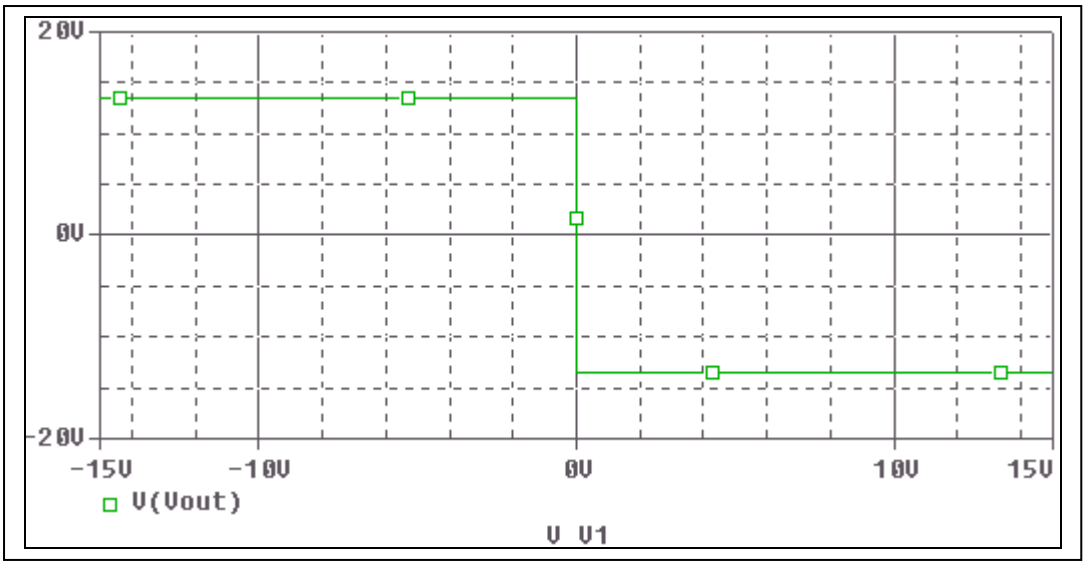
Device Modeling Report

COMPONENTS:OPERATIONAL AMPLIFIER
PART NUMBER:MC3303
MANUFACTURER: STMicroelectronics

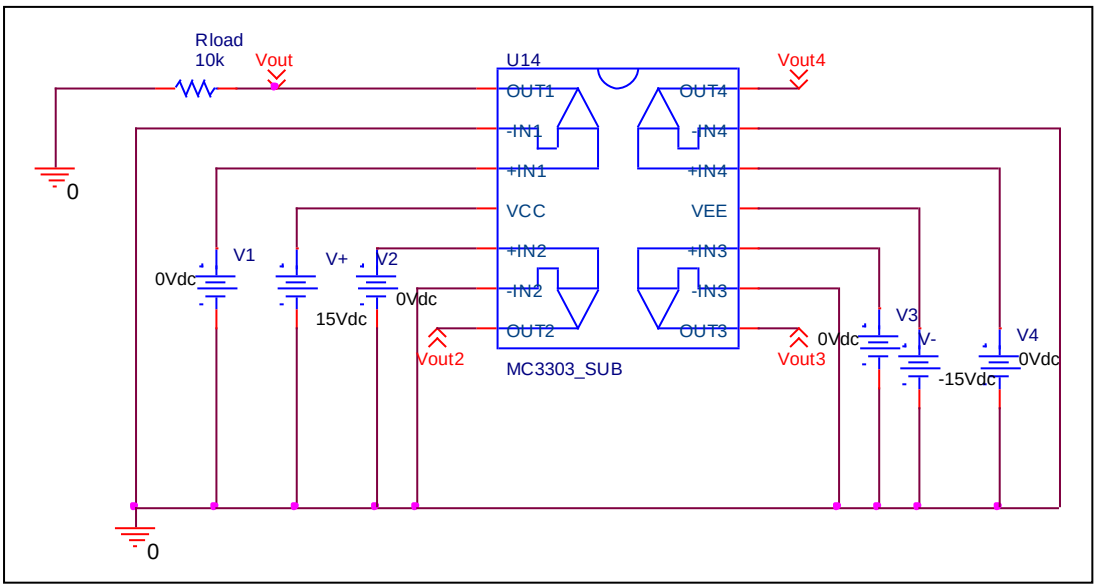
Bee Technologies Inc.

