

Device Modeling Report

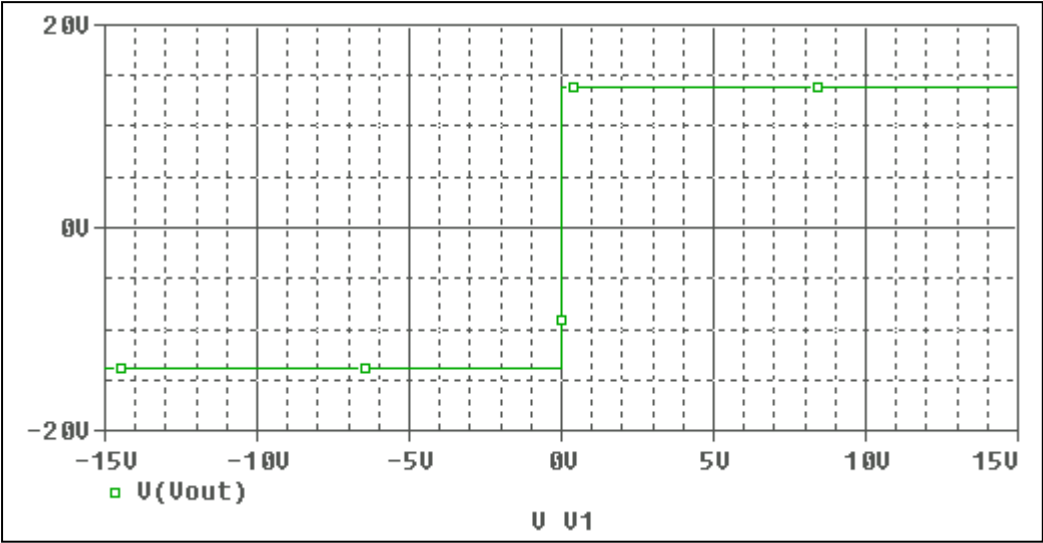
COMPONENTS:MOSFET: OPERATIONAL AMPLIFIER
PART NUMBER:NJM4558V
MANUFACTURER: NEW JAPAN RADIO CO.,LTD



Bee Technologies Inc.

