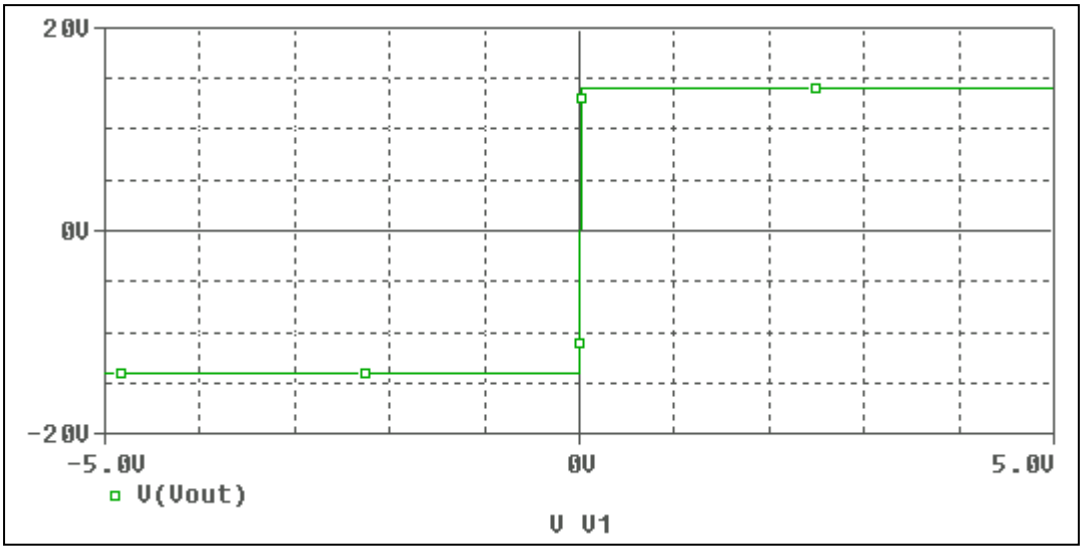
Device Modeling Report

COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER:NJM2162L
MANUFACTURER: NEW JAPAN RADIO CO.,LTD

Bee Technologies Inc.

