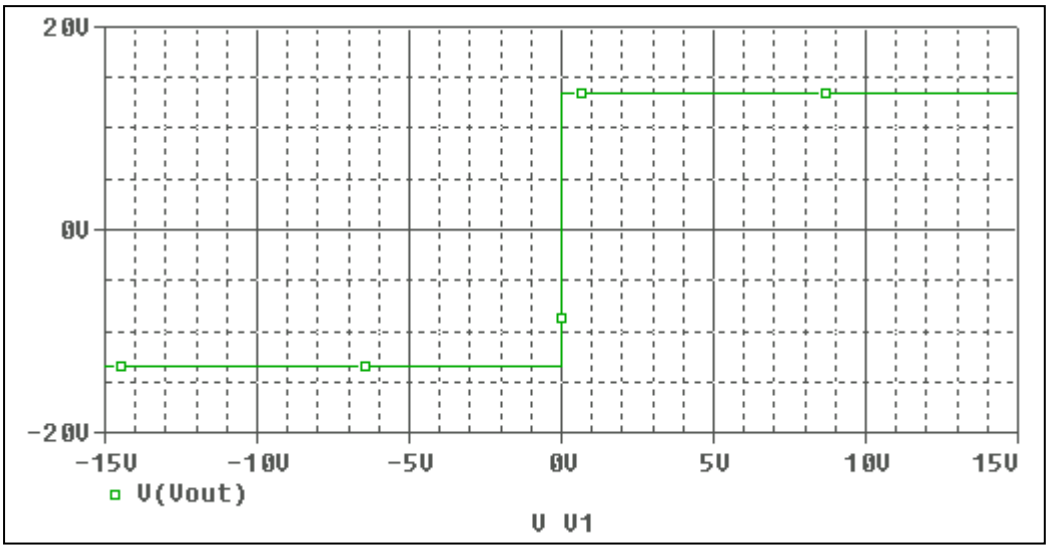
Device Modeling Report

COMPONENTS:MOSFET: OPERATIONAL AMPLIFIER
PART NUMBER:NJM2068V
MANUFACTURER: NEW JAPAN RADIO CO.,LTD

Bee Technologies Inc.

