

Device Modeling Report

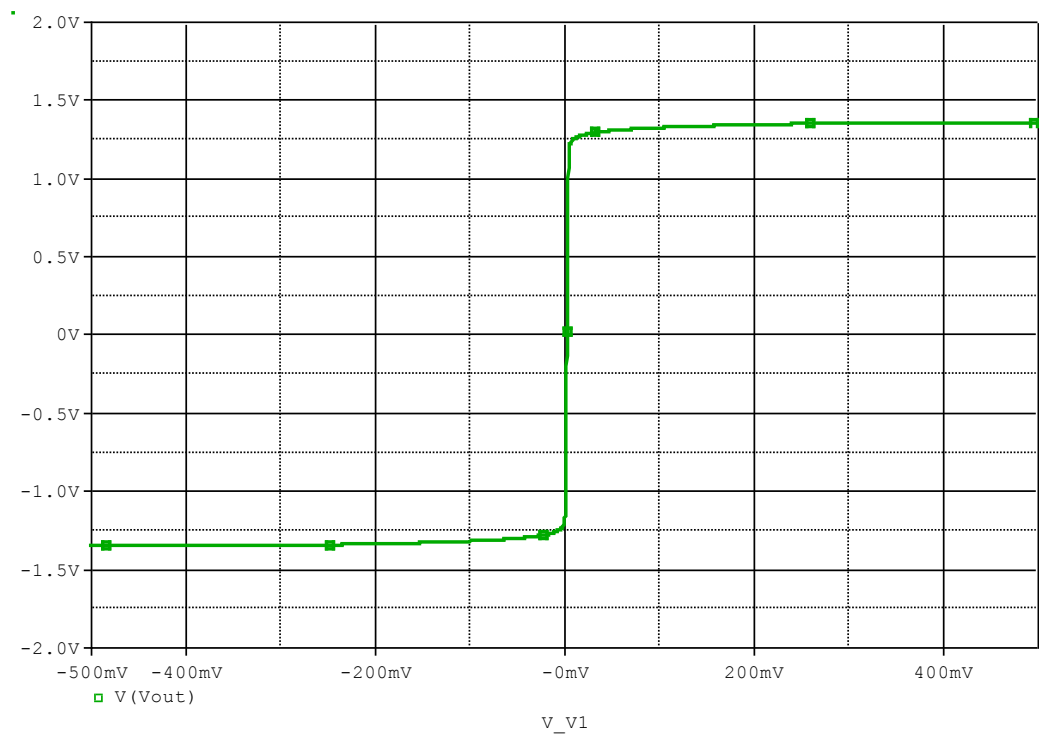
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM2721
MANUFACTURER: NEW JAPAN RADIO



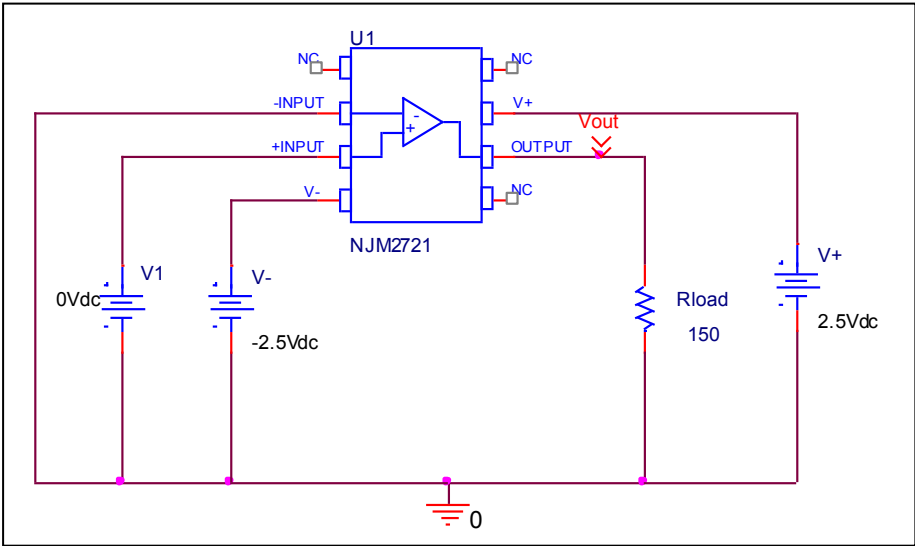
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