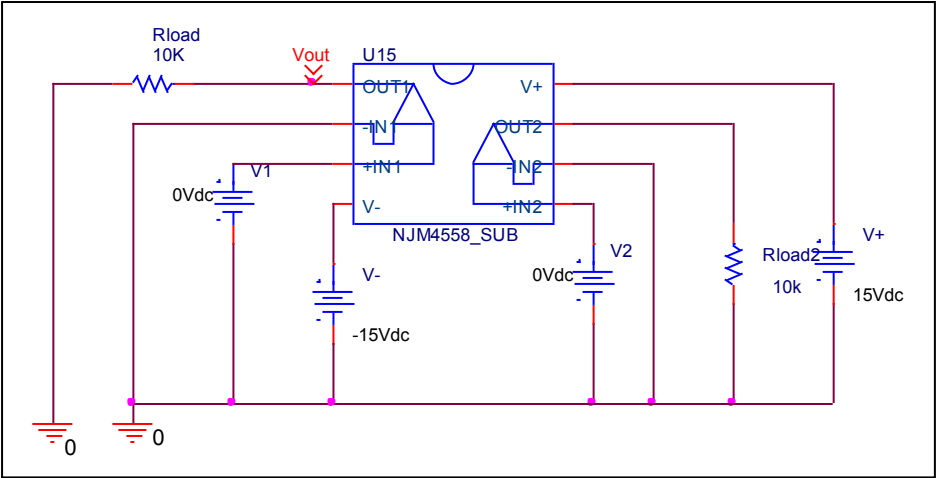
Output Voltage Swing, +Vout and –Vout

Simulation result



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

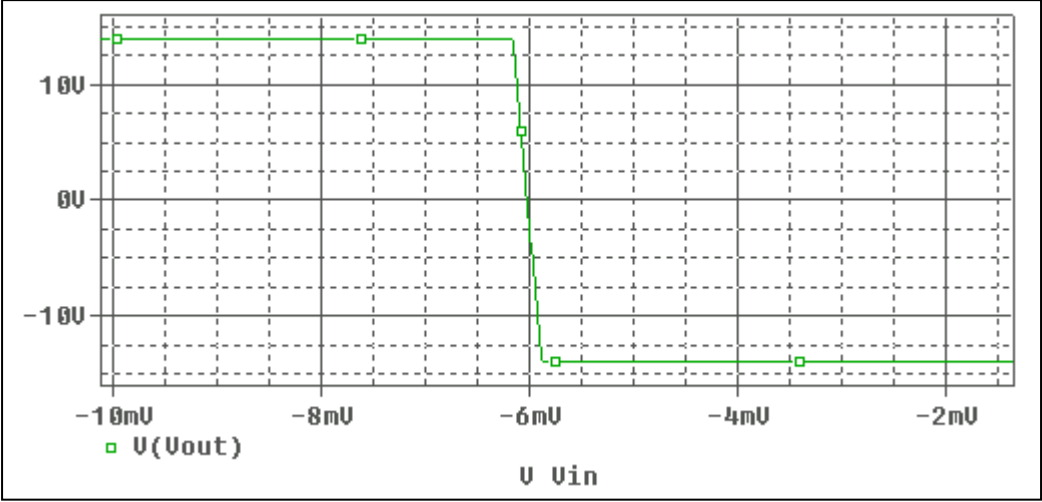
Evaluation circuit



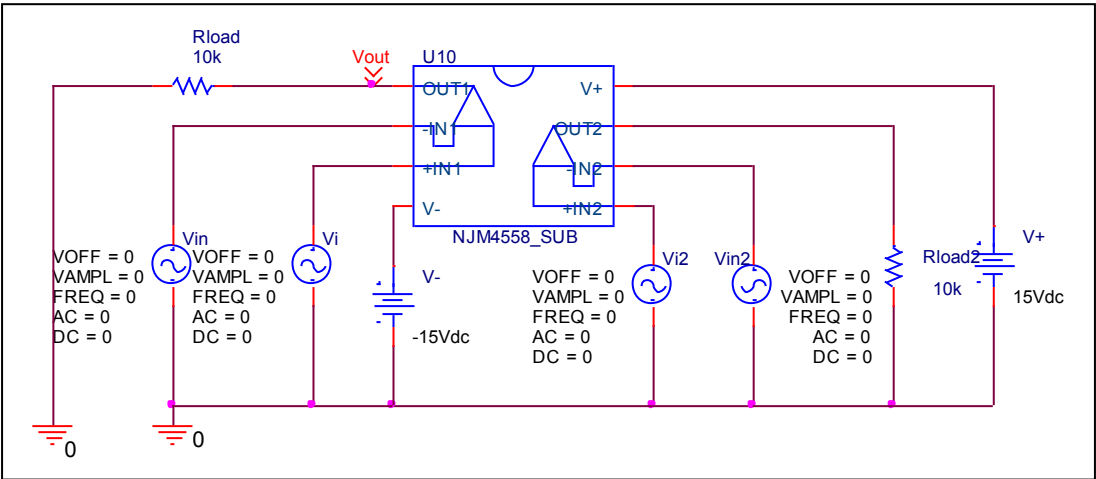
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+14	13.943	0.407
-Vout(V)	-14	-13.943	0.407

