

Device Modeling Report

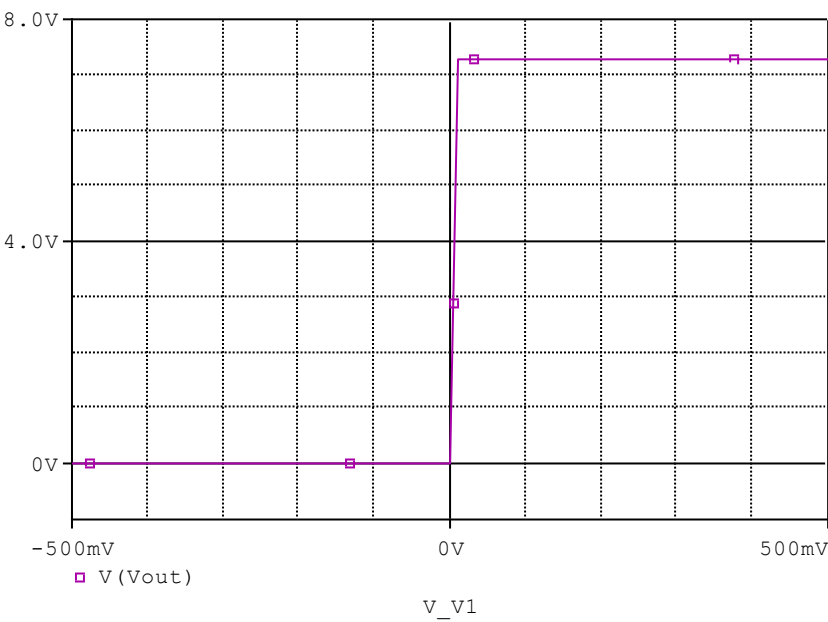
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM3414A
MANUFACTURER: NEW JAPAN RADIO CO.,LTD



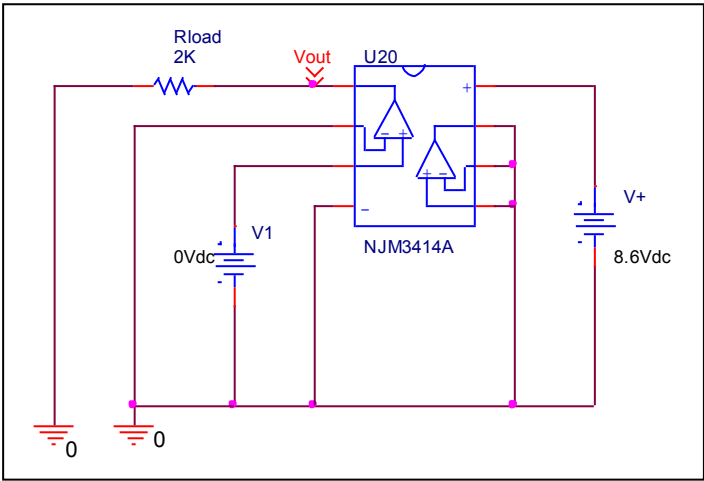
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

