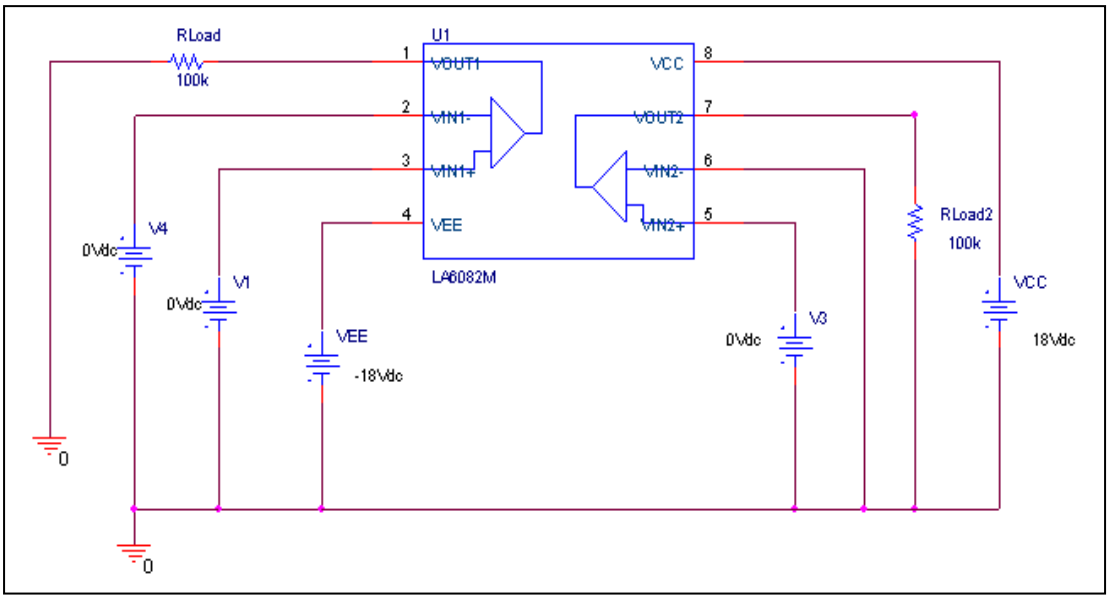
Device Modeling Report

COMPONENTS:MOSFET: OPERATIONAL AMPLIFIER
PART NUMBER:LA6082M
MANUFACTURER:SANYO

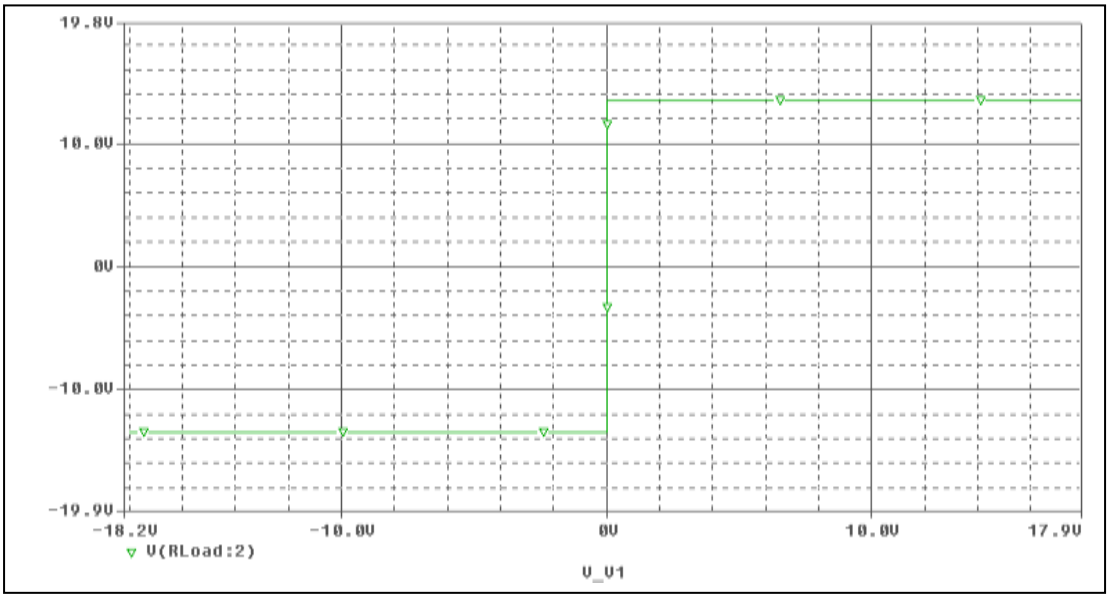
Bee Technologies Inc.