Input Offset Voltage

Simulation result



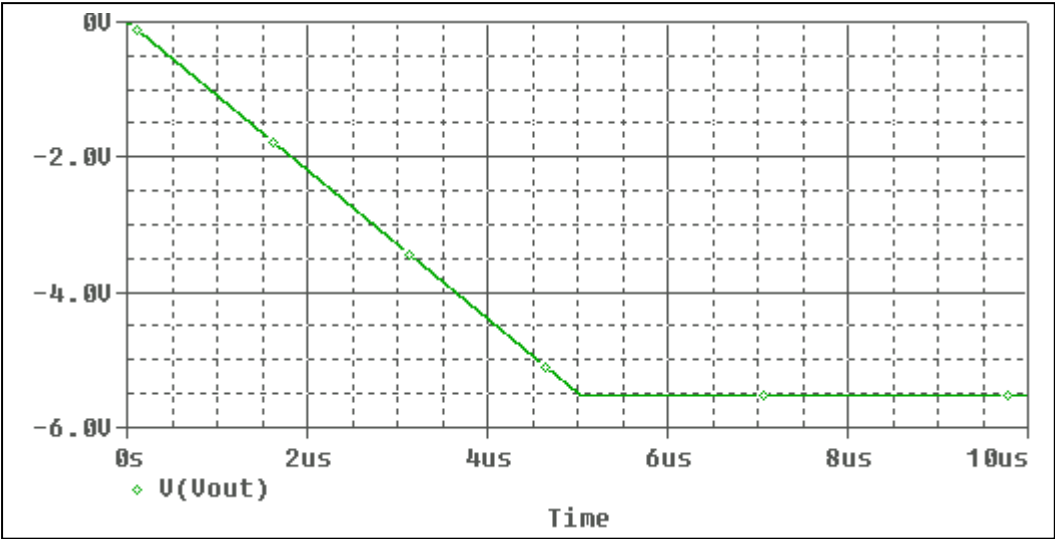
Evaluation circuit



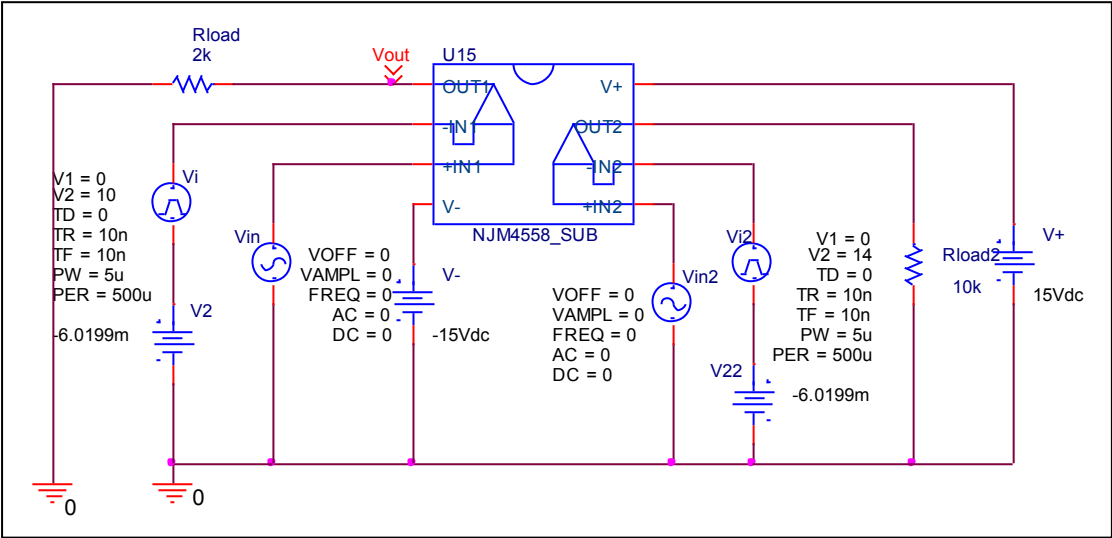
Vos	Measurement		Simulation		Error	
	6	mV	6.0199	mV	0.331	%

