

Device Modeling Report

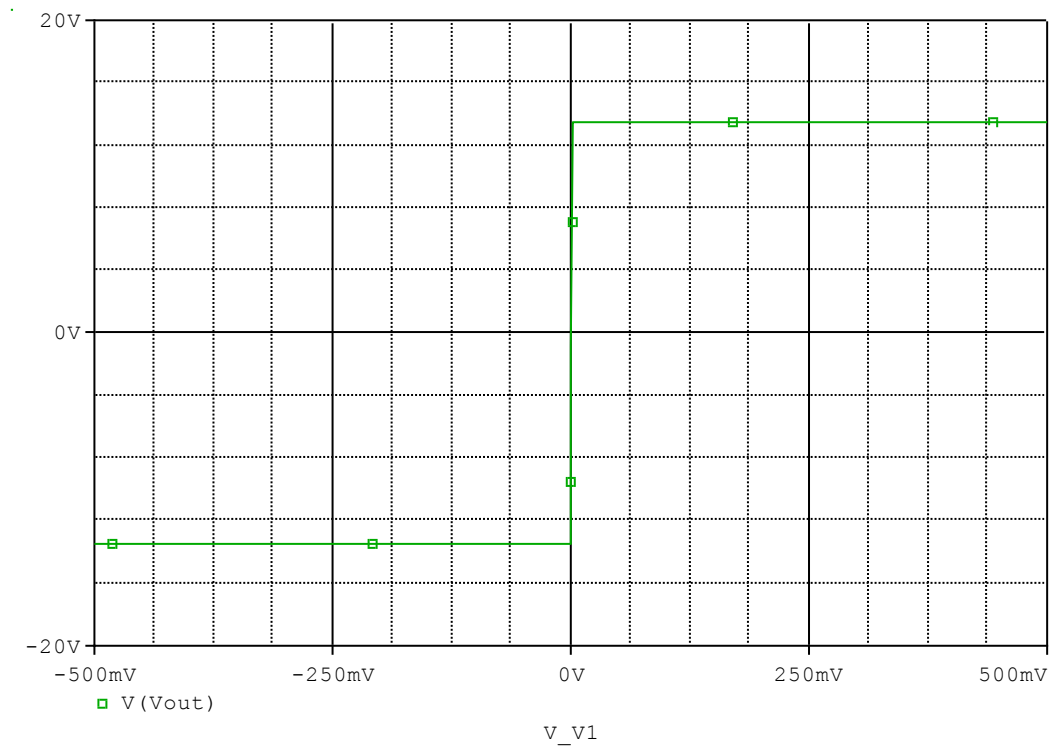
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: MC3503
MANUFACTURER: STMicroelectronics



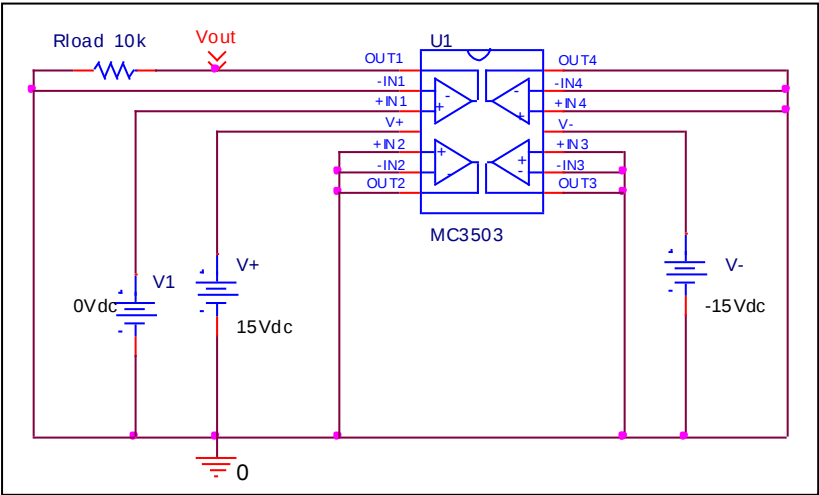
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