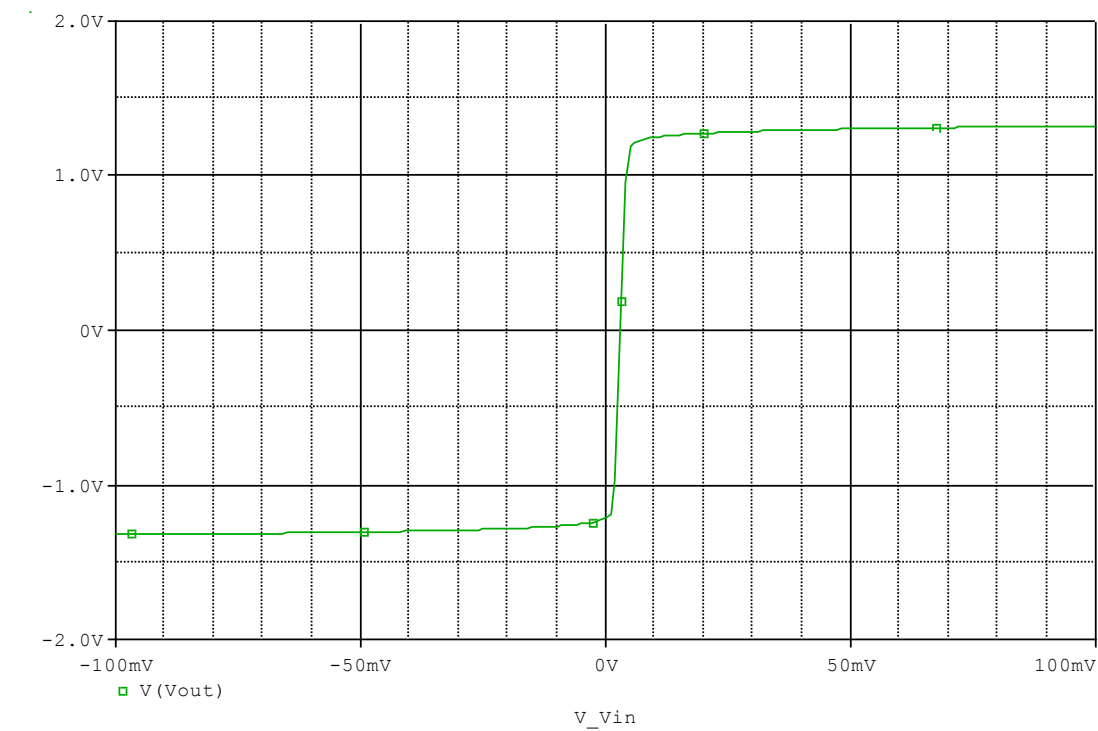


Comparison table

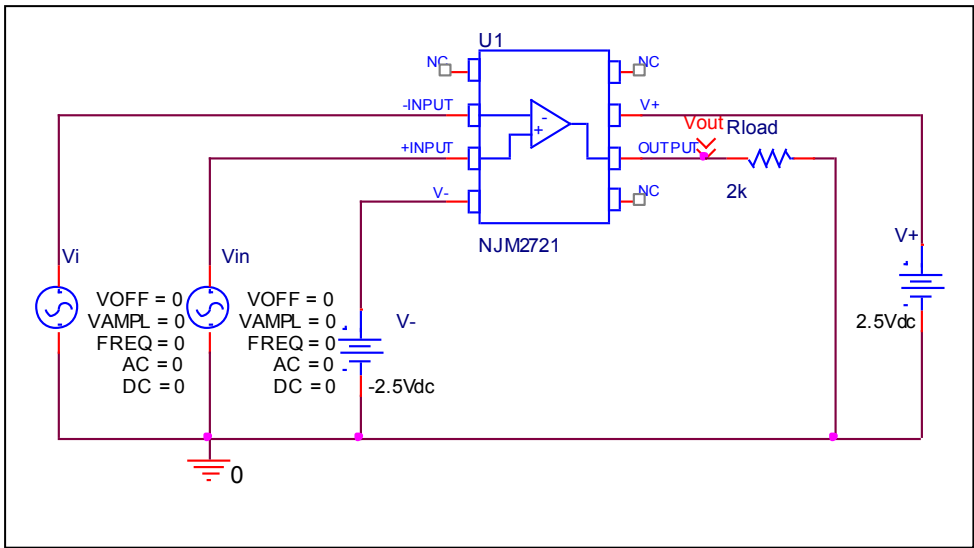
Output Voltage Swing	Measurement	Simulation	%Error
+VOUT(V)	1.350	1.350	0.007
-VOUT(V)	-1.350	-1.350	0.007