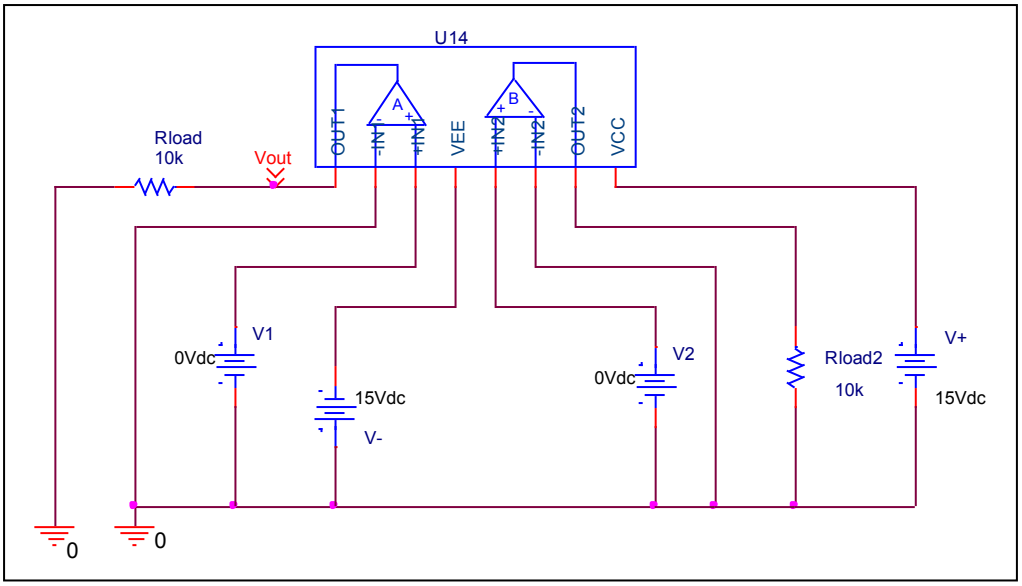
Output Voltage Swing, +Vout and –Vout

Simulation result



These simulation results are compared with ±Vout

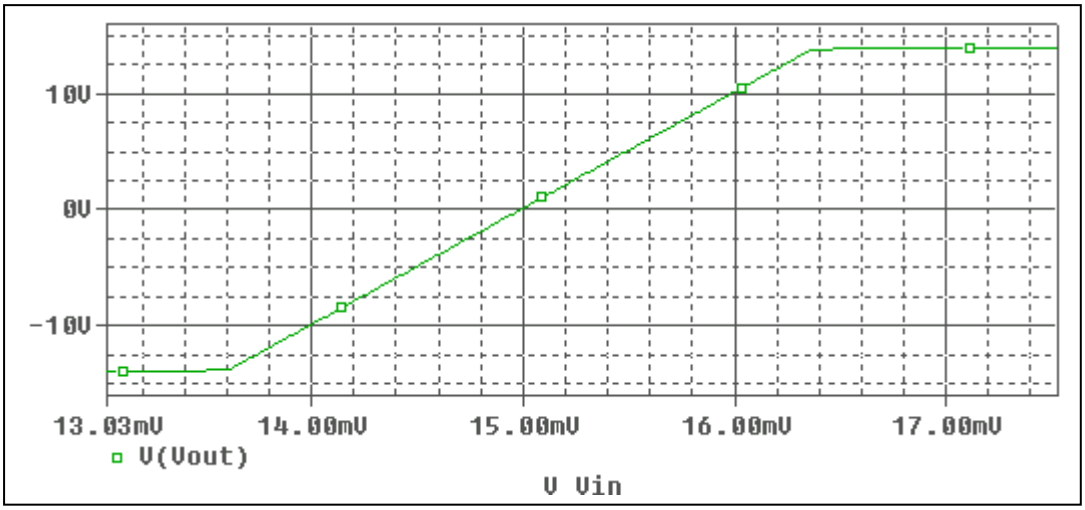
Evaluation circuit



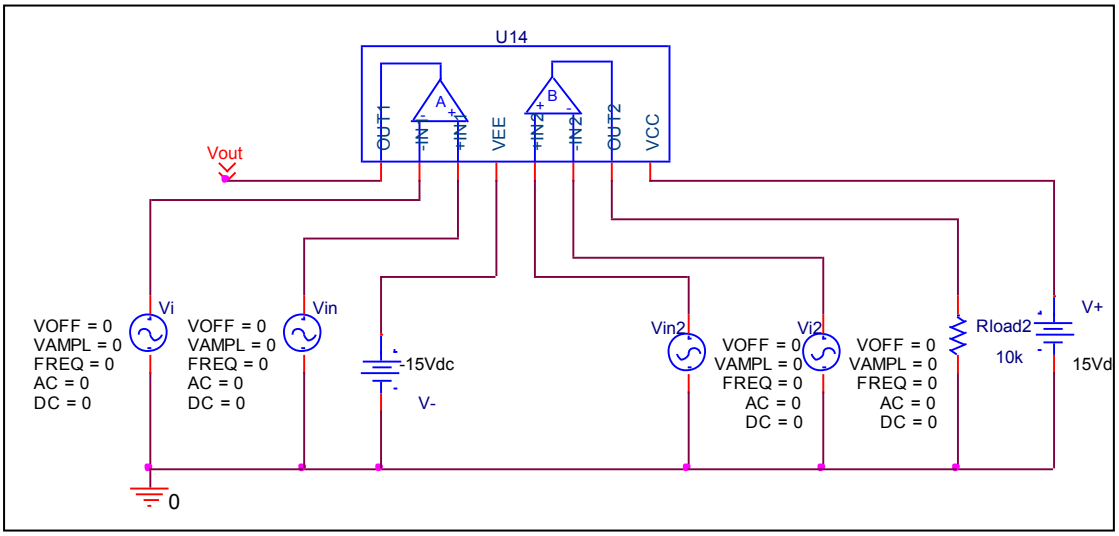
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+14	+13.972	0.2
-Vout(V)	-14	-13.972	0.2

