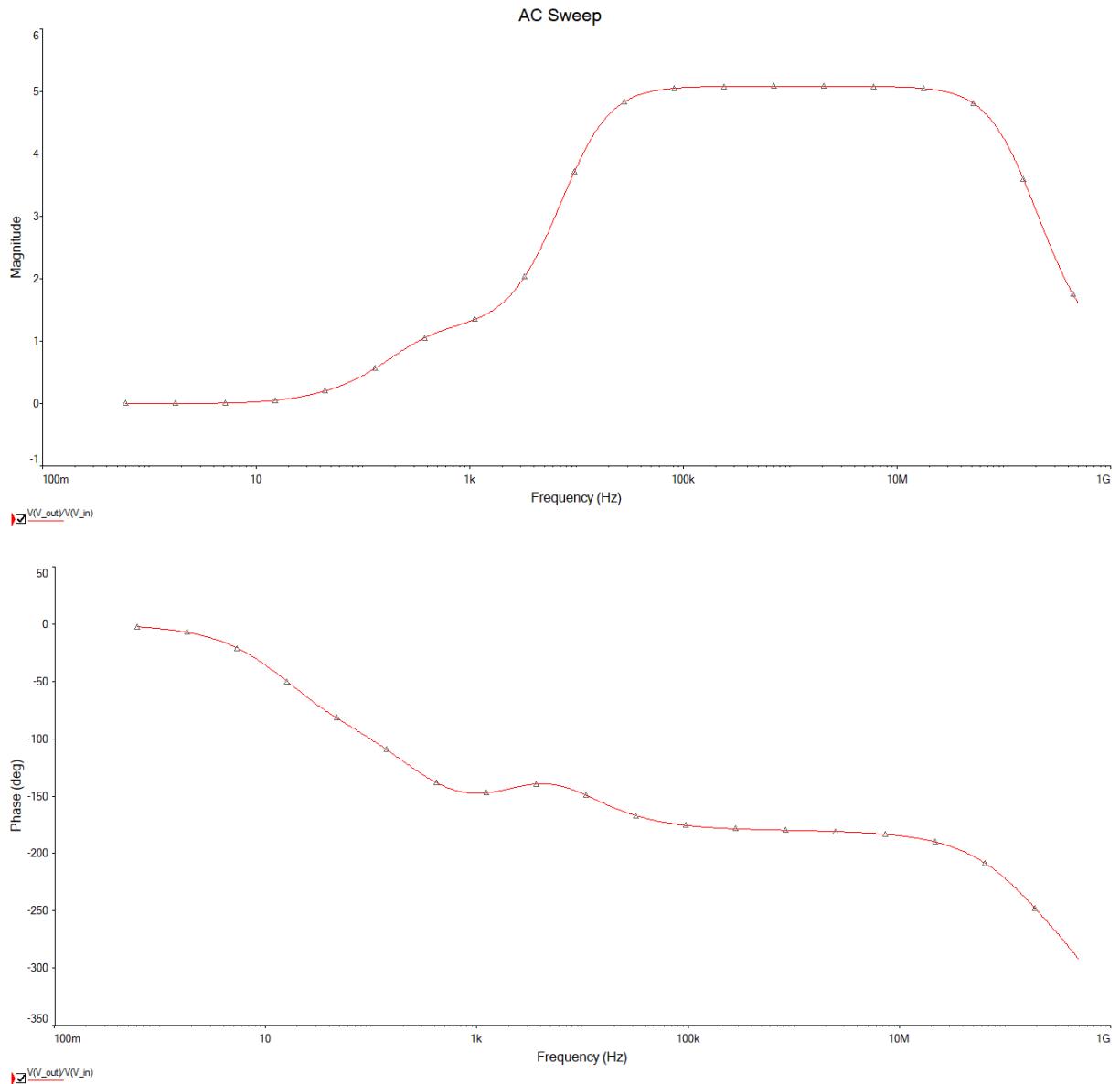
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 Prelab 5  
 ENGE 312  
 February 18, 2026



**Fig. 1.** Common-Source Amplifier using the 2N3819 N-channel JFET, schematic from Multisim

**Table 1.** DC operating point values

Q Point	Value
$I_D$	3.89 mA
$V_{DS}$	6.52 V
Node	Voltage (Volts)
$V_D$	9.17
$V_G$	1.36
$V_S$	2.65



**Fig. 2.** Bode Plot of Common-Source Amplifier, AC sweep from 0.5Hz, to 500Mhz, Magnitude in V/V

**Table 2.** AC sweep summary

Parameter	Value
Gain: $A_M$	5.08 V/V
3dB Lower Cutoff: $f_L$	8.87 kHz
3dB Upper Cutoff: $f_H$	153 MHz