Output Voltage Swing, +Vout and –Vout

Simulation result



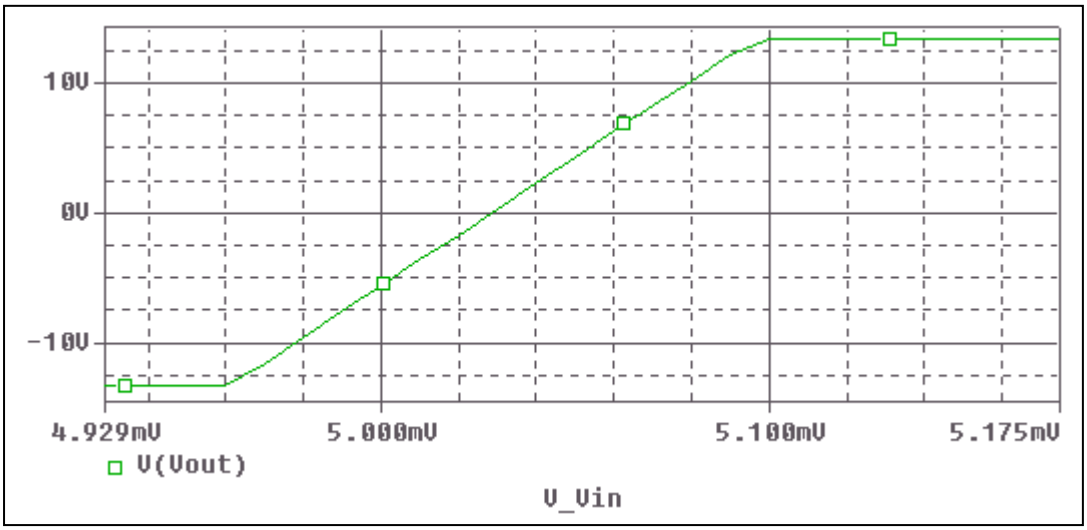
Evaluation circuit



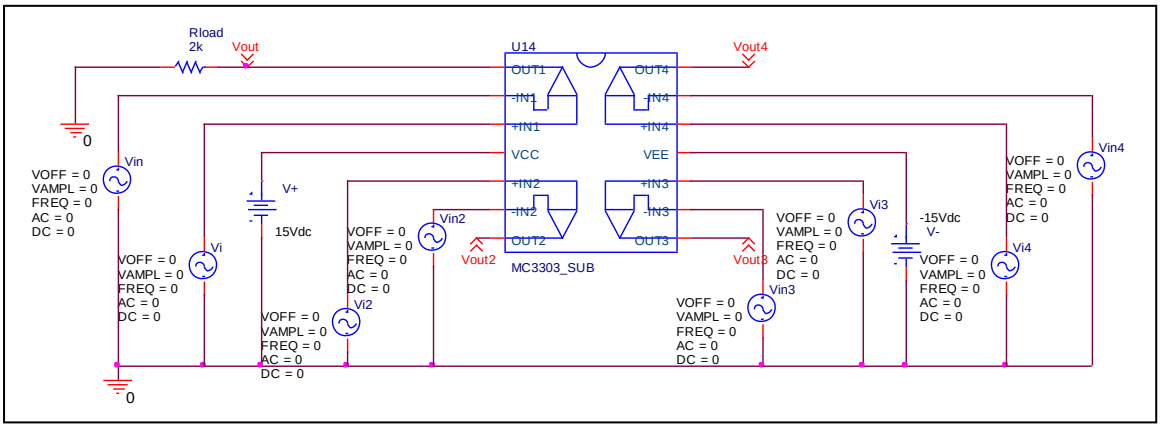
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+13.5	+13.499	0.007
-Vout(V)	-13.5	-13.499	0.007