Input Offset Voltage

Simulation result



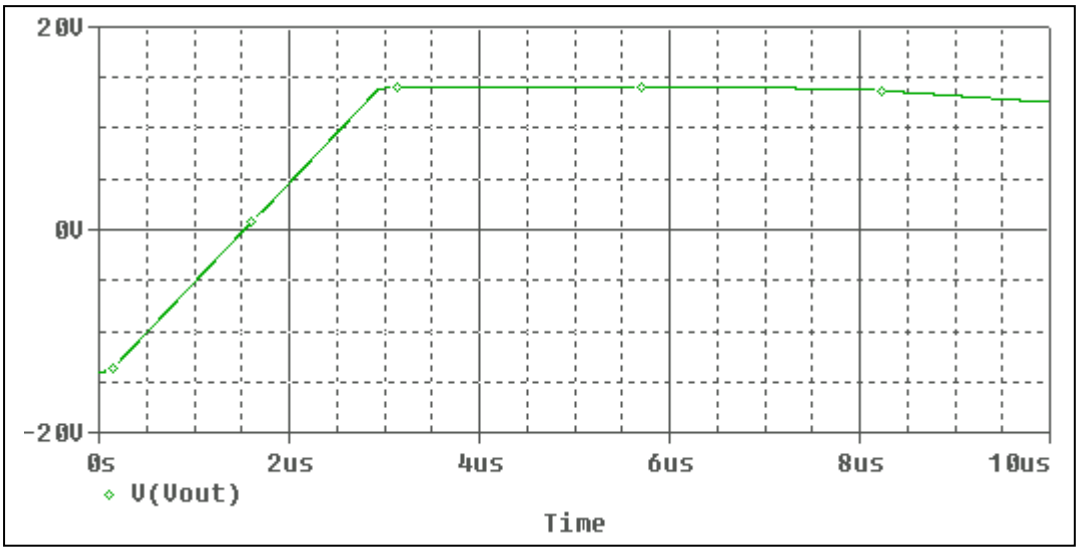
Evaluation circuit



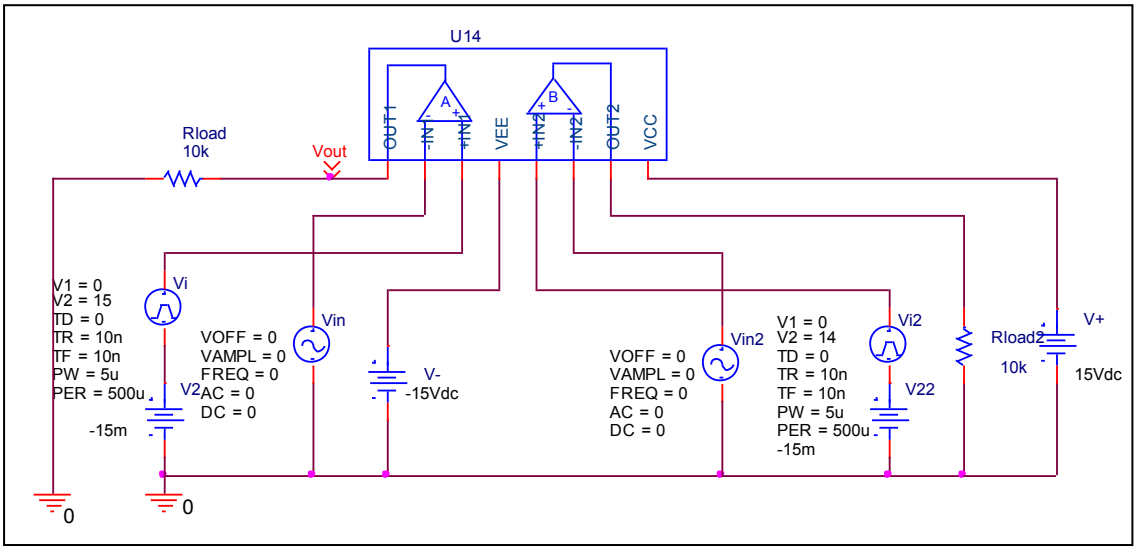
Vos	Measurement		Simulation		Error	
	15	mV	15	mV	0	%