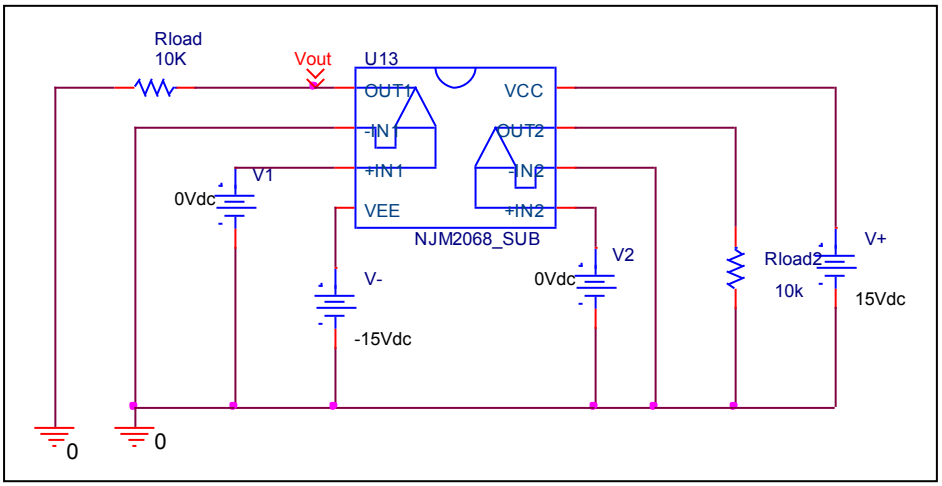
Output Voltage Swing, +Vout and –Vout

Simulation result



These simulation results are compared with ±Vout

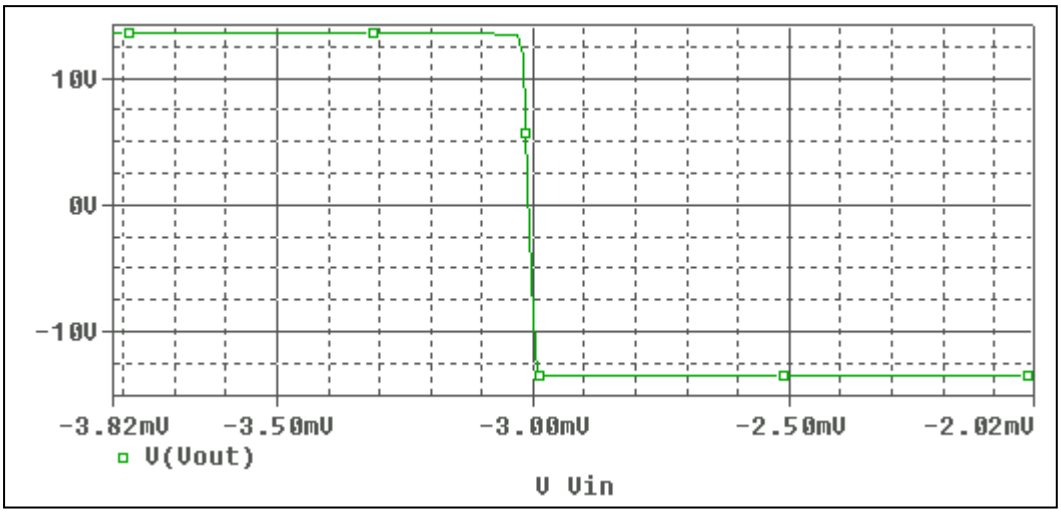
Evaluation circuit



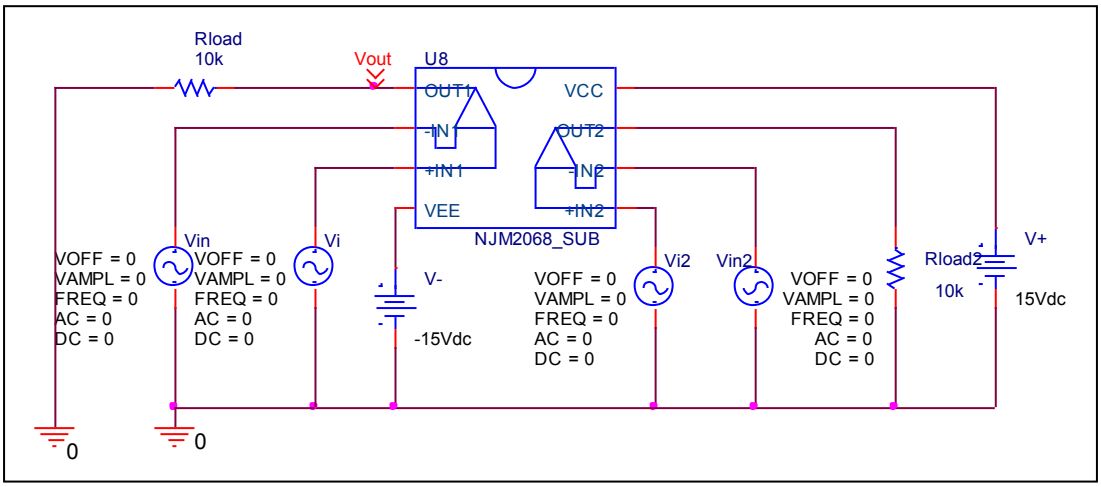
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+13.5	13.496	0.029
-Vout(V)	-13.5	-13.496	0.029