Input Offset Voltage

Simulation result



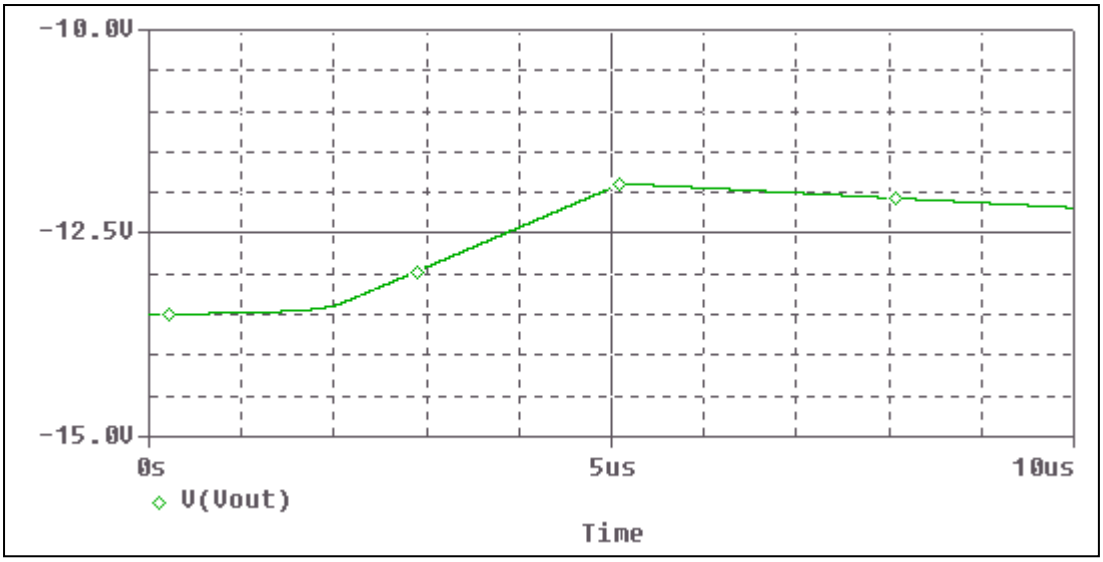
Evaluation circuit



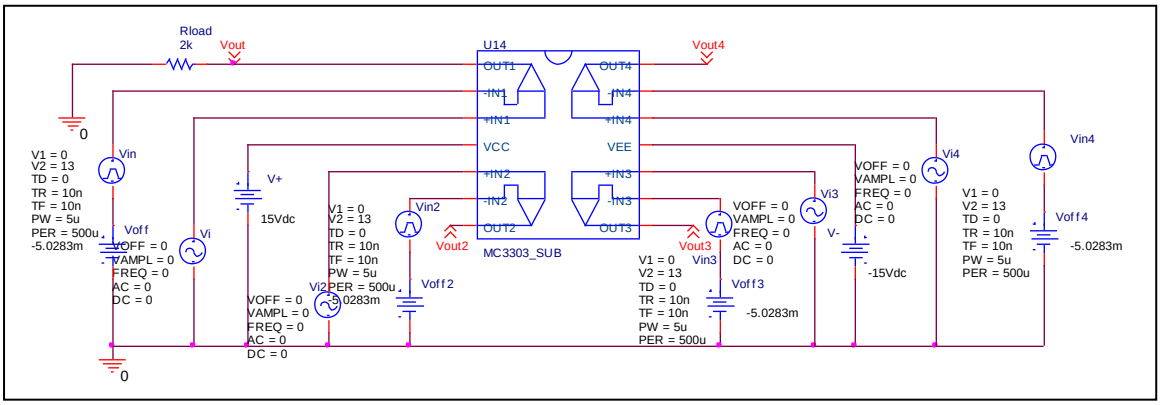
Vos	Measurement		Simulation		Error	
	5	mV	5.0283	mV	0.566	%