Input Offset Voltage

Simulation result



Evaluation circuit

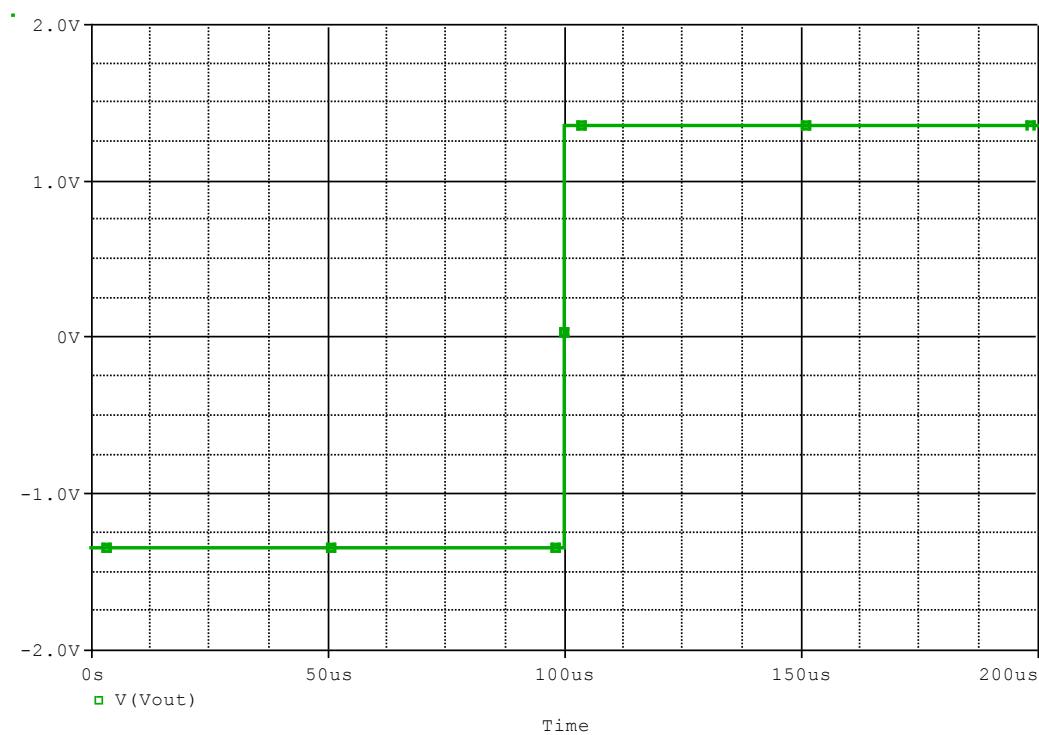


Comparison table

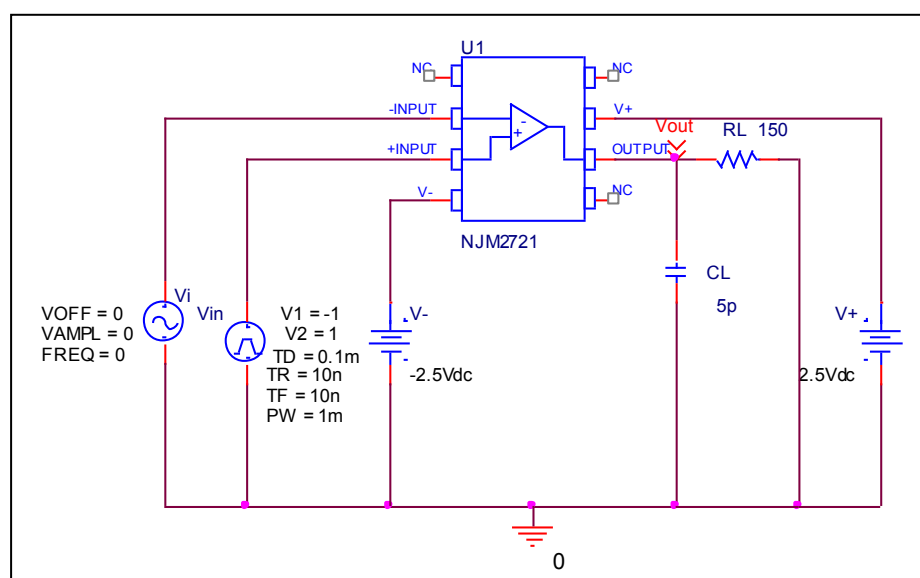
Vos(mV)	Measurement	Simulation	%Error
	3.000	3.009	0.293