Input Offset Voltage

Simulation result



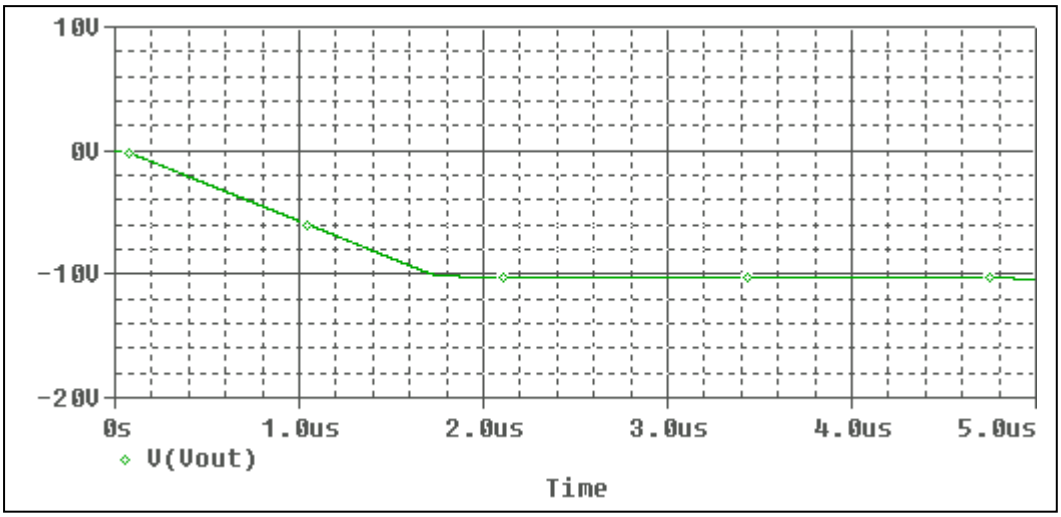
Evaluation circuit



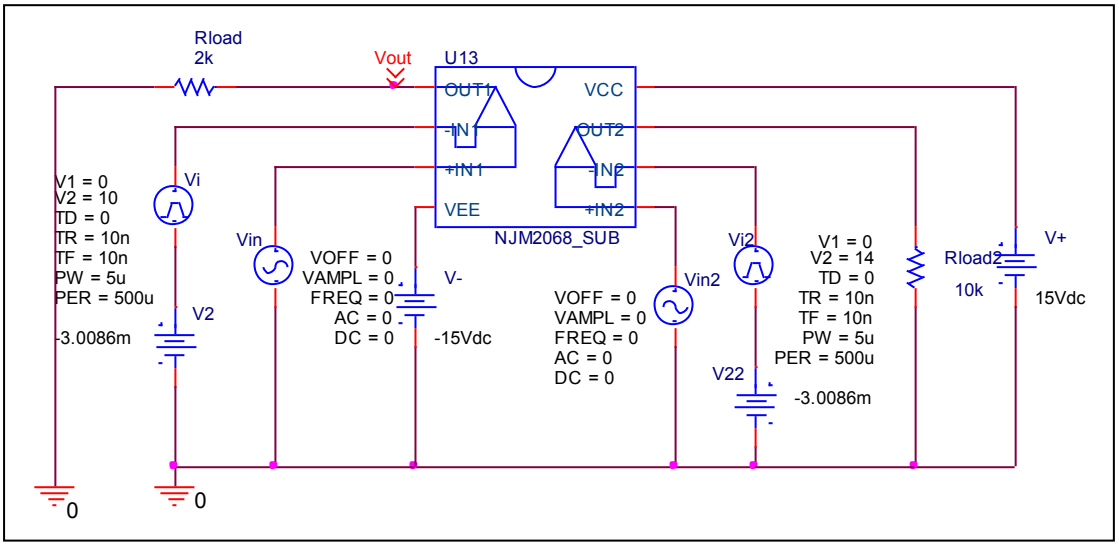
Vos	Measurement		Simulation		Error	
	3	mV	3.0086	mV	0.286	%