Slew Rate, +SR, -SR

Simulation result



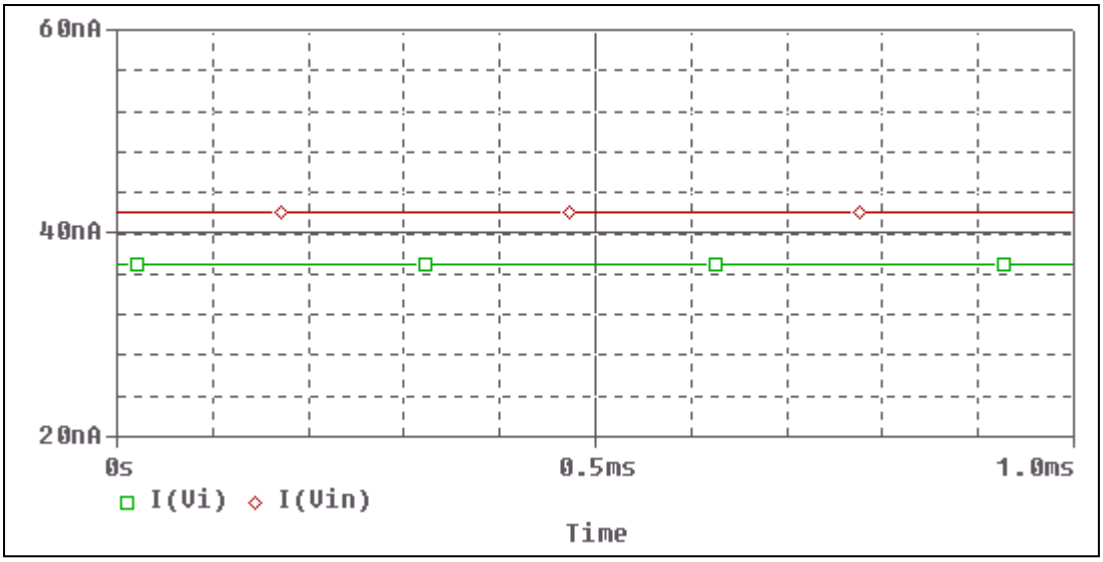
Evaluation circuit



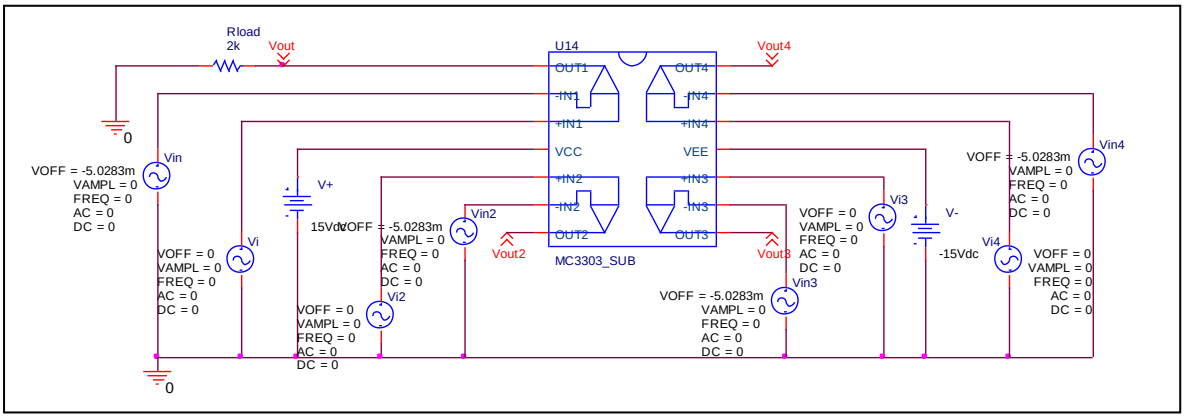
Slew Rate(v/us)	Data sheet	Simulation	%Error
	0.5V/us	0.489V/us	0.22

