

Device Modeling Report

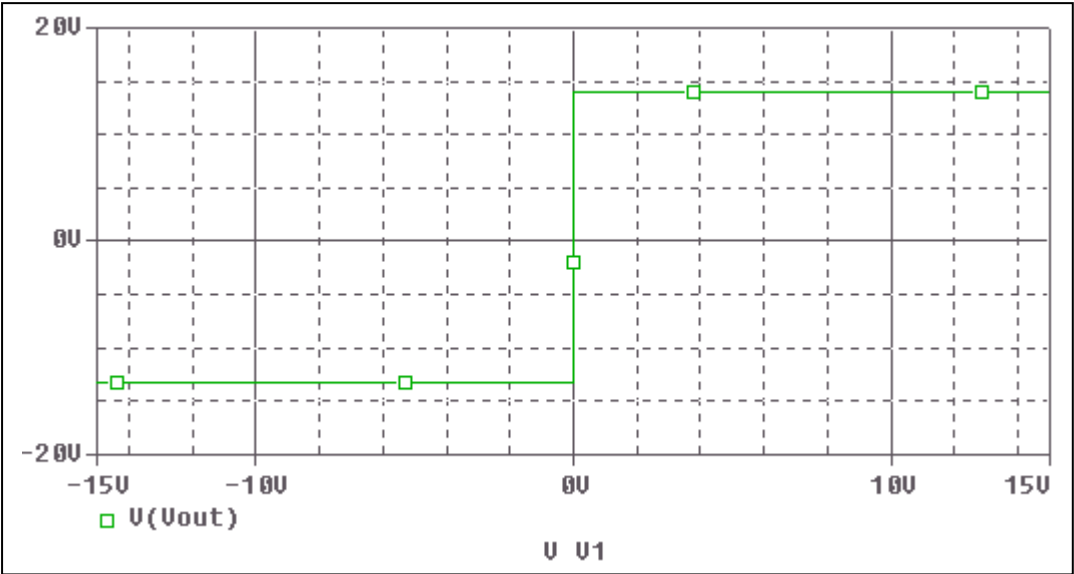
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: uPC4092G2
MANUFACTURER: NEC ELECTRONICS



Bee Technologies Inc.