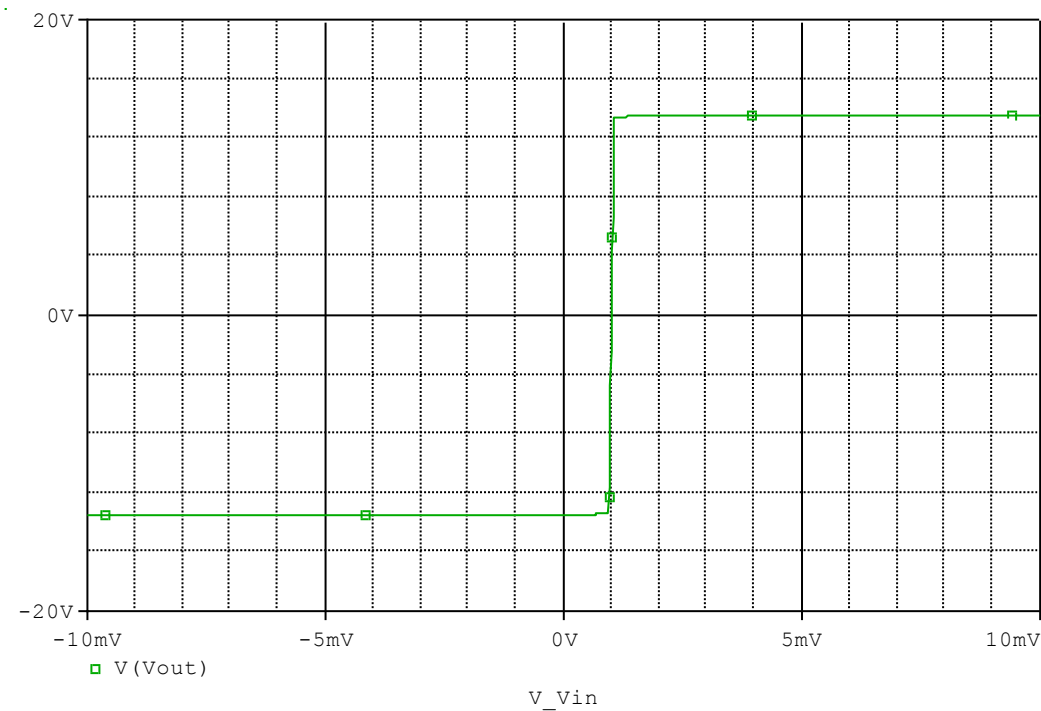


Comparison table

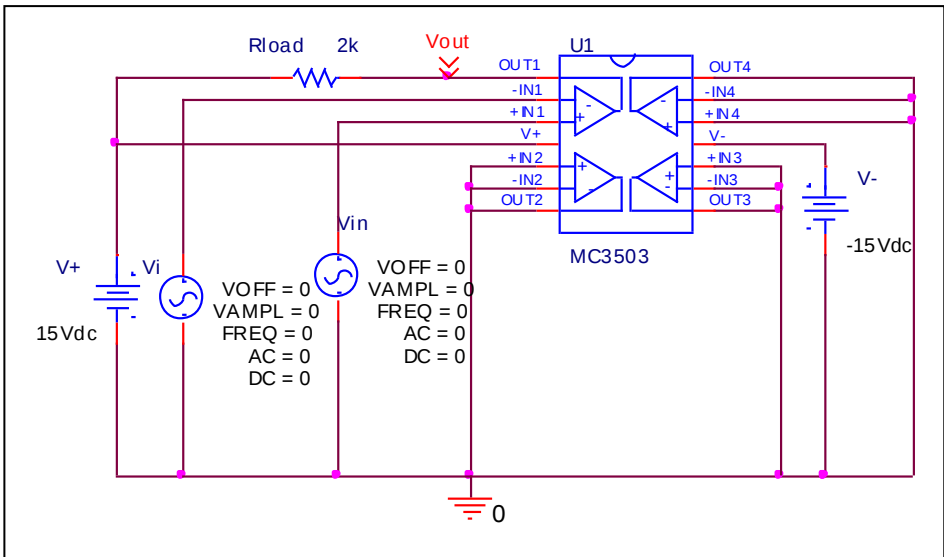
Output Voltage Swing	Measurement	Simulation	%Error
+Vout(V)	13.500	13.499	-0.007
-Vout(V)	-13.500	-13.499	-0.007