Slew Rate, +SR, -SR

Simulation result



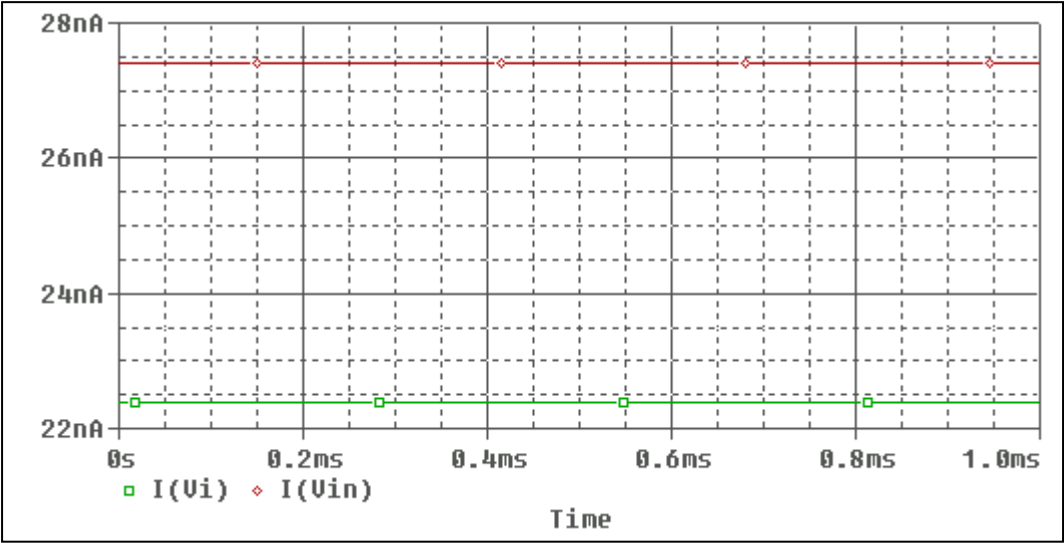
Evaluation circuit



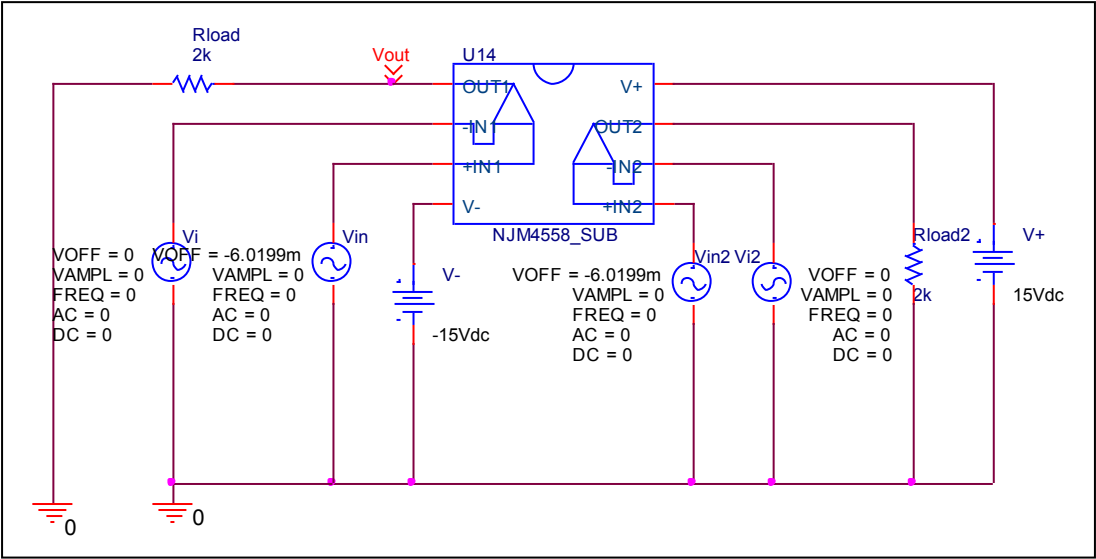
Slew Rate(v/us)	Data sheet	Simulation	%Error
	1V/us	1.045V/us	4.5