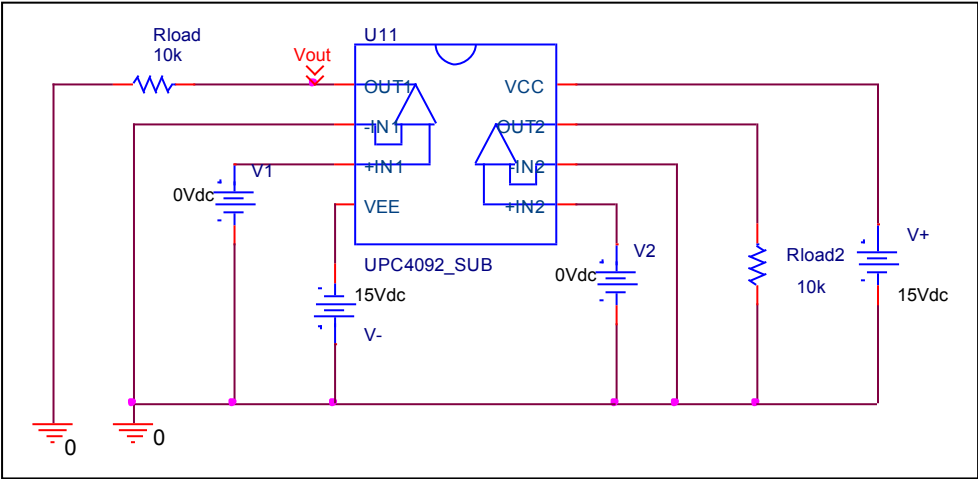
Output Voltage Swing, +Vout and –Vout

Simulation result



These simulation results are compared with $\pm V_{out}$

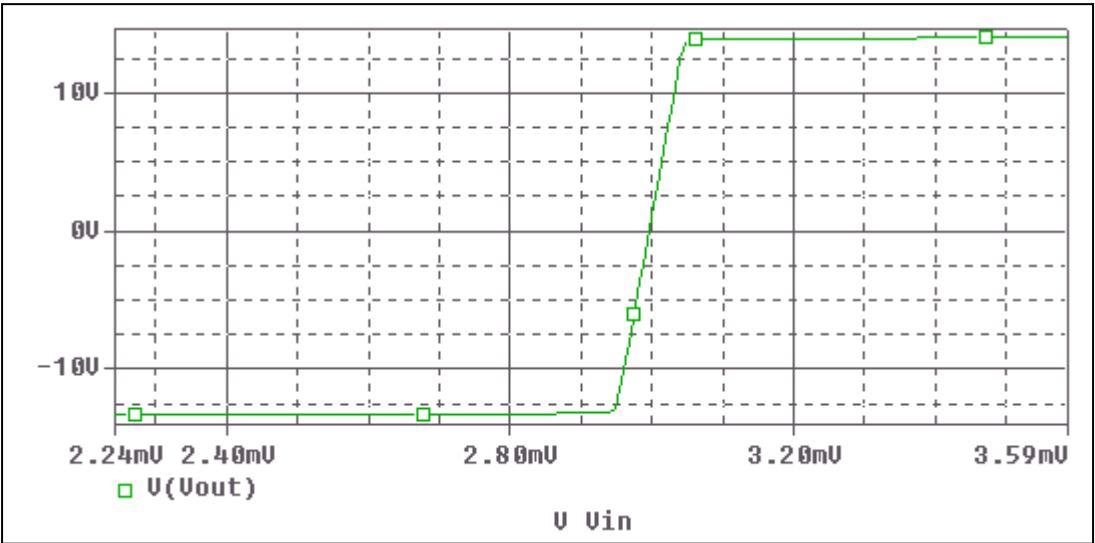
Evaluation circuit



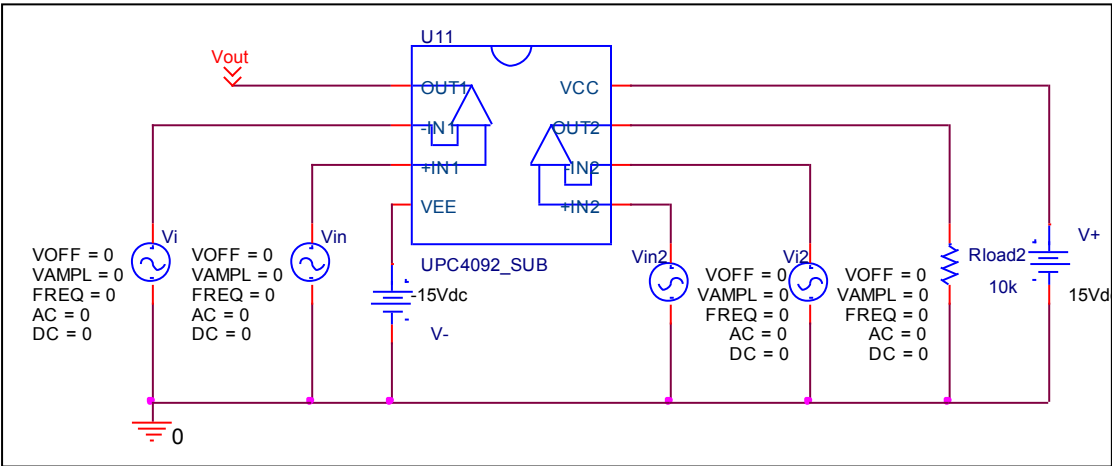
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+14	+13.98	0.14
-Vout(V)	-13.3	-13.28	0.15