Input current Ib, Ibos

Simulation result



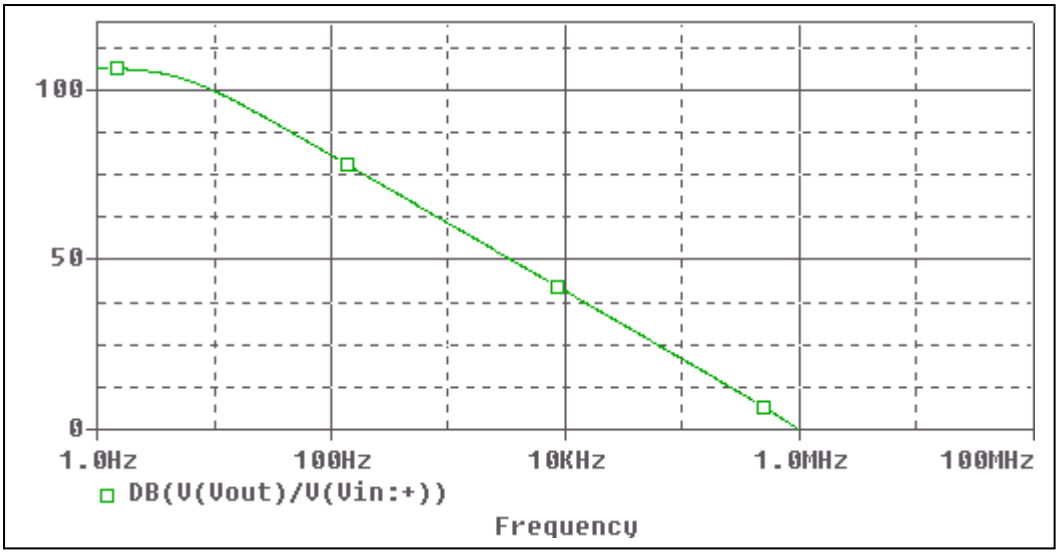
Evaluation circuit



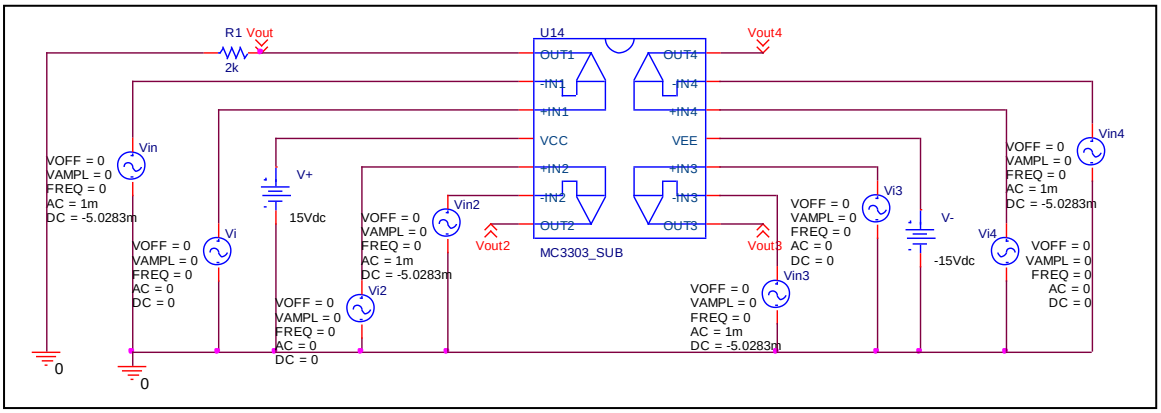
	Data sheet	Simulation	%Error
Ib(pA)	40	39.5	1.25
Ibos(pA)	5	5.05	1