Output Voltage Swing, +Vout and –Vout

Evaluation circuit



Simulation result

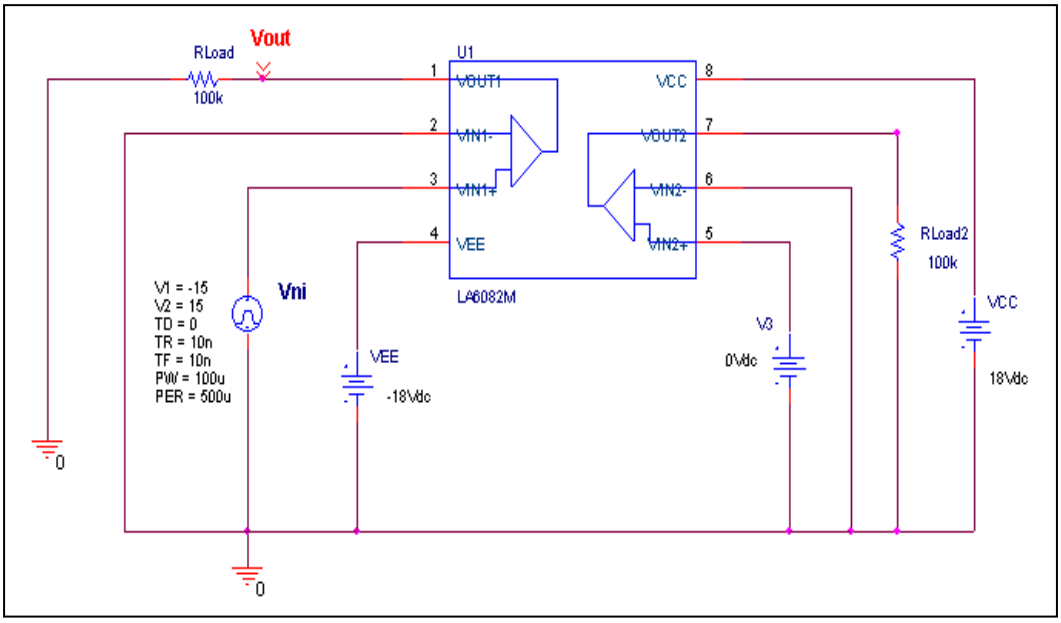


Compare Measurement vs. Simulation

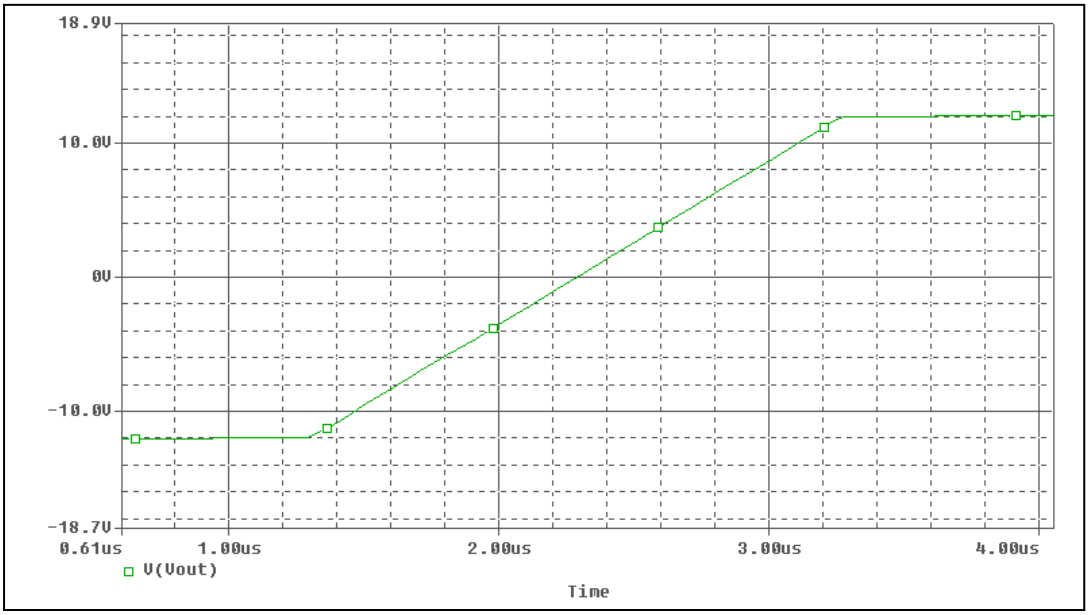
Output Voltage Swing	Measurement	Simulation	%Error
+Vout(V)	+13.5	+13.5	0
-Vout(V)	-13.5	-13.5	0