Slew Rate, +SR, -SR

Simulation result



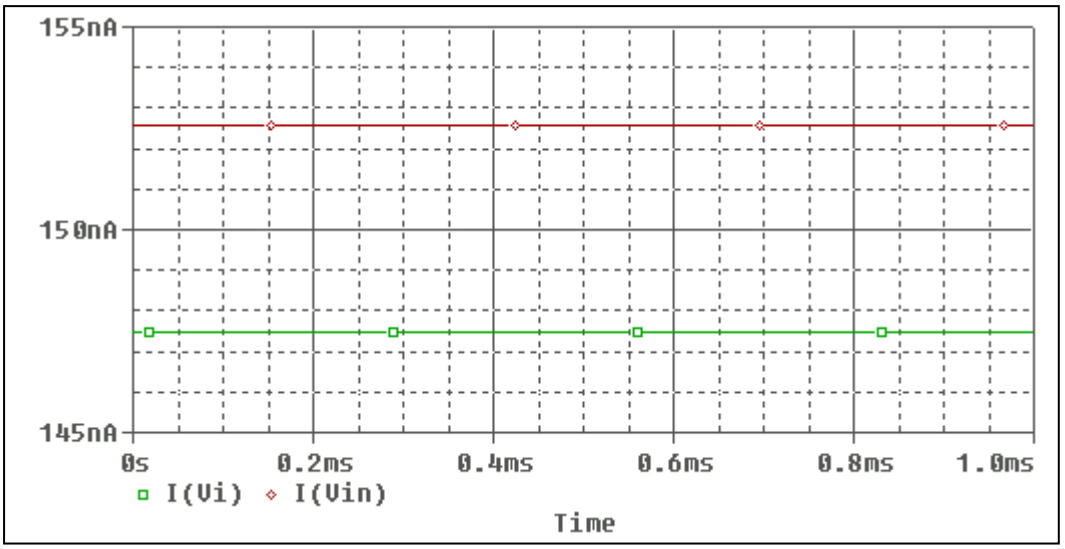
Evaluation circuit



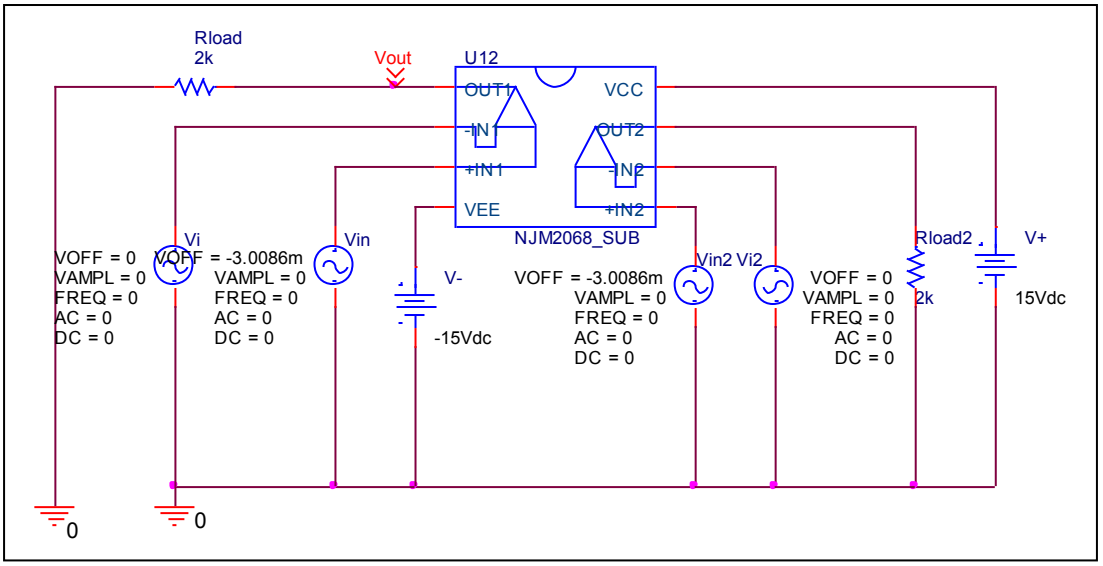
Slew Rate(v/us)	Data sheet	Simulation	%Error
	6V/us	6.001V/us	0.016