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

Simulation result



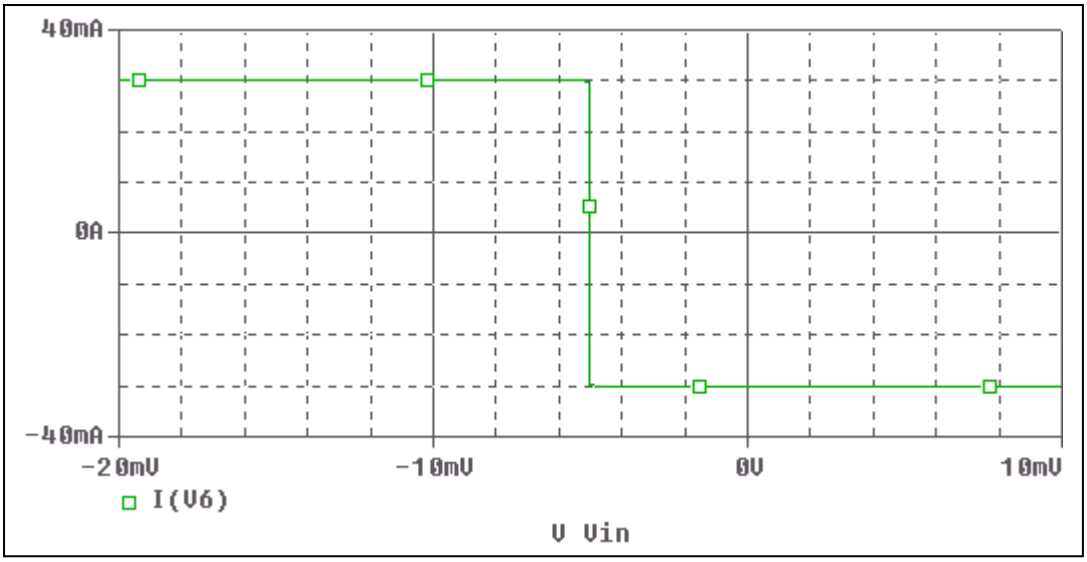
Evaluation circuit



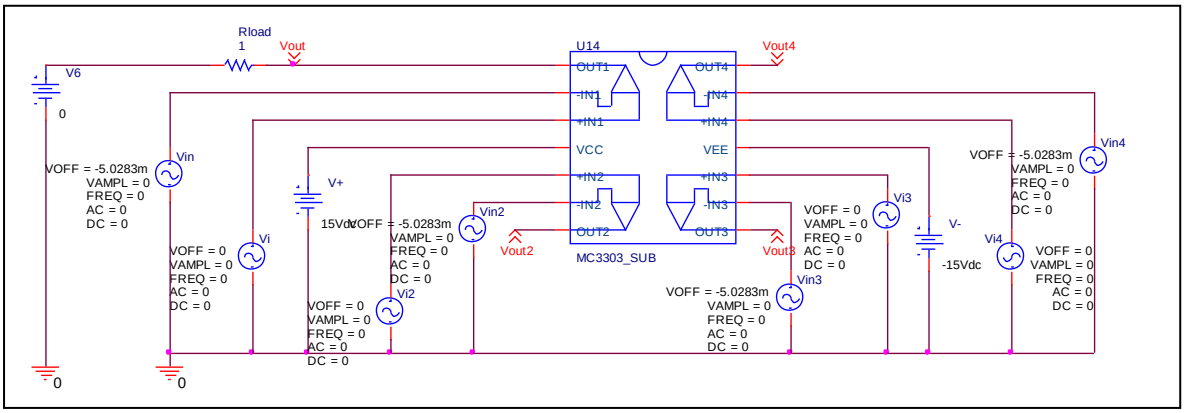
	Data sheet	Simulation	%Error
f-0dB(MHz)	1	0.982	1.8
Av-dc	200000	208929	4.46