Input current Ib, Ibos

Simulation result



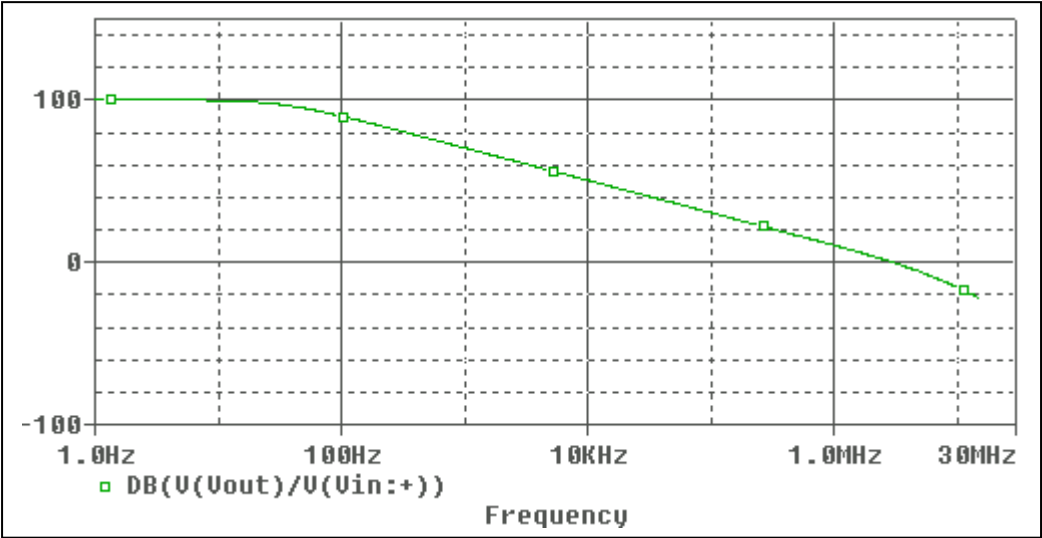
Evaluation circuit



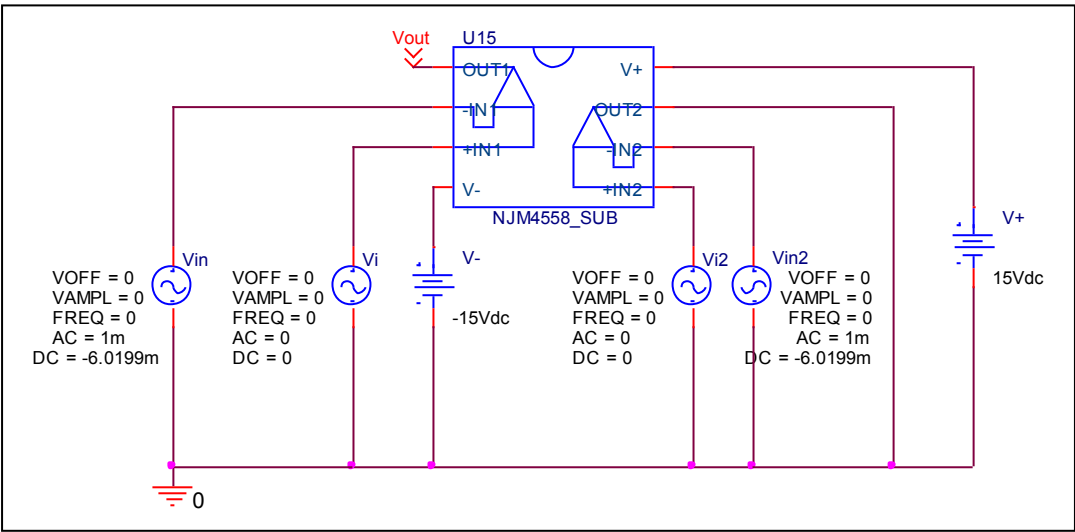
	Data sheet	Simulation	%Error
Ib(nA)	25	24.897	0.412
Ibos(nA)	5	5.04	0.8