Input current Ib, Ibos

Simulation result



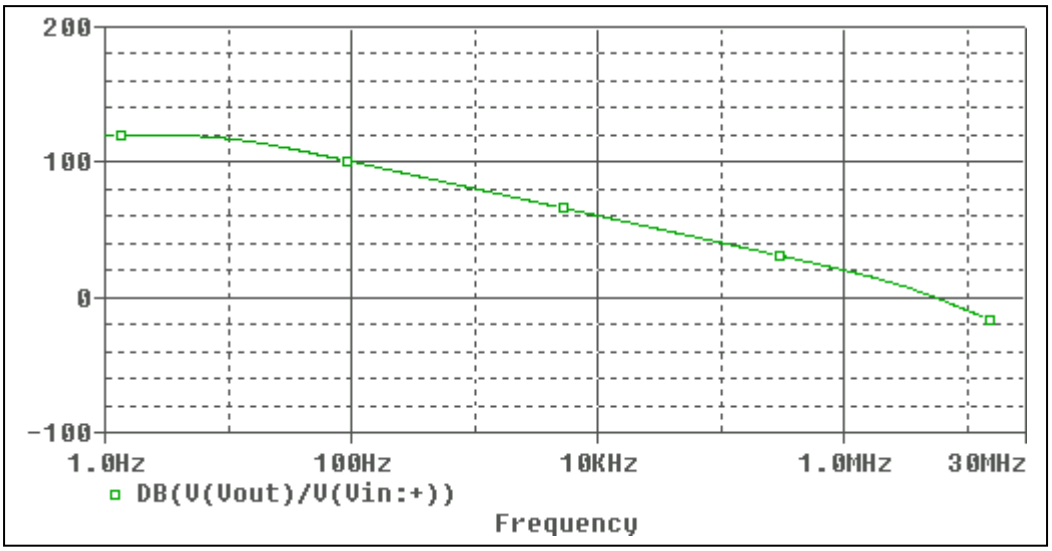
Evaluation circuit



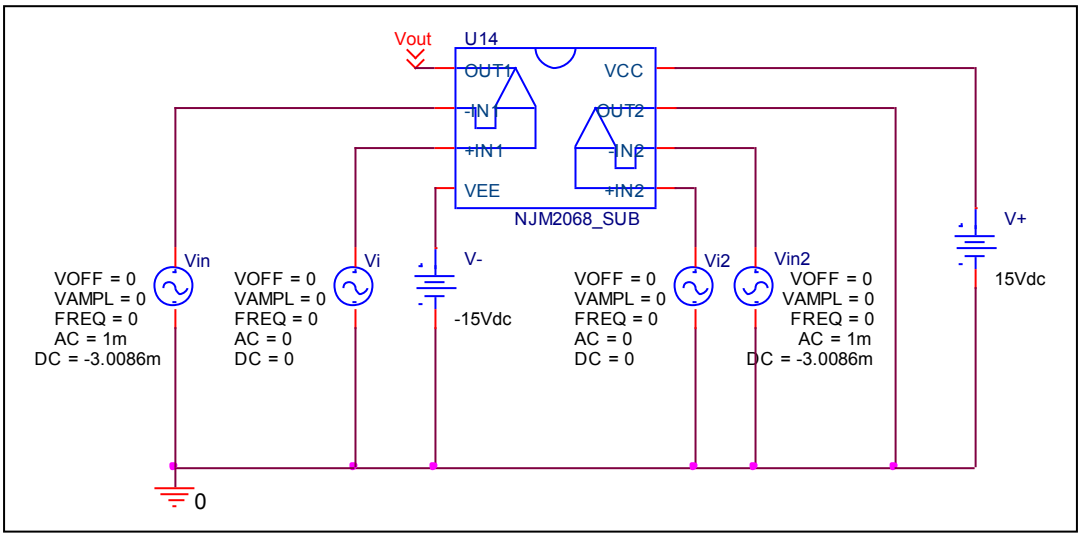
	Data sheet	Simulation	%Error
Ib(nA)	150	150.01	0.006
Ibos(nA)	5	5.07	1.4