Input Offset Voltage

Simulation result



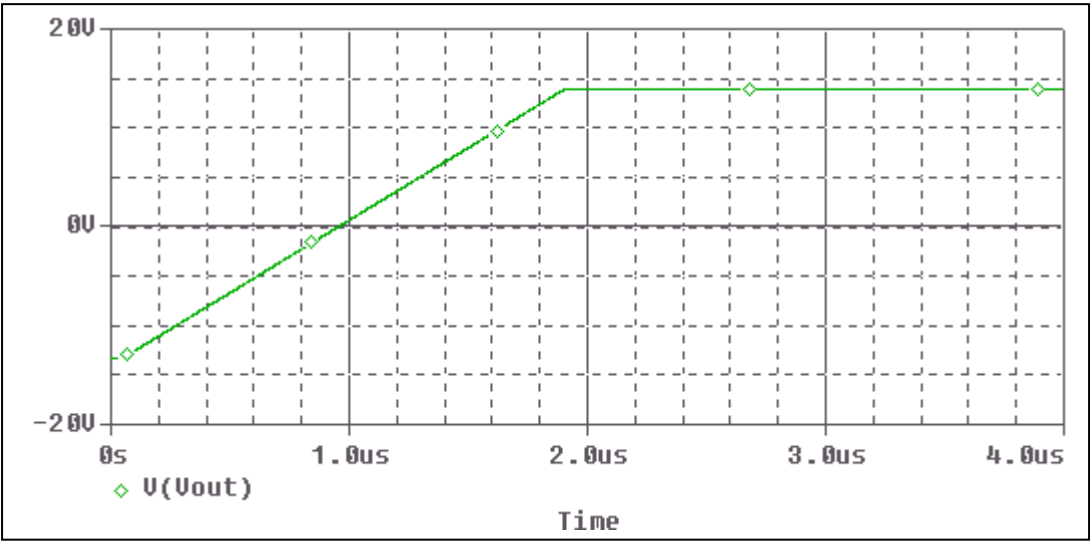
Evaluation circuit



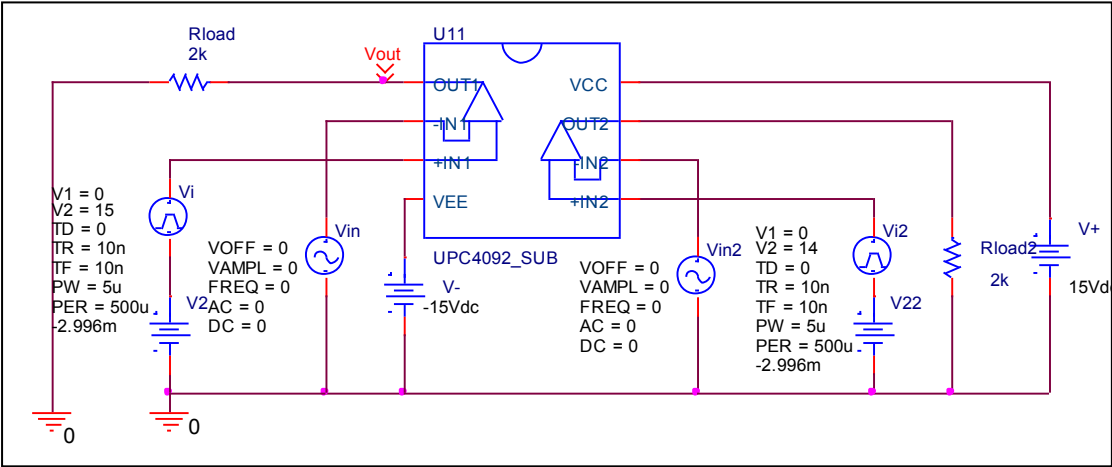
Vos	Measurement		Simulation		Error	
	3	mV	2.996	mV	0.133	%