Slew Rate, +SR, -SR

Evaluation circuit



Simulation result

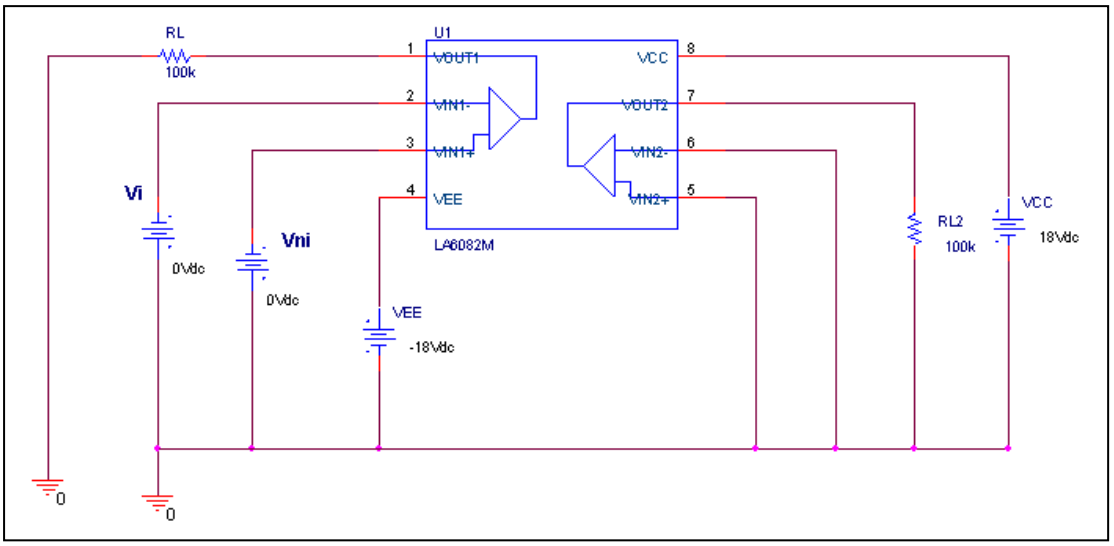


Compare Measurement vs. Simulation

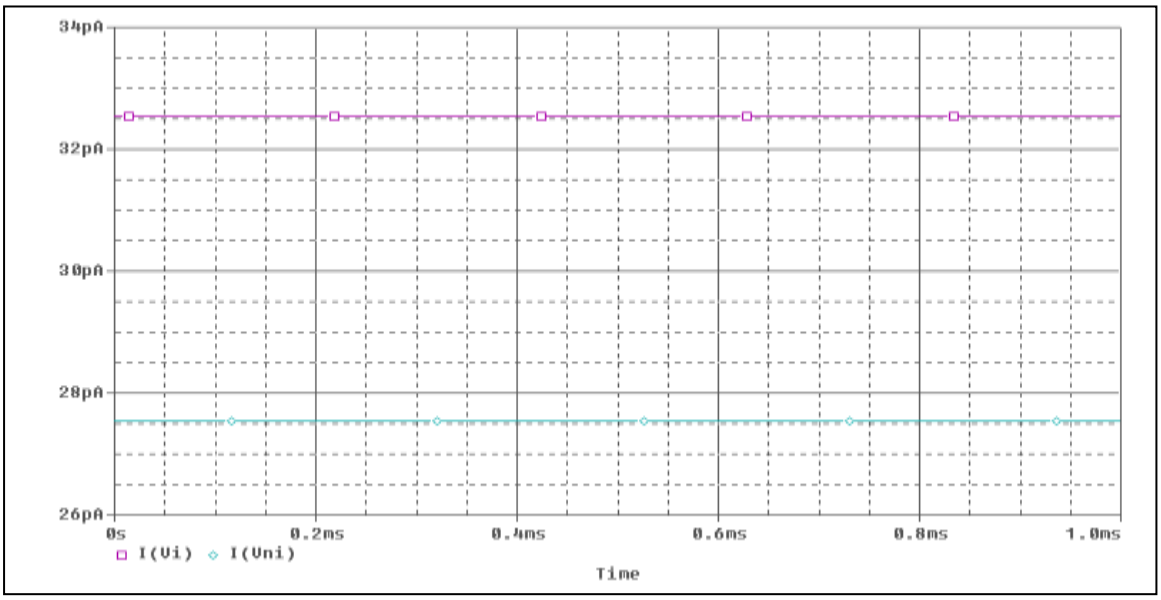
Slew Rate(v/us)	Measurement	Simulation	%Error
	13	12.989	0.085