Input Offset Voltage

Simulation result



Evaluation circuit

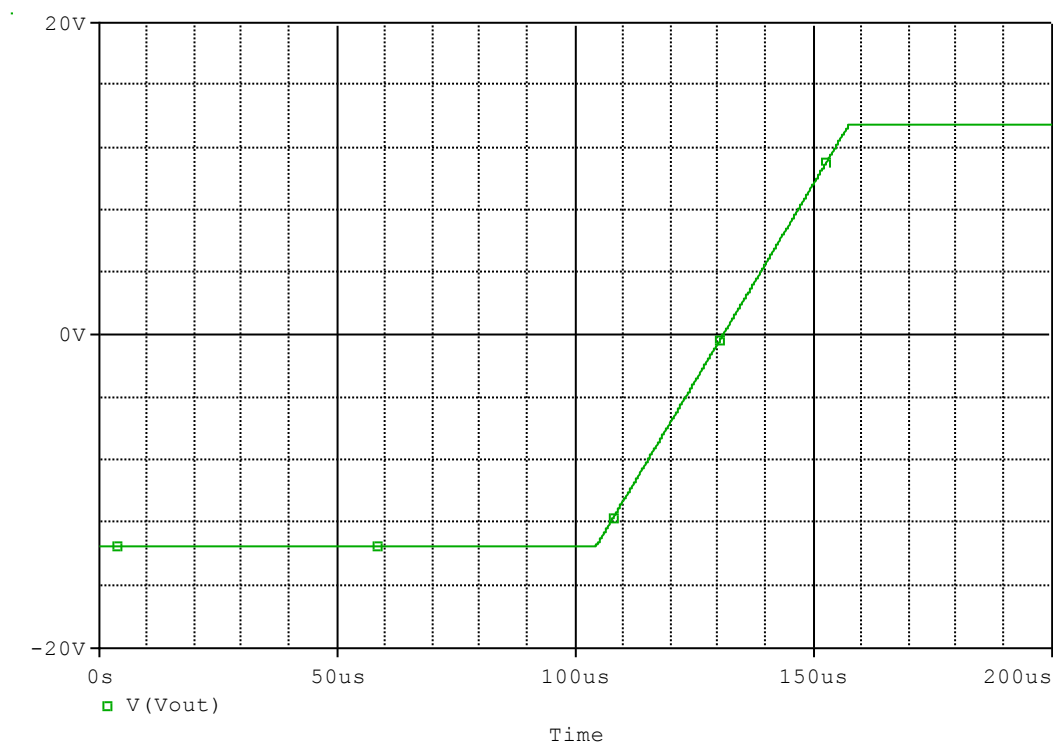


Comparison table

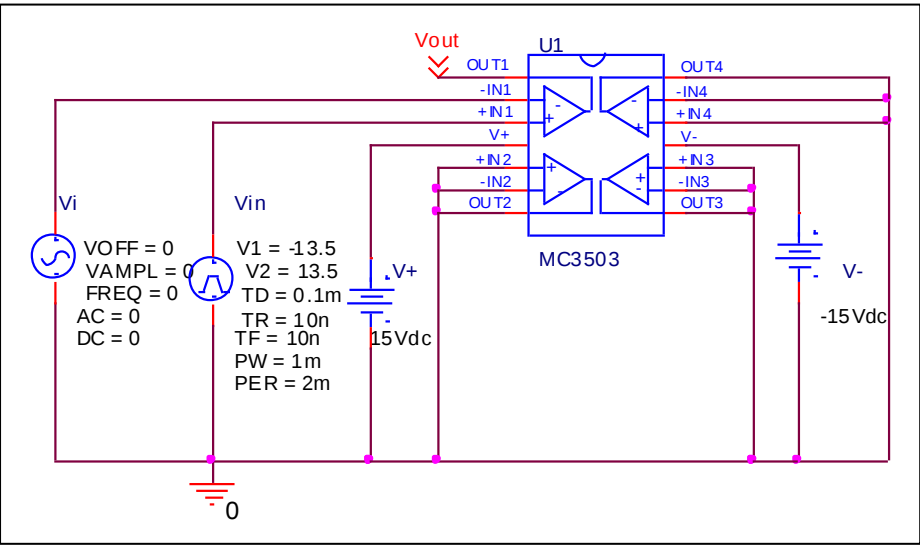
Vos(mV)	Measurement	Simulation	%Error
	1.000	1.001	0.100