Slew Rate, +SR, -SR

Simulation result



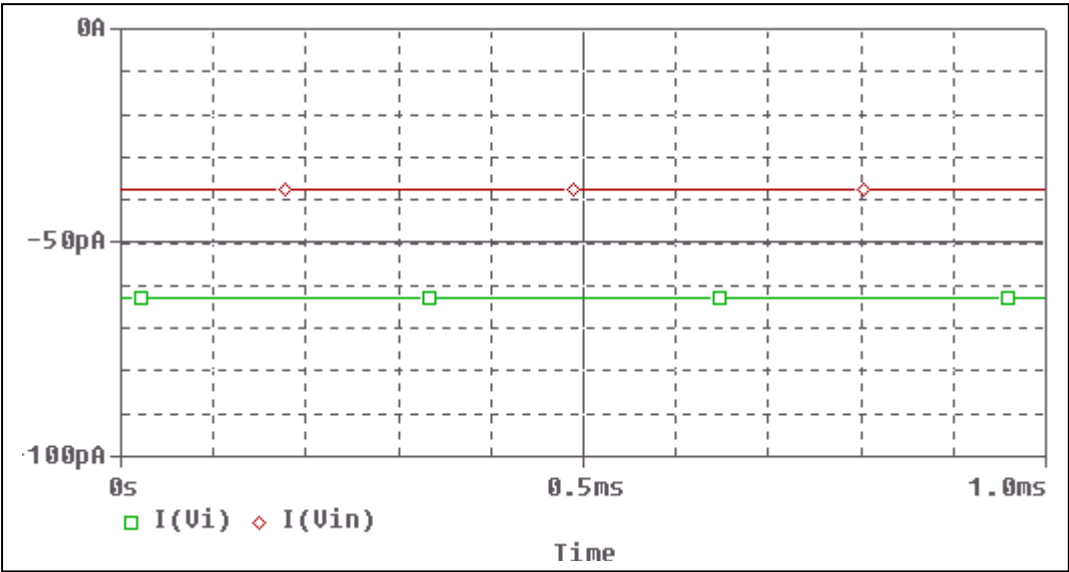
Evaluation circuit



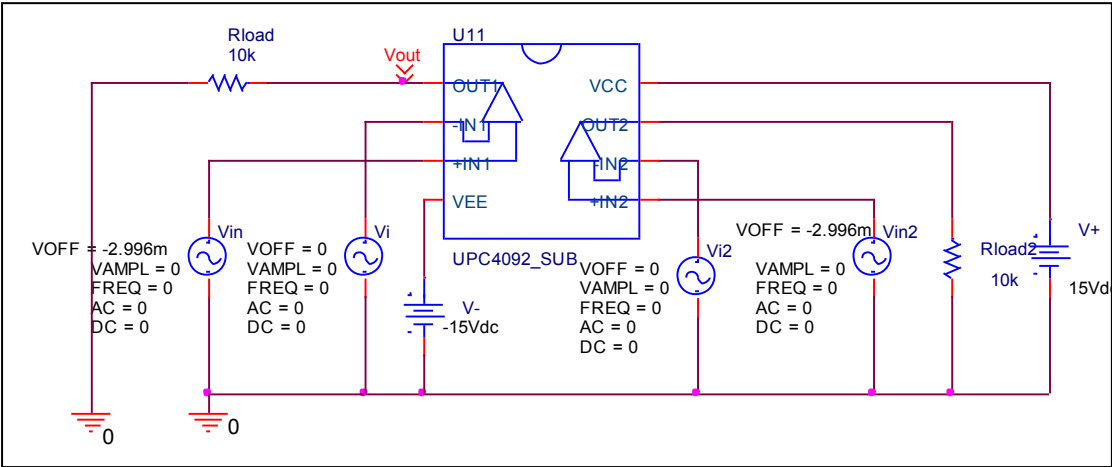
Slew Rate(v/us)	Data sheet	Simulation	%Error
	15V/us	14.671V/us	2.19