Input current Ib, Ibos

Evaluation circuit



Simulation result

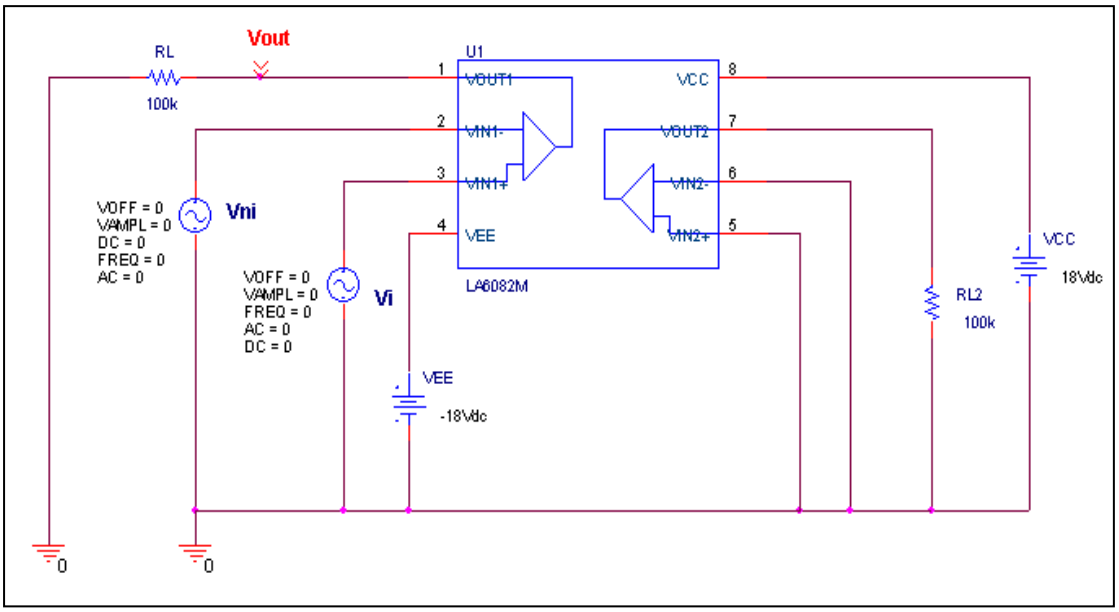


Compare Measurement vs. Simulation

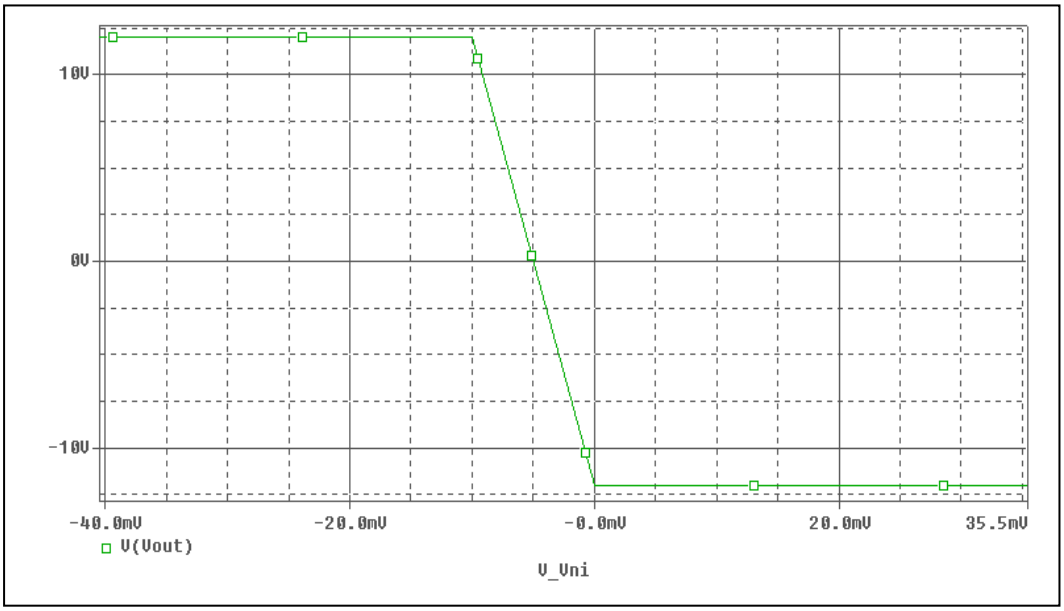
	Measurement	Simulation	%Error
Ib(pA)	30	29.948	0.173
Ibos(pA)	5	5.008	0.160