Slew Rate

Simulation result



Evaluation circuit

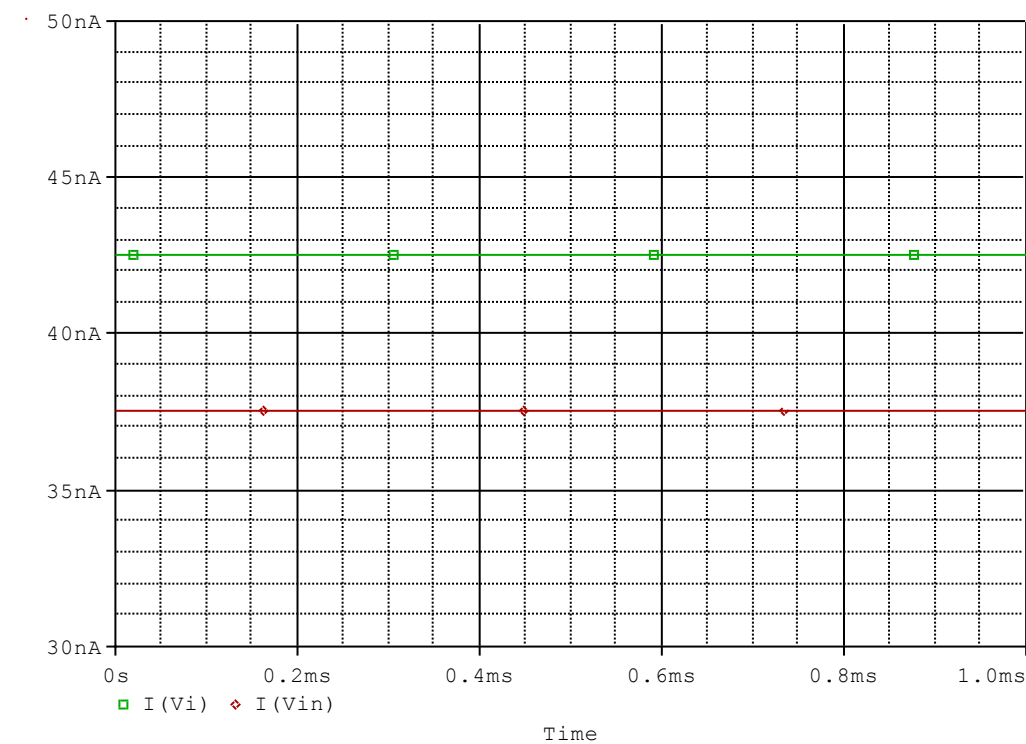


Comparison table

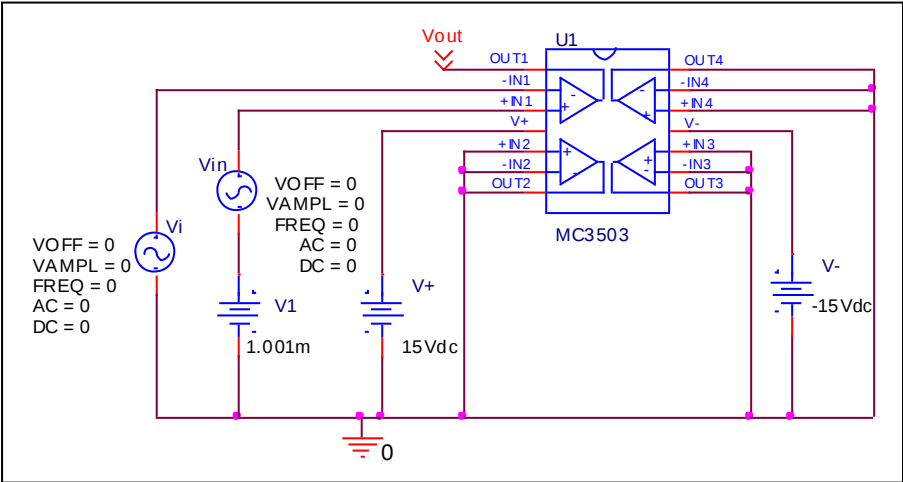
Slew Rate(v/us)	Measurement	Simulation	%Error
	0.500	0.508	1.600