Input current Ib, Ibos

Simulation result



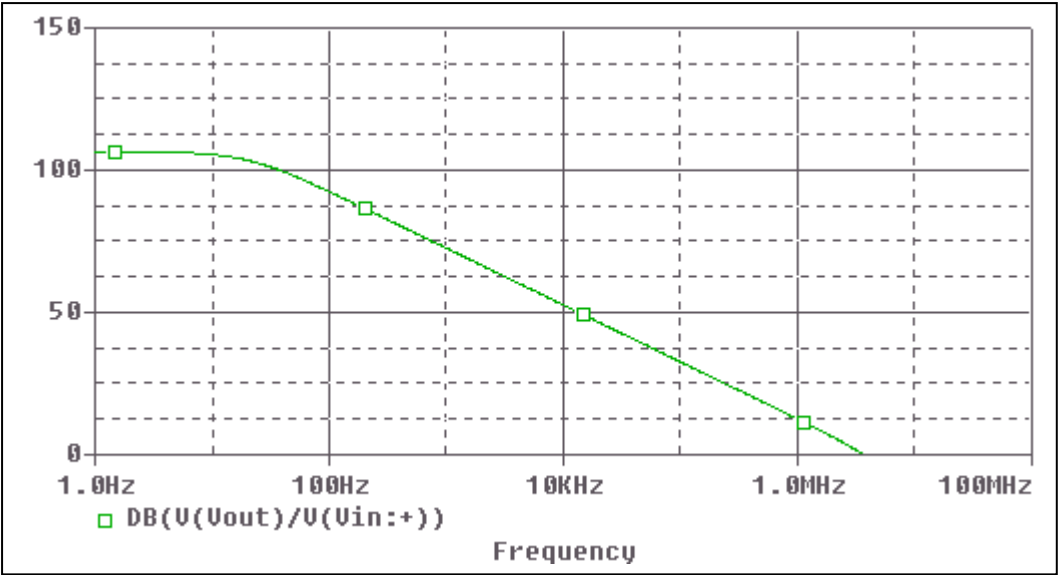
Evaluation circuit



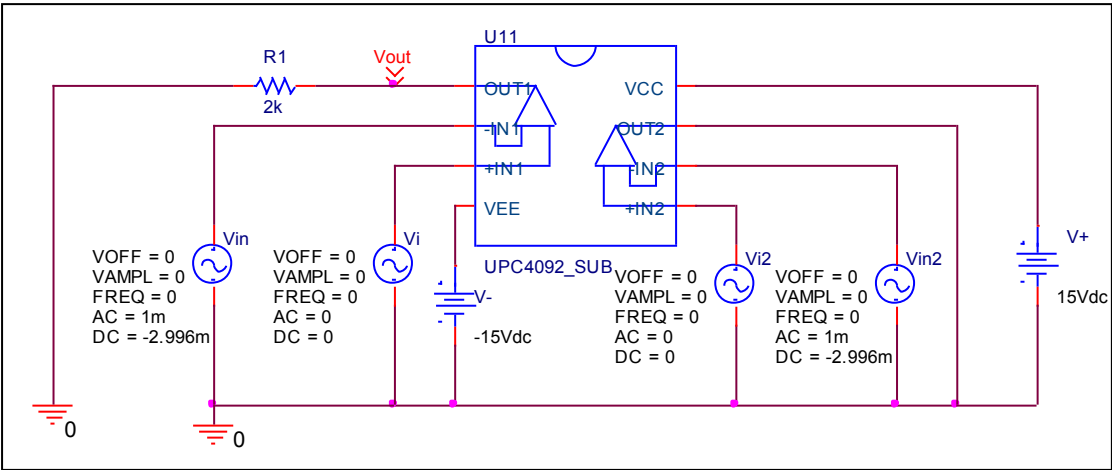
	Data sheet	Simulation	%Error
Ib(pA)	50	50.2	0.4
Ibos(pA)	25	25.015	0.06