Input Offset Voltage

Evaluation circuit



Simulation result

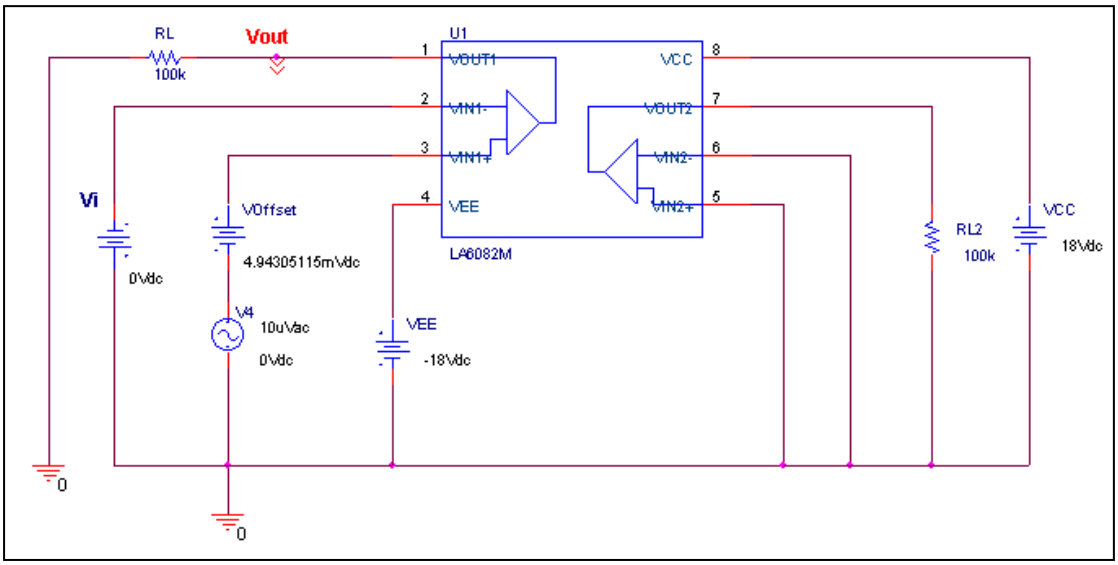


Compare Measurement vs. Simulation

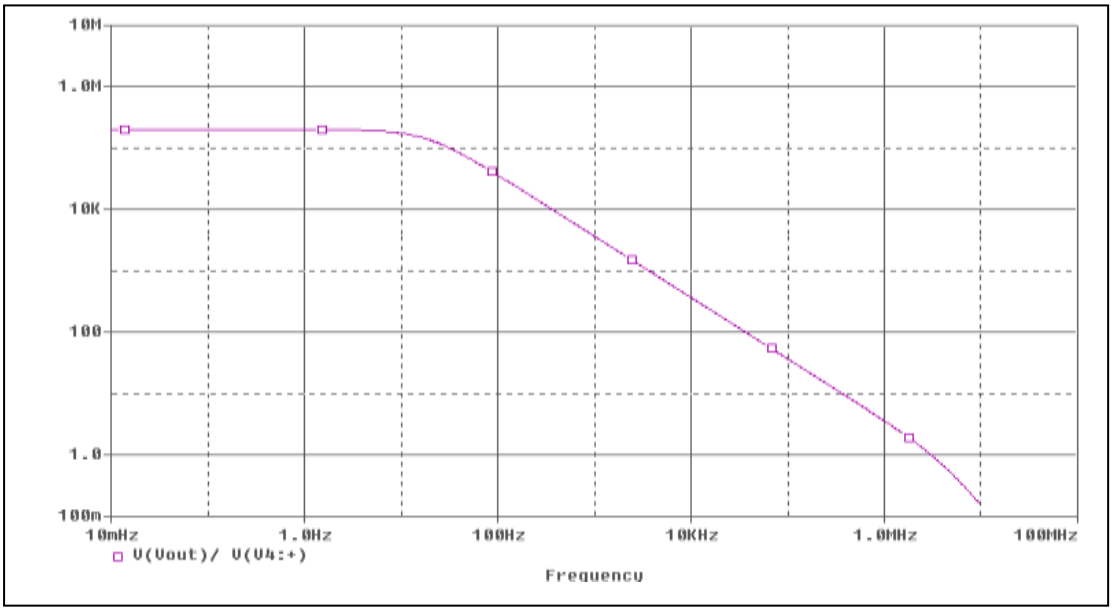
	Measurement		Simulation		Error	
Vos	5	mV	5.009	mV	0.180	%