Input current Ib, Ibos

Simulation result



Evaluation circuit

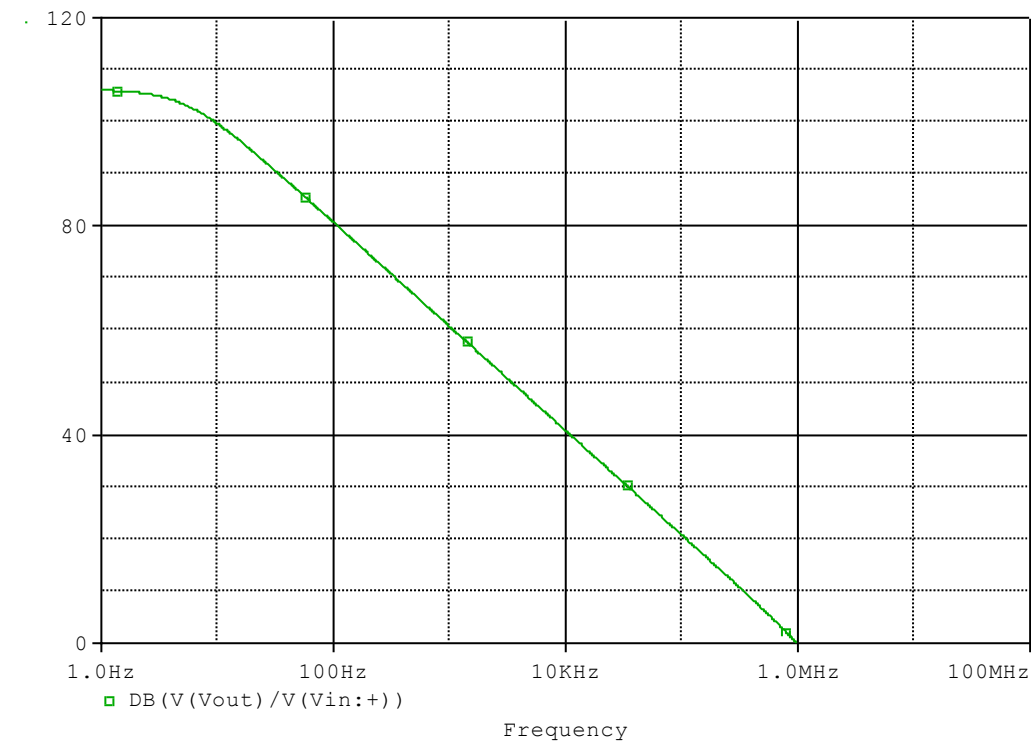


Comparison table

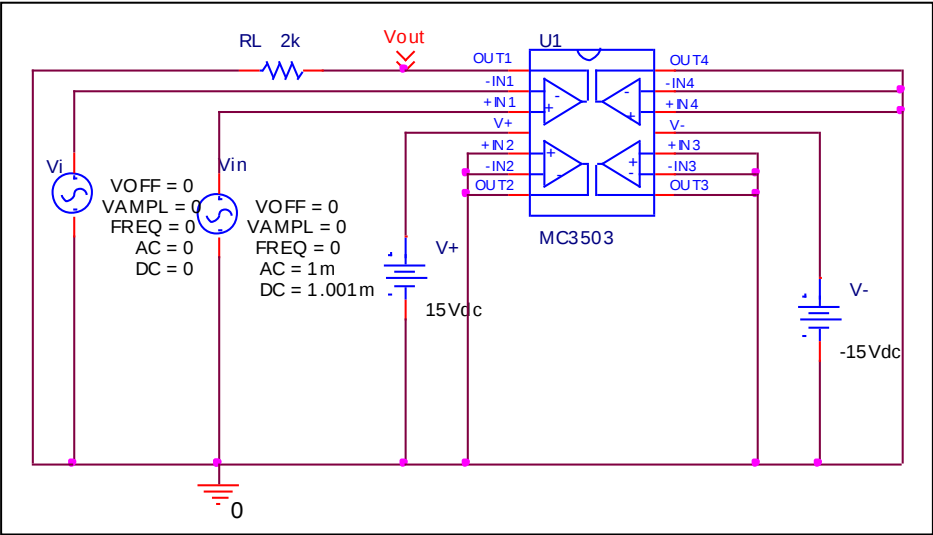
	Measurement	Simulation	%Error
Ib(nA)	40.000	40.013	0.032
Ibos(nA)	5.000	5.000	0.008