Slew Rate

Simulation result



Evaluation circuit

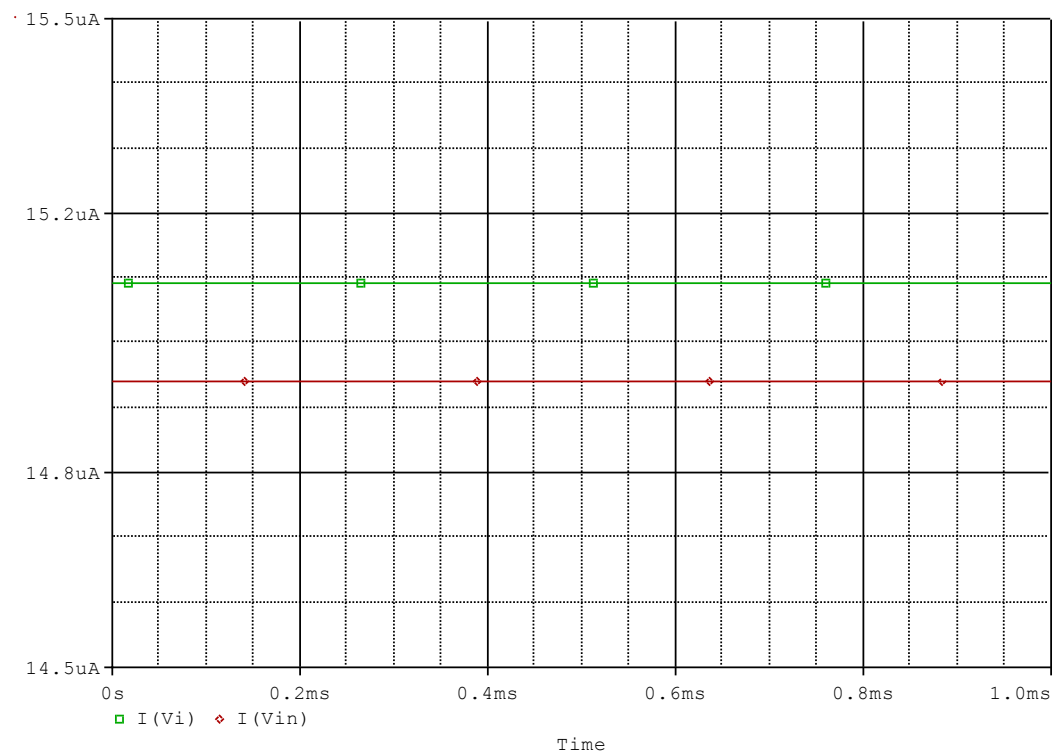


Comparison table

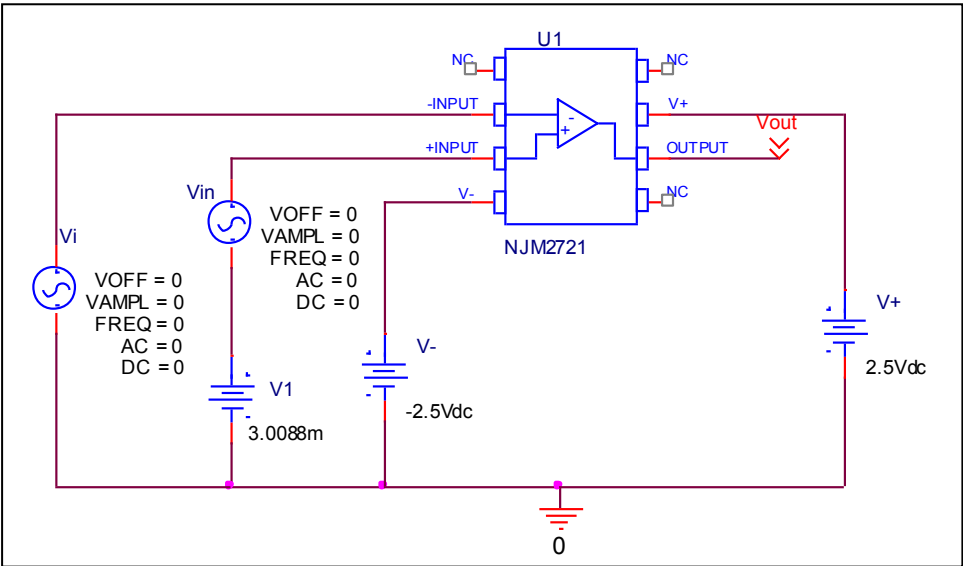
Slew Rate(v/us)	Measurement	Simulation	%Error
	500.000	525.000	5.000