Open Loop Voltage Gain(DC) and Unity Gain

Evaluation circuit



Simulation result

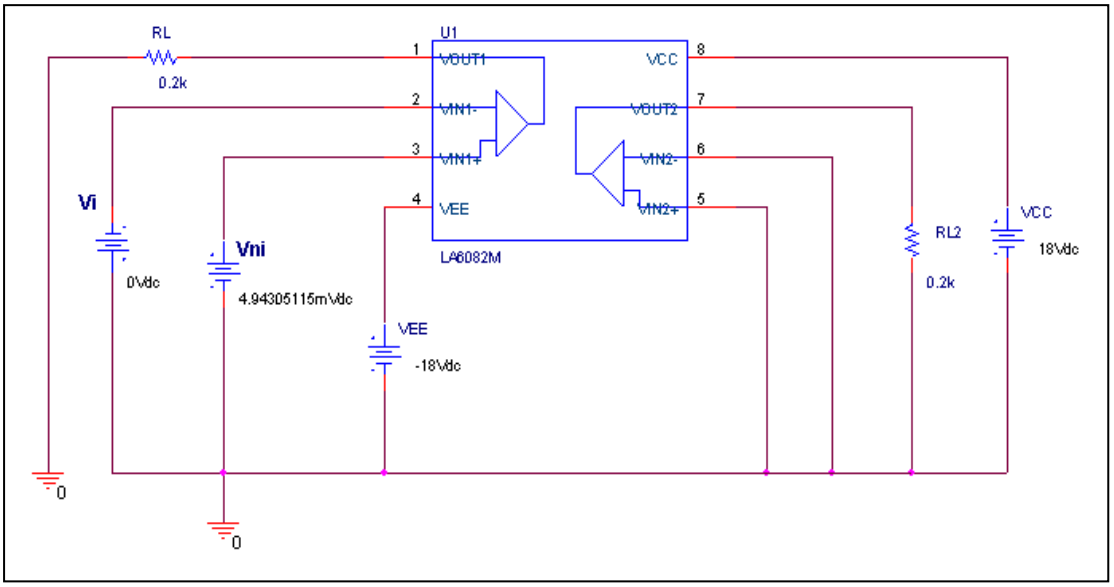


Compare Measurement vs. Simulation

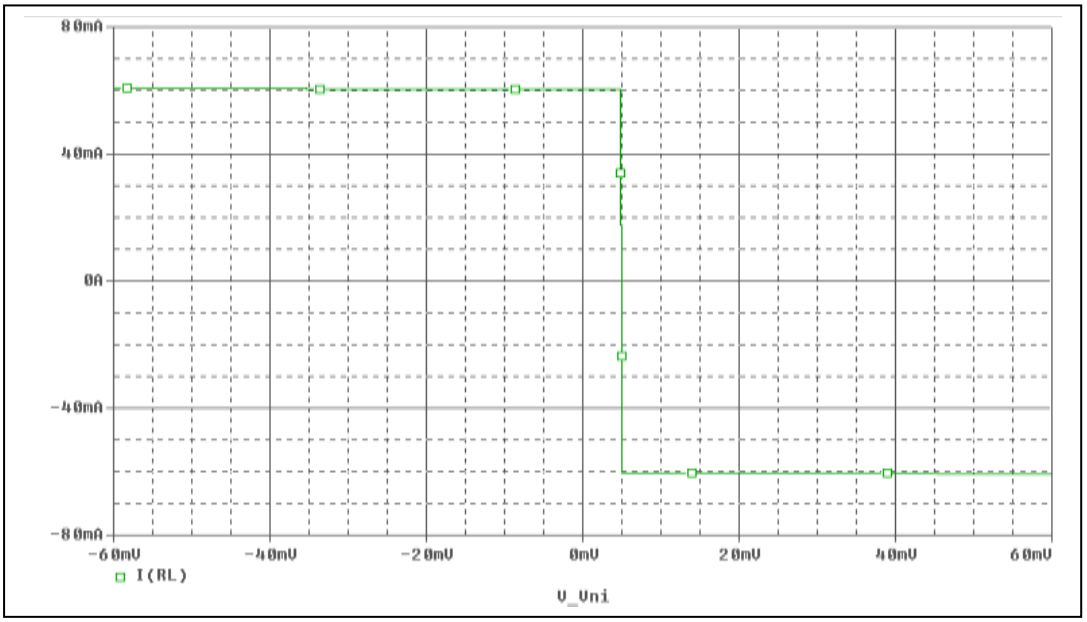
	Measurement		Simulation		Error	
Av-dc	200	V/mV	199.215	V/mV	0.392	%
f-odb	3	MHz	3.0358	MHz	1.193	%