Slew Rate, +SR, -SR

Simulation result



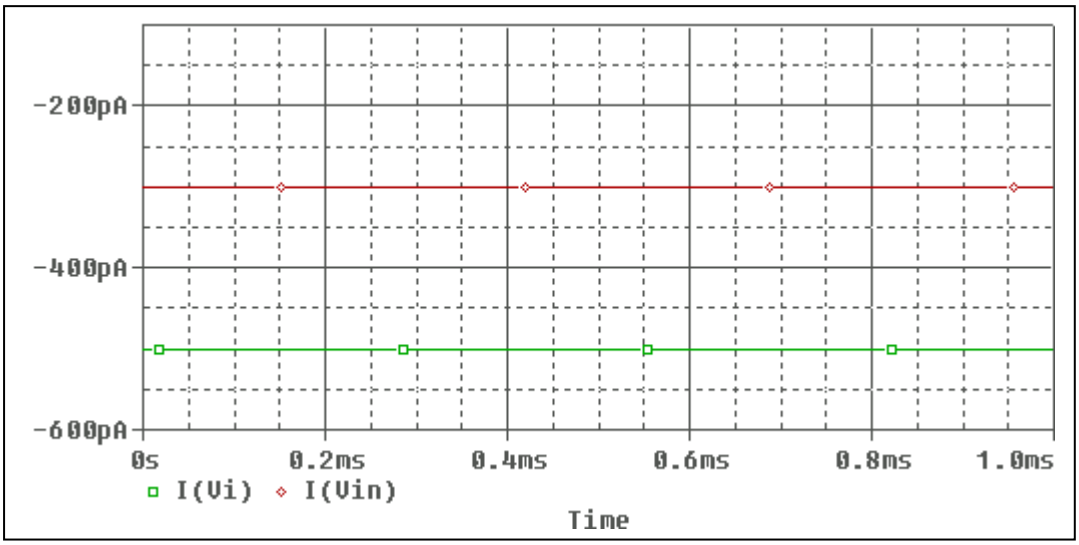
Evaluation circuit



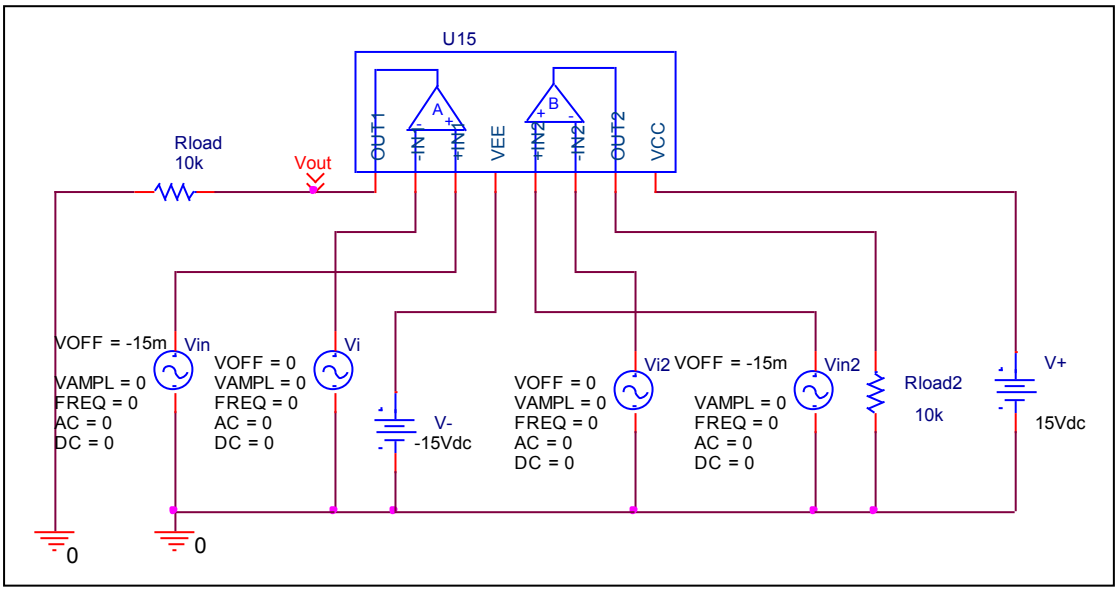
Slew Rate(v/us)	Data sheet	Simulation	%Error
	10V/us	9.85V/us	1.5