Input current Ib, Ibos

Simulation result



Evaluation circuit

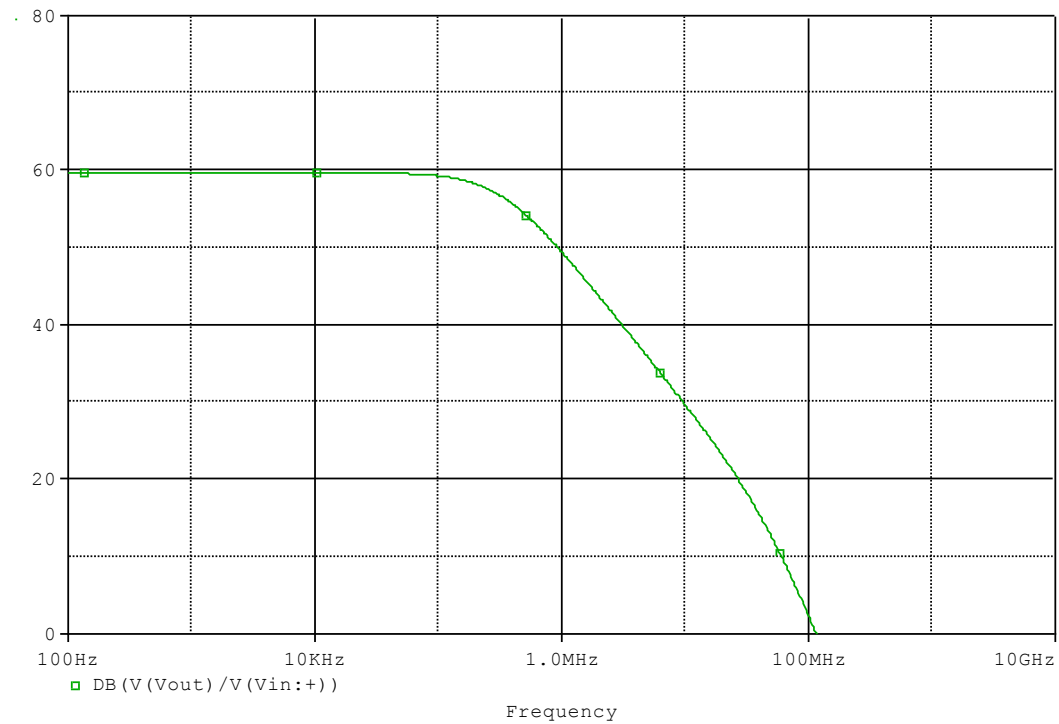


Comparison table

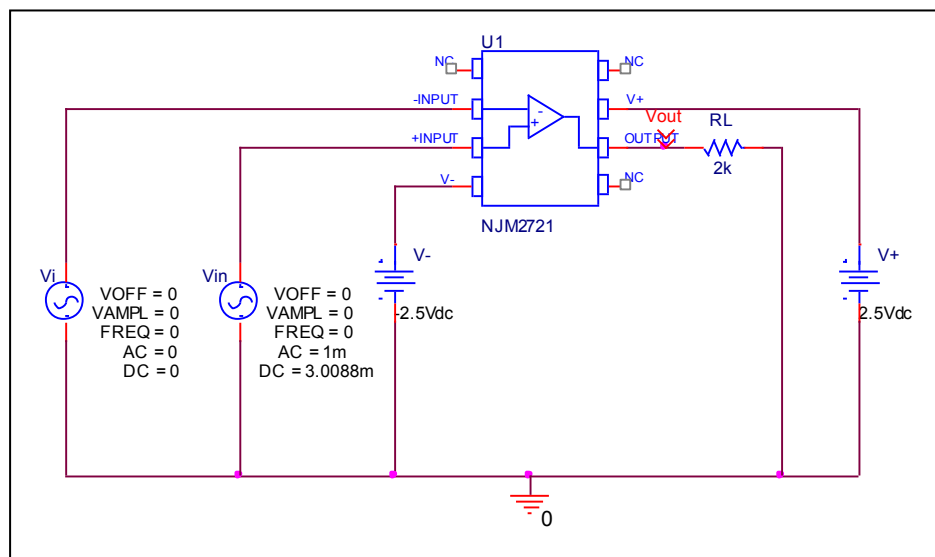
	Measurement	Simulation	%Error
Ib(uA)	15.000	15.016	0.107
Ibos(nA)	150.000	150.028	0.019