Output Short Circuit Current - Ios

Evaluation circuit



Simulation result

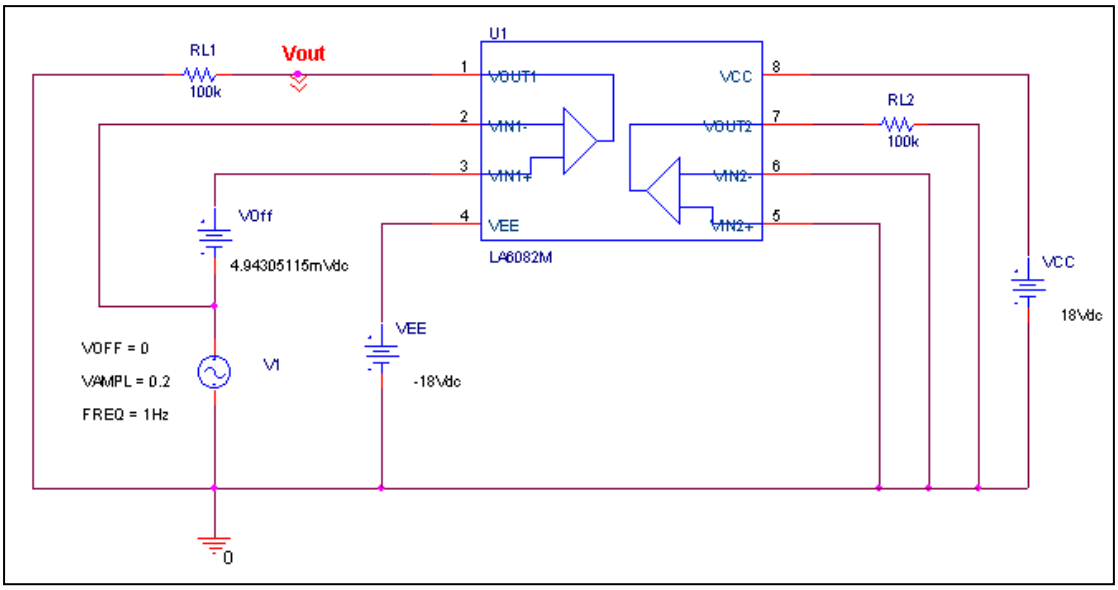


Compare Measurement vs. Simulation

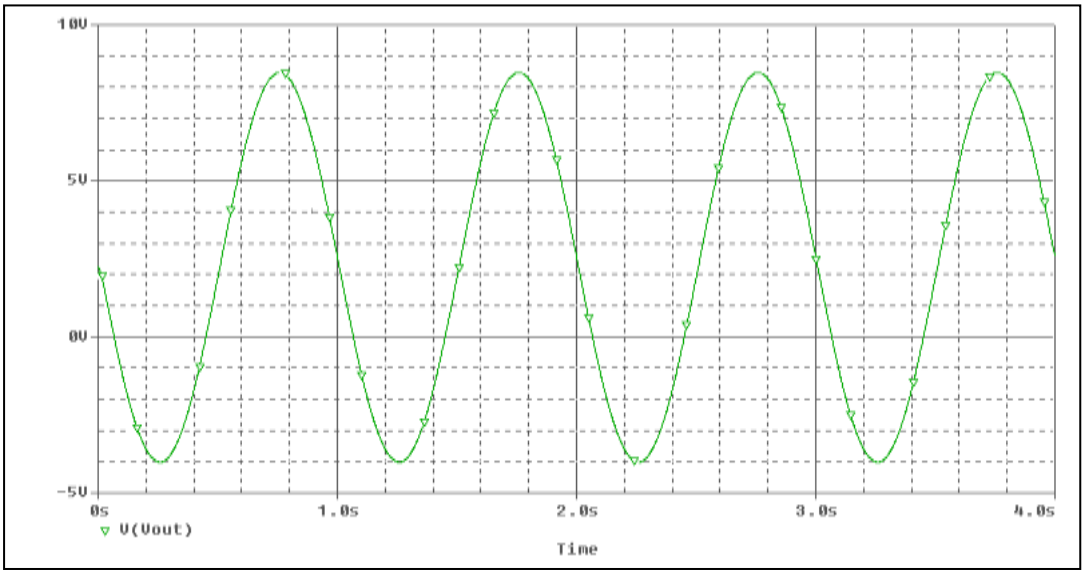
	Measurement	Simulation	%Error
Short Circuit Current	67.5mA	66.976mA	0.776

Common-mode rejection ratio - CMRR

Evaluation circuit



Simulation result



Common mode gain=12.462/0.4 =31.155
Common Mode Reject Ratio=199215/31.155=6394.31
Change to dB = 20log(6394.31) = 76.1 dB

Compare Measurement vs. Simulation

	Measurement	Simulation	%Error
CMRR(dB)	76	76.1	0.131