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

Simulation result



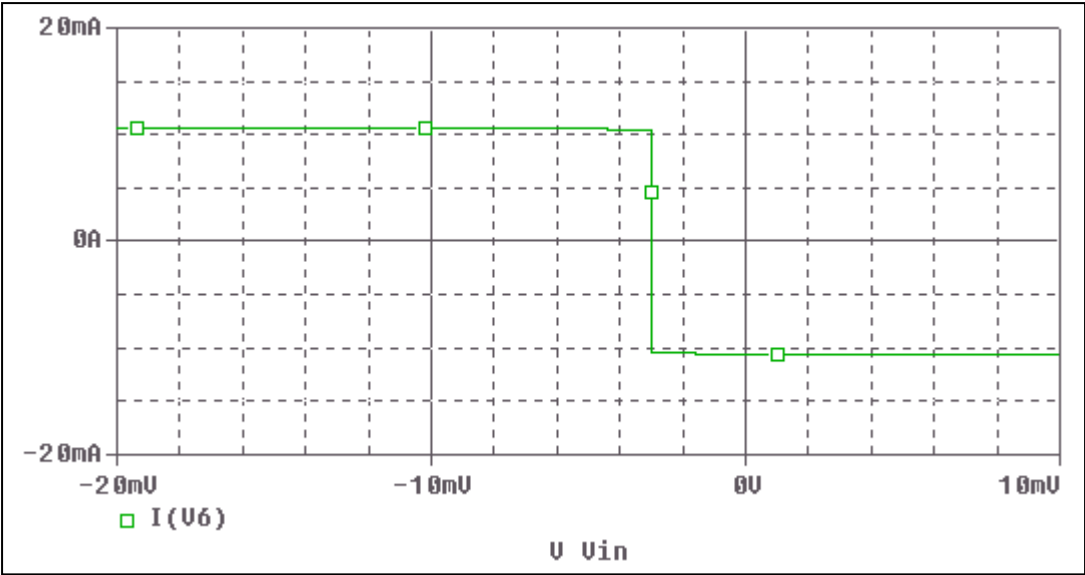
Evaluation circuit



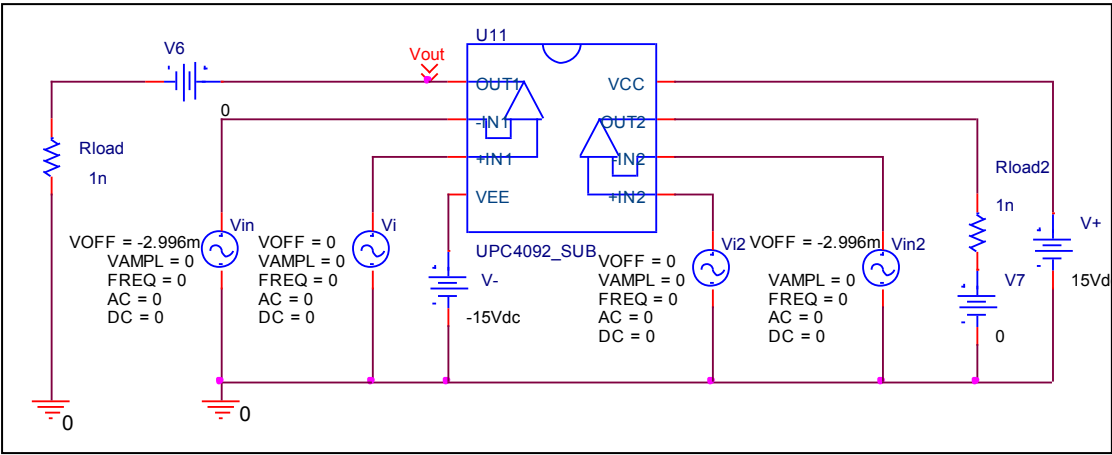
	Data sheet	Simulation	%Error
f-0dB(MHz)	4	3.8	5
Av-dc(dB)	200000	208929	4.46