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

Simulation result



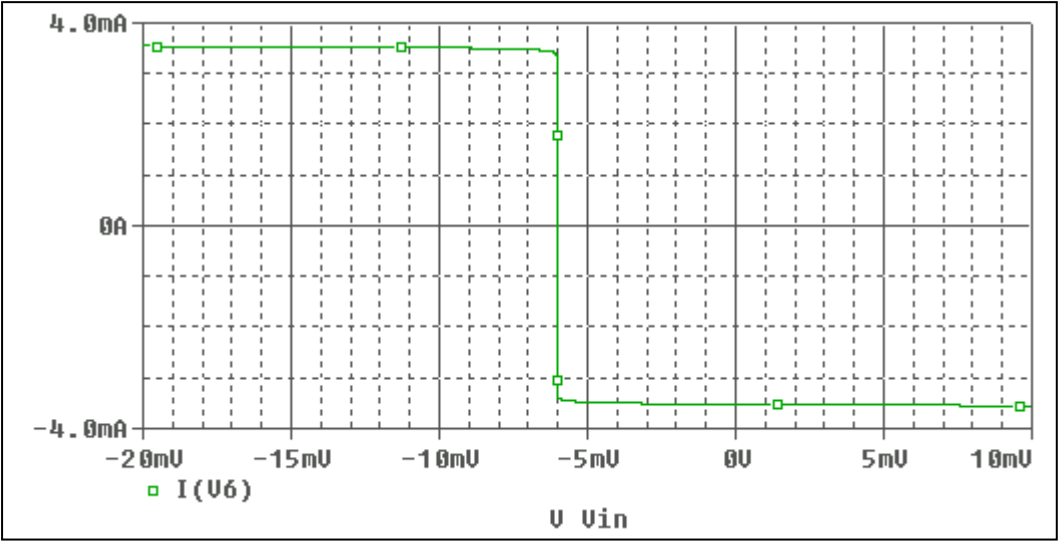
Evaluation circuit



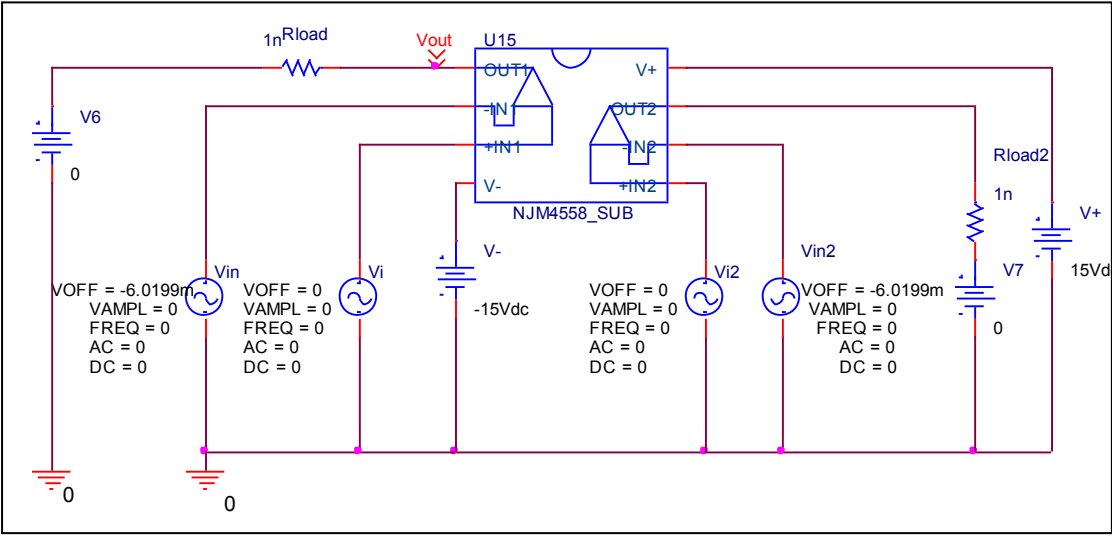
	Data sheet	Simulation	%Error
f-0dB(MHz)	3	2.9903	0.323
Av-dc(dB)	100	99.984	0.016