Input current Ib, Ibos

Simulation result



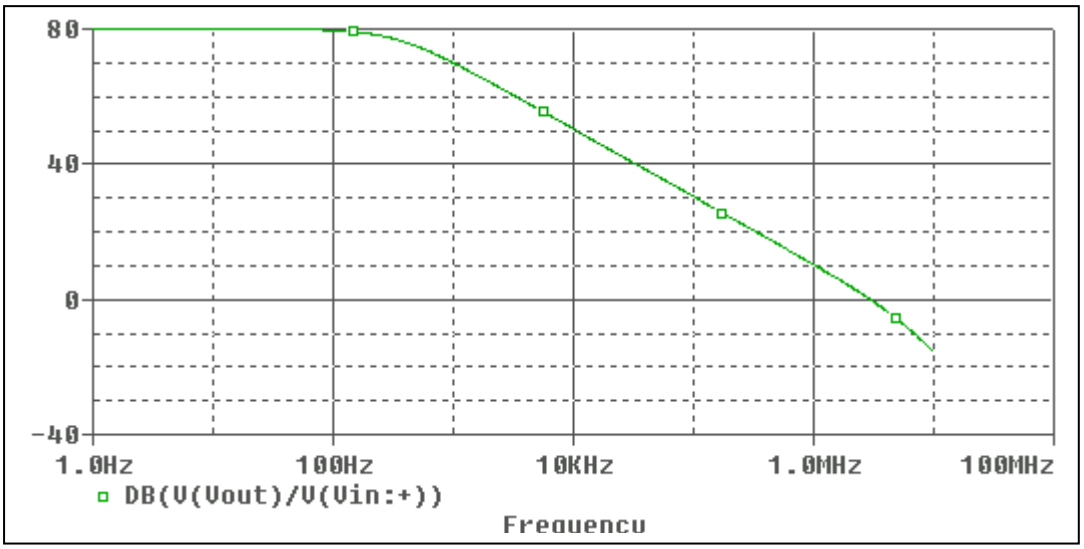
Evaluation circuit



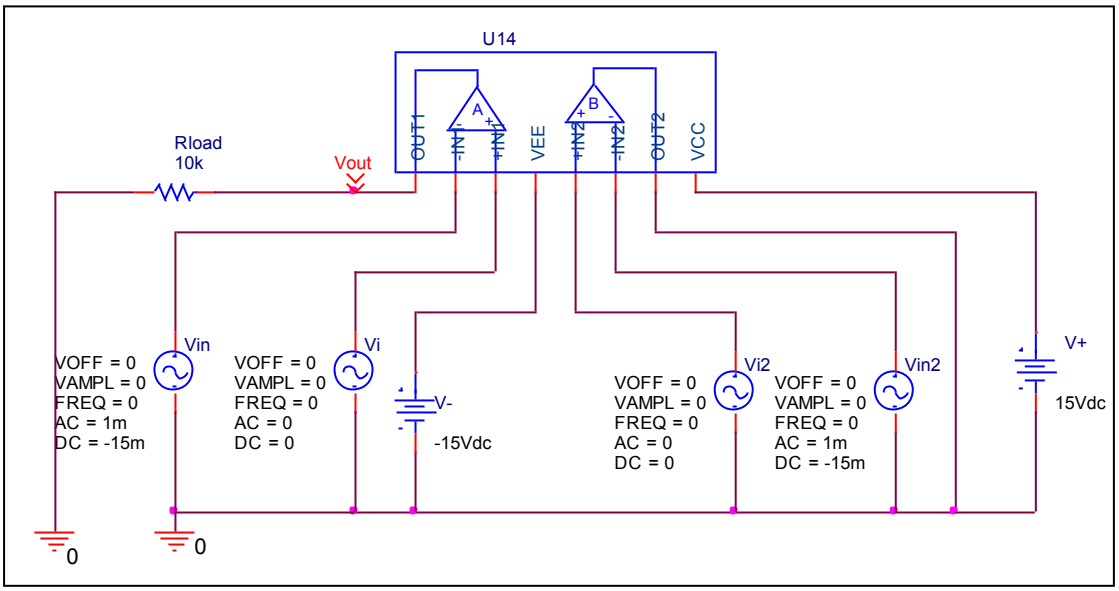
	Data sheet	Simulation	%Error
Ib(pA)	400	400	0
Ibos(pA)	200	200	0