Output Short Circuit Current - Ios

Simulation result



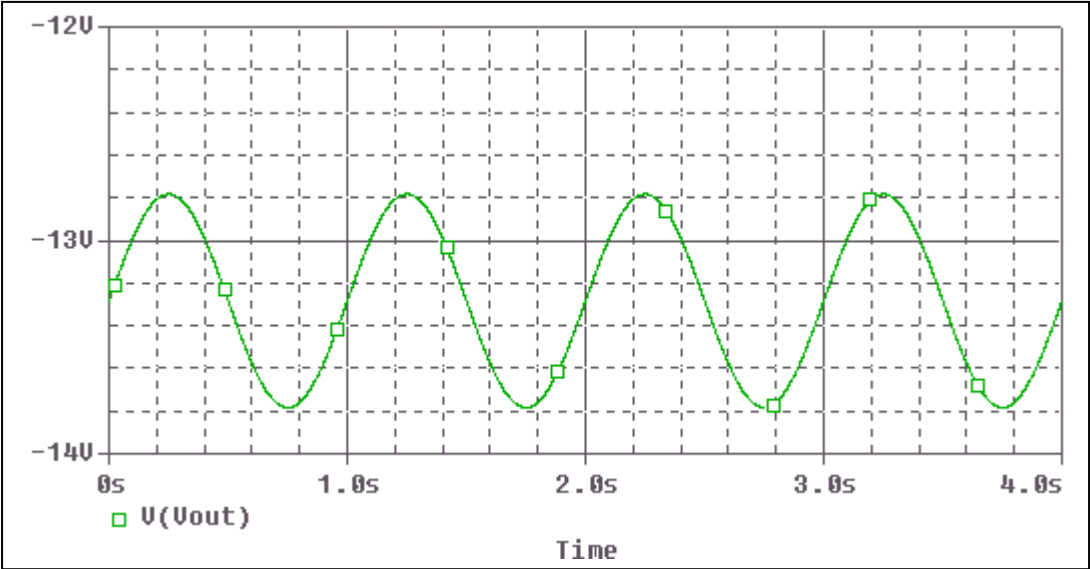
Evaluation circuit



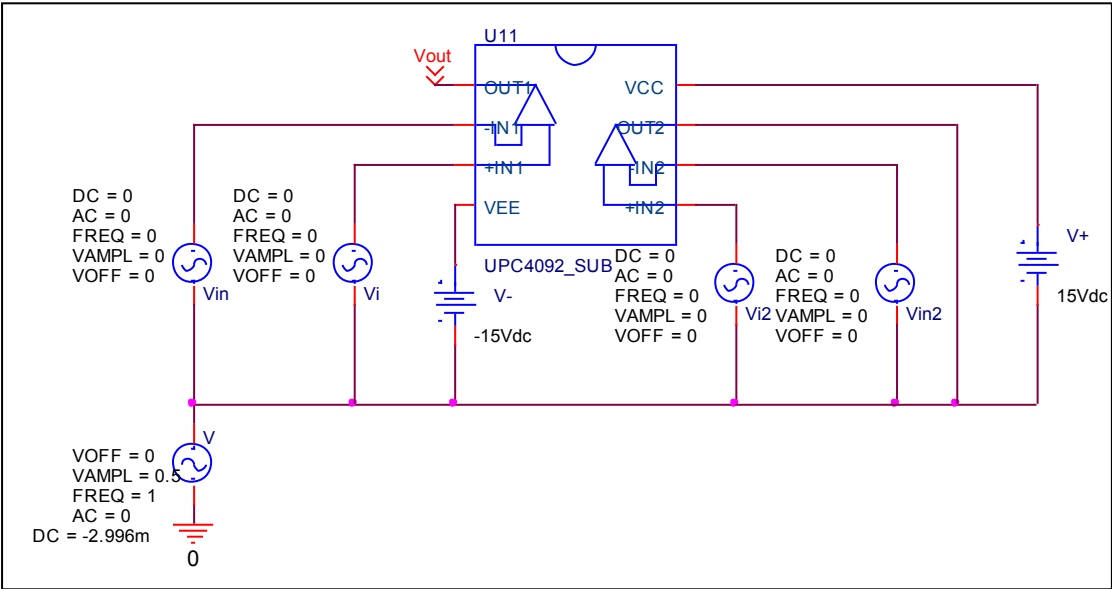
Short Circuit Current	Data sheet	Simulation	%Error
	10mA	10.5mA	5

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common mode gain=1/0.5
Common Mode Reject Ratio=208929/2=104464

CMRR	Data sheet	Simulation	%Error
	100000	104464	4.464