Output Short Circuit Current - Ios

Simulation result



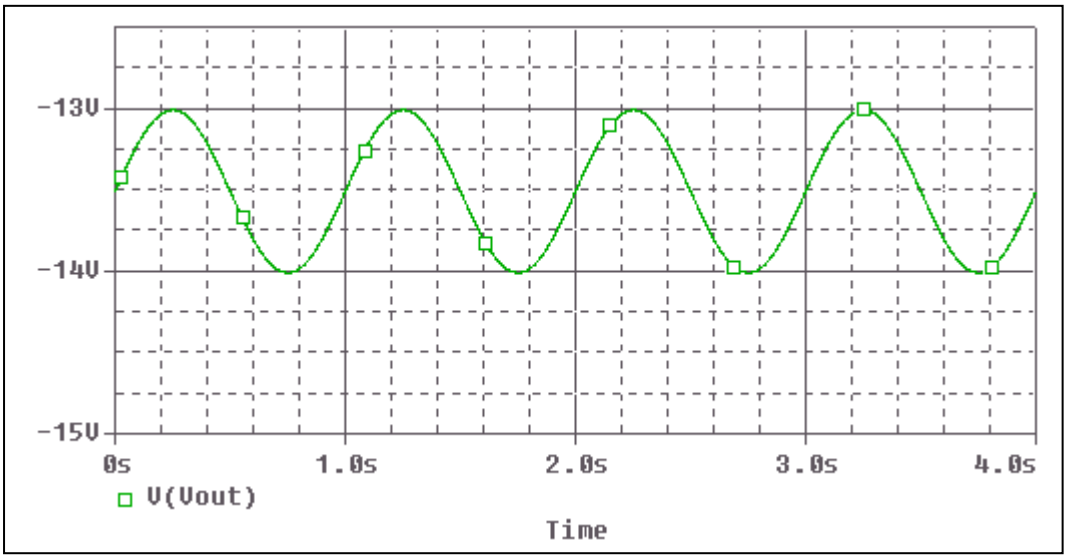
Evaluation circuit



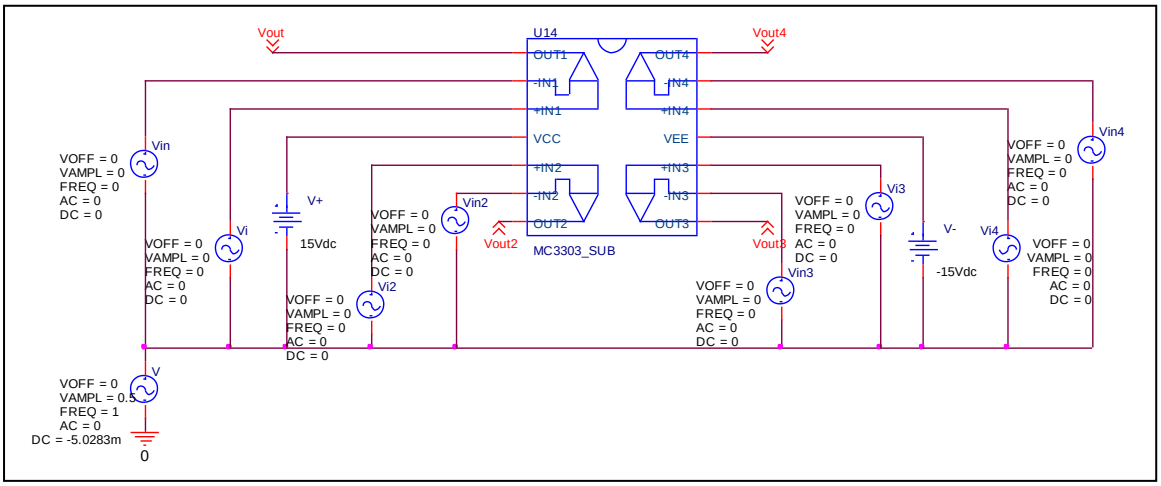
Short Circuit Current	Data sheet	Simulation	%Error
	30mA	30.063mA	0.21

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common mode gain=6.324/1
Common Mode Reject Ratio=208929/6.324=33037

CMRR	Data sheet	Simulation	%Error
	31622	33037	4.474