Output Short Circuit Current - Ios

Simulation result



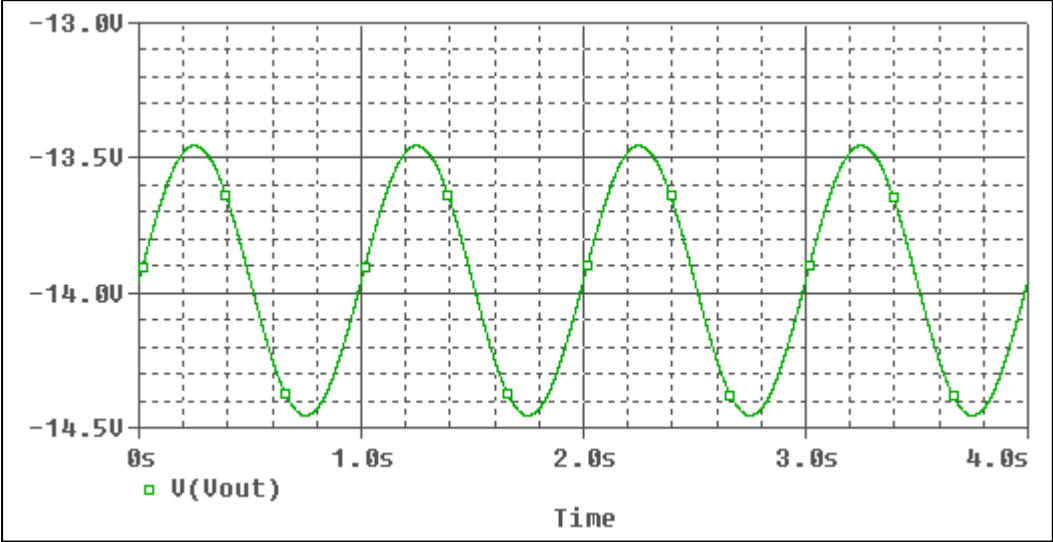
Evaluation circuit



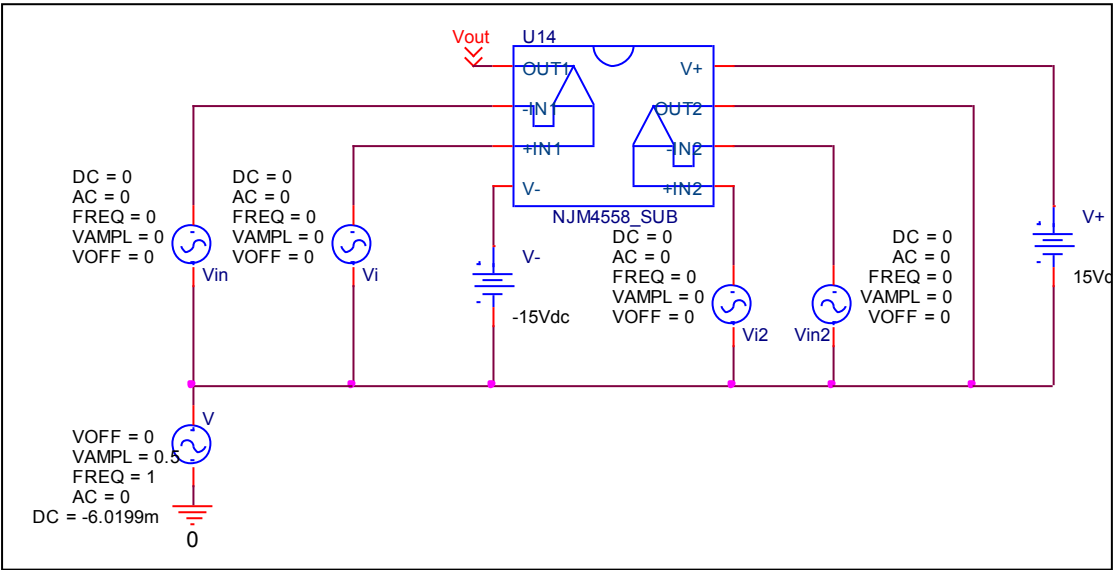
Short Circuit Current	Data sheet	Simulation	%Error
	3.5mA	3.4998mA	0.005

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common mode gain=3.162/1

Common Mode Reject Ratio=99815/3.162=31567

CMRR	Data sheet	Simulation	%Error
	31622	31567	0.173