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

Simulation result



Evaluation circuit

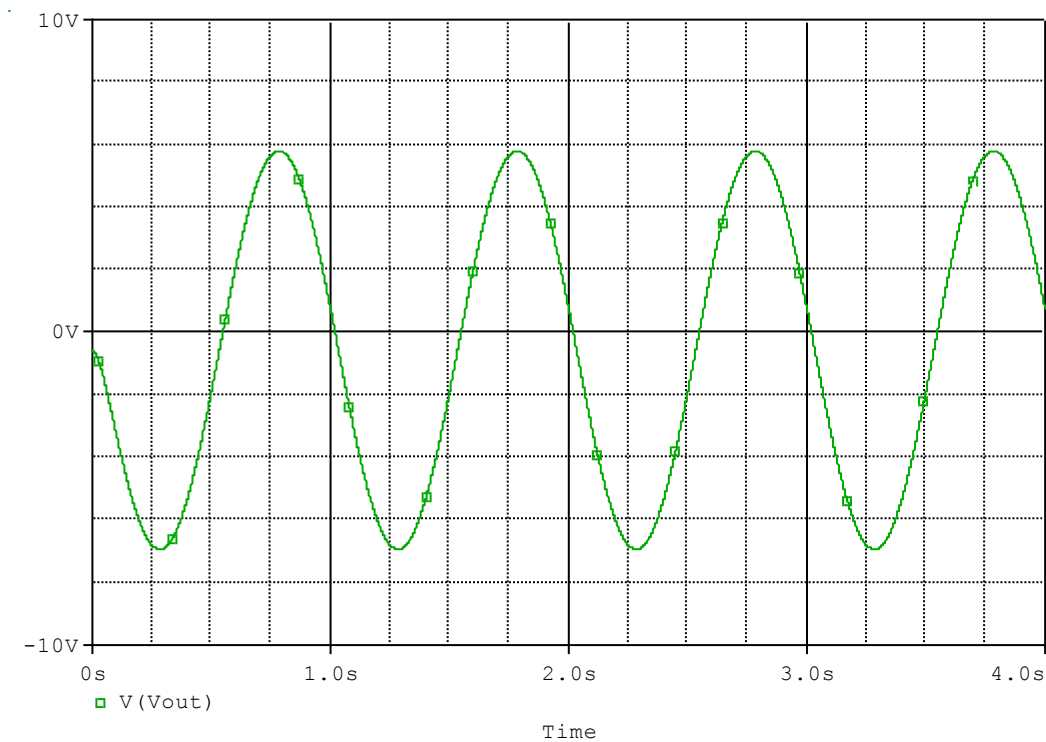


Comparison table

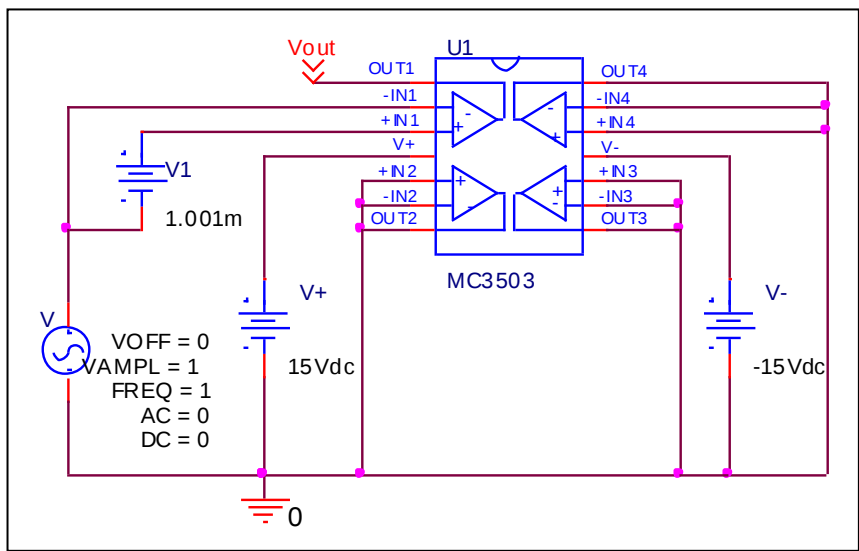
	Measurement	Simulation	%Error
f-0dB(MHz)	1.000	0.961	-3.900
Av-dc(dB)	106.000	106.098	0.092

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $20 \times \text{LOG}(201790.1671/(12.742/2))$
= 90.0138 dB

CMRR (dB)	Measurement	Simulation	%Error
	90.000	90.014	0.015