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

Simulation result



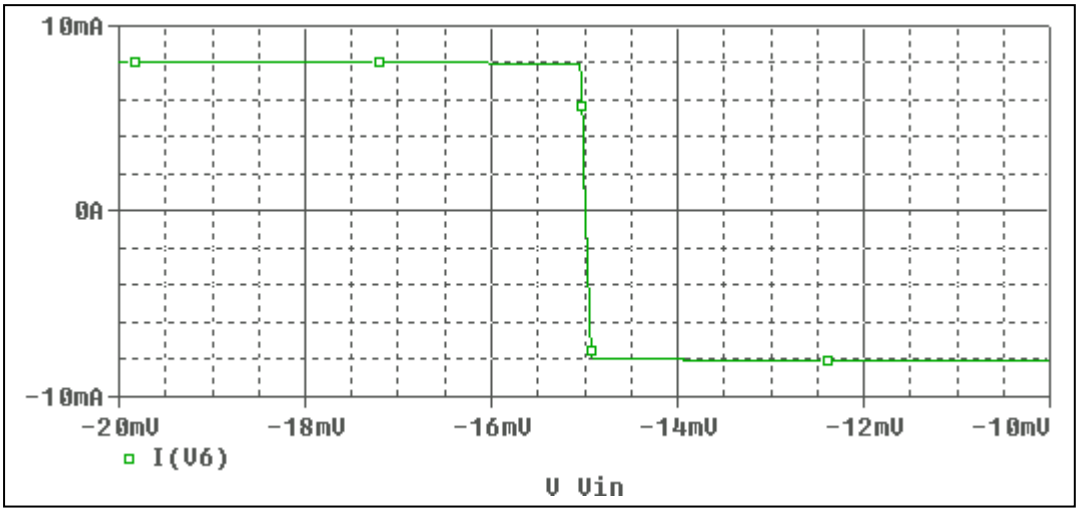
Evaluation circuit



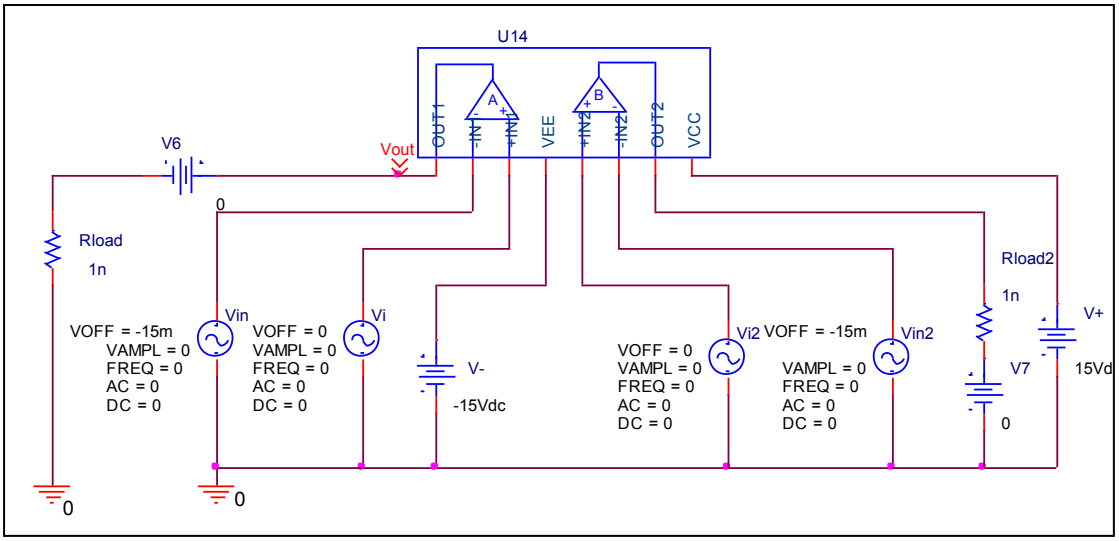
	Data sheet	Simulation	%Error
f-0dB(MHz)	3	2.95	1.667
Av-dc	80	79.95	0.062