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

Simulation result



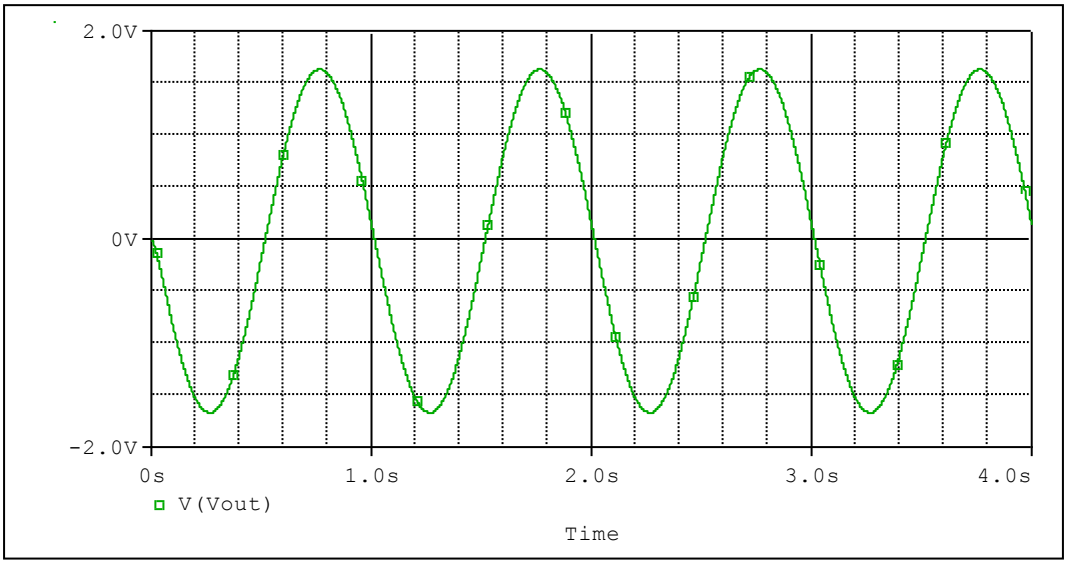
Evaluation circuit



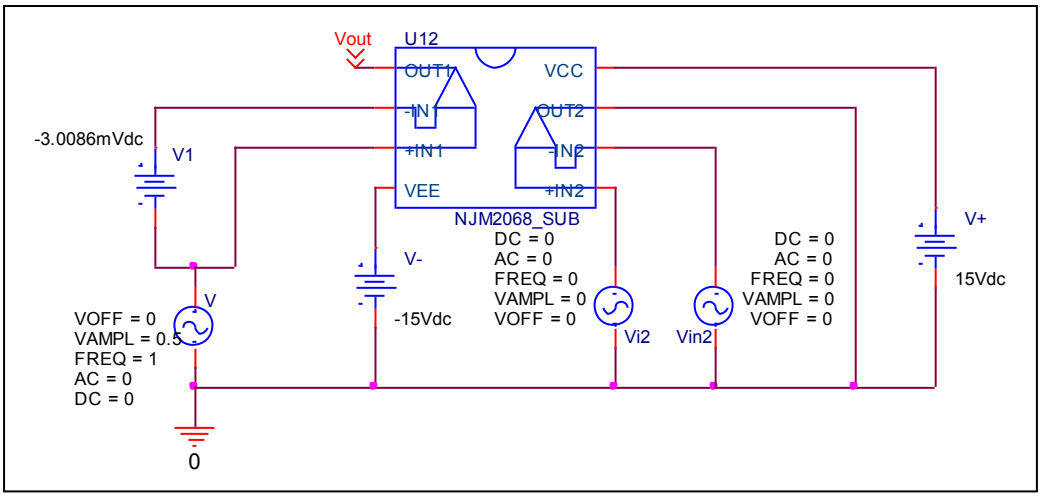
	Data sheet	Simulation	%Error
f-0dB(MHz)	5.5	5.53	0.545
Av-dc(dB)	120	119.952	0.04

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Rejection Ratio=994489/3.298=301543.056

CMRR	Data sheet	Simulation	%Error
	110	109.586	-0.376