Open Loop Voltage Gain vs. Frequency , Av-dc, f-0dB

Simulation result



Evaluation circuit

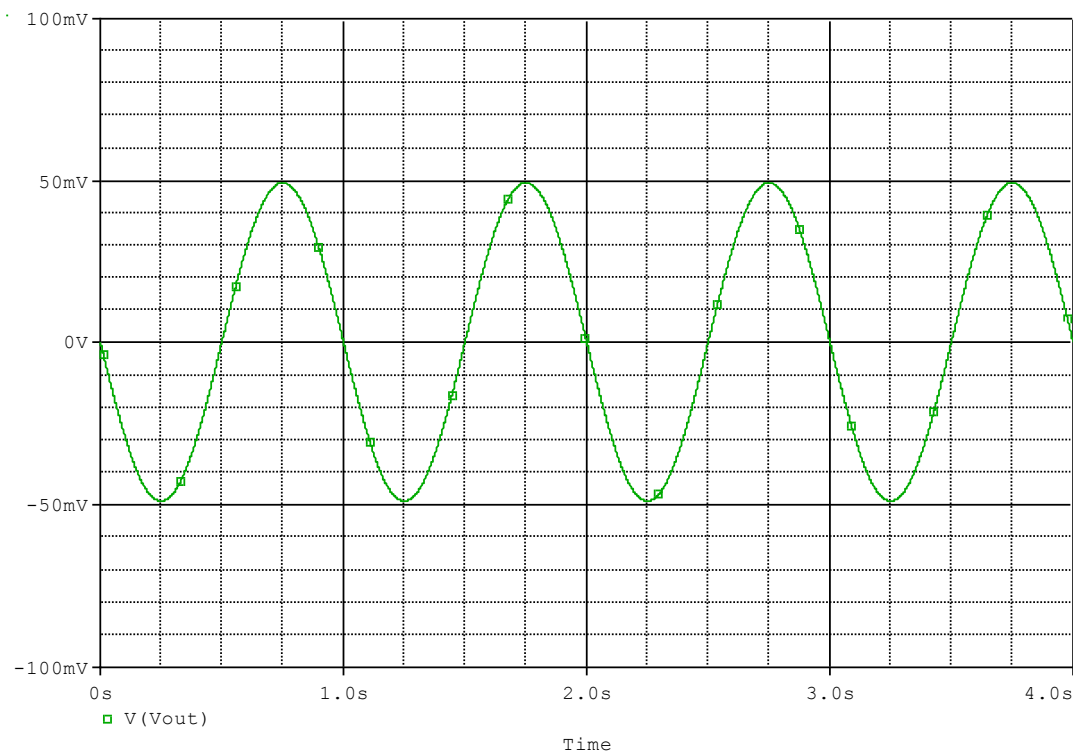


Comparison table

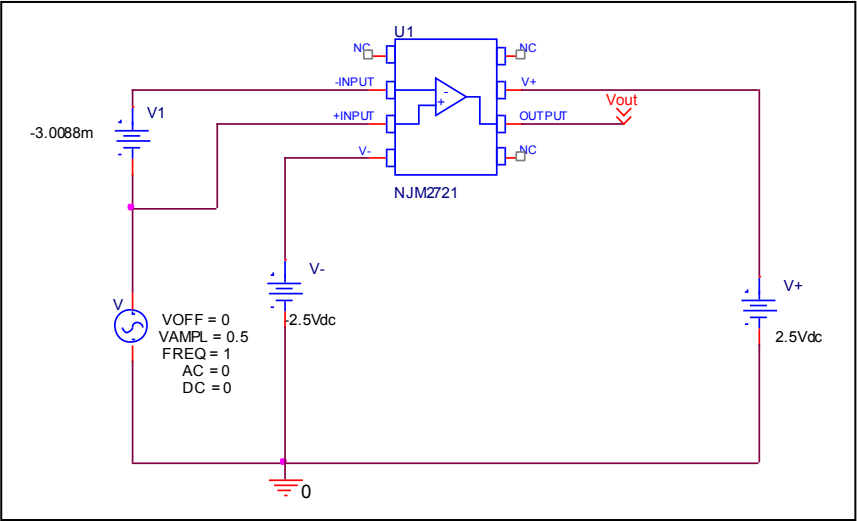
	Measurement	Simulation	%Error
f-0dB(MHz)	120.000	114.207	-4.828
Av-dc(dB)	60.000	59.675	-0.542

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $20 \times \text{LOG}(963.274/0.098103) = 79.8413\text{dB}$

CMRR (dB)	Measurement	Simulation	%Error
	80.000	79.841	-0.198