Output Short Circuit Current - Ios

Simulation result



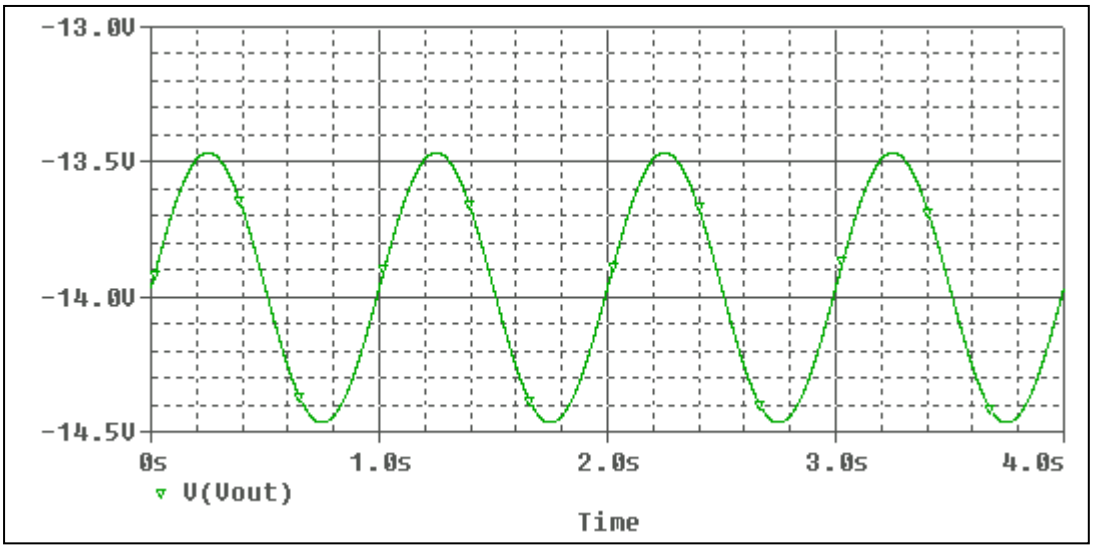
Evaluation circuit



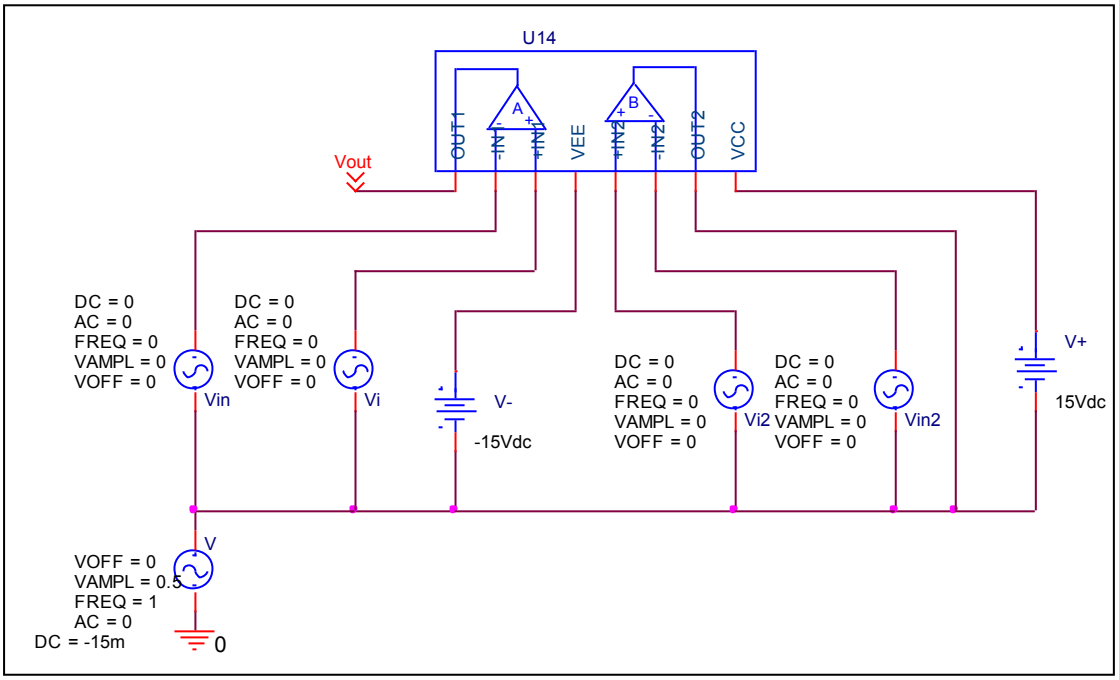
Short Circuit Current	Data sheet	Simulation	%Error
	8mA	8.04mA	0.5

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common mode gain=0.3162/1=0.3162
Common Mode Reject Ratio=9942/0.3162=31444

CMRR	Data sheet	Simulation	%Error
	31622	31444	0.562