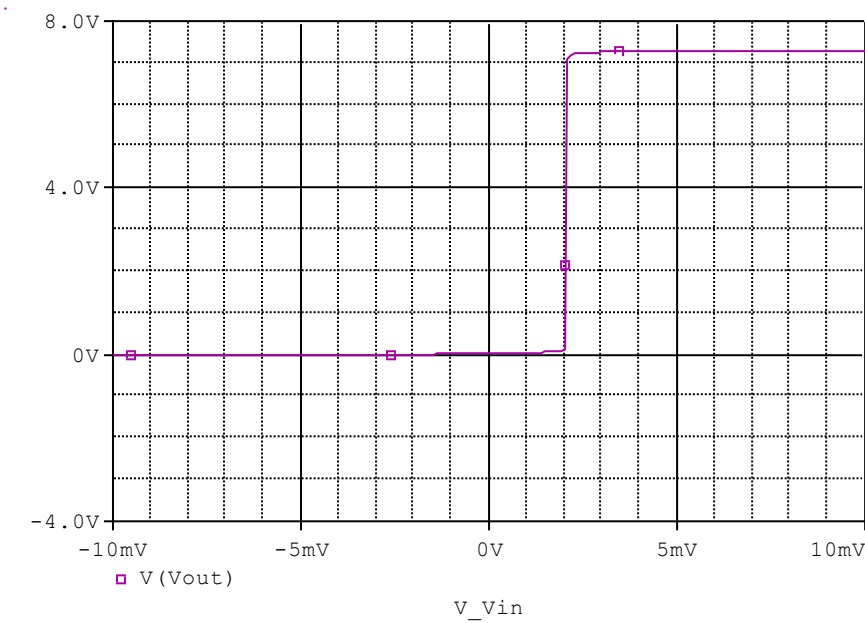


Comparison table

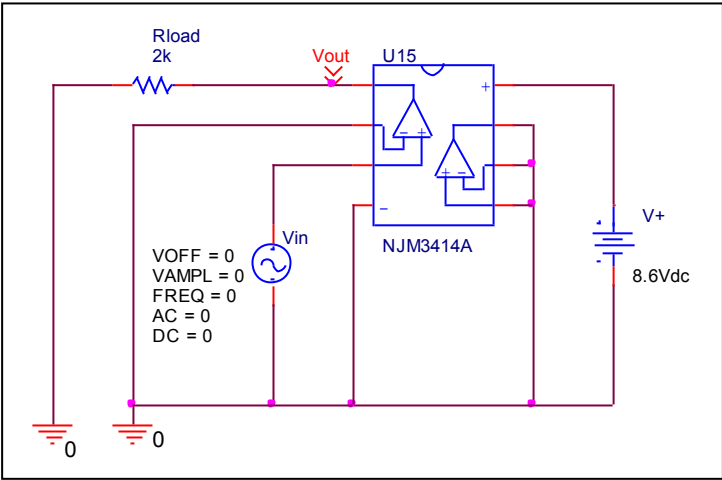
Output Voltage Swing	Data sheet	Simulation	%Error
VOM	7.3	7.295	-0.068

Input Offset Voltage

Simulation result



Evaluation circuit

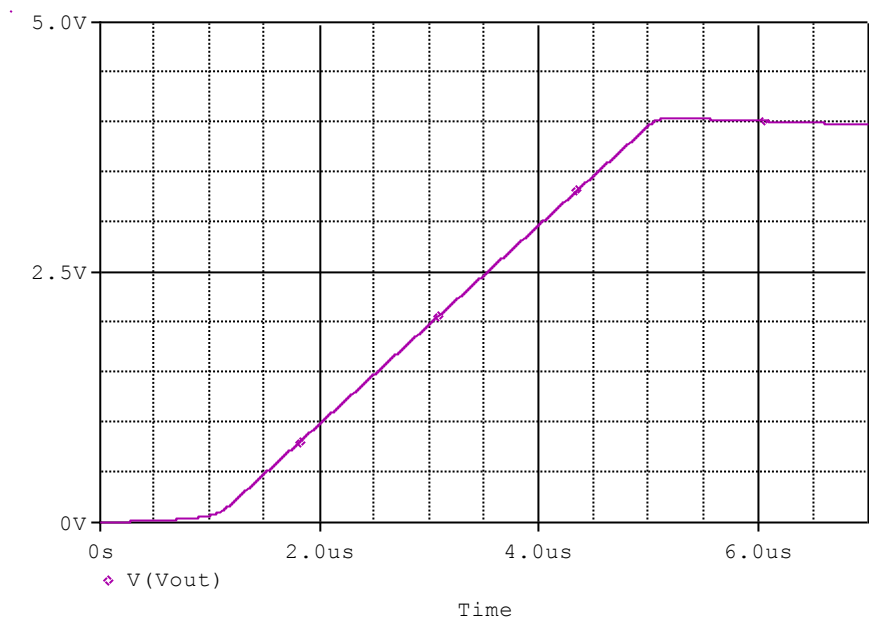


Comparison table

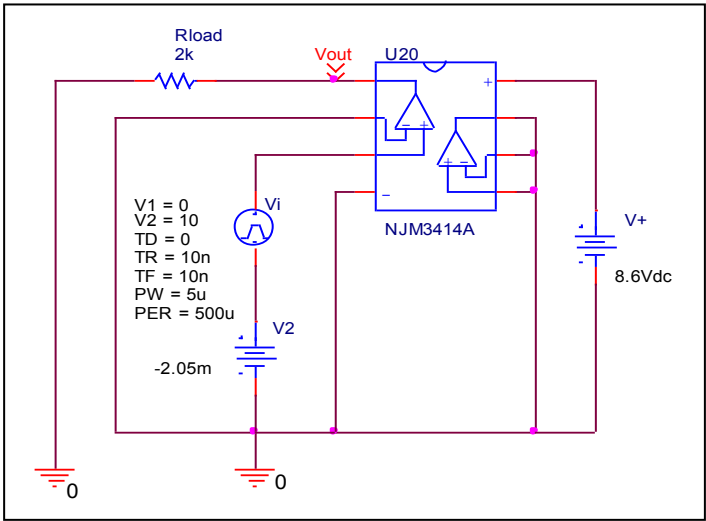
Vio	Measurement		Simulation		Error	
	2	mV	2.05	mV	2.5	%

Slew Rate

Simulation result



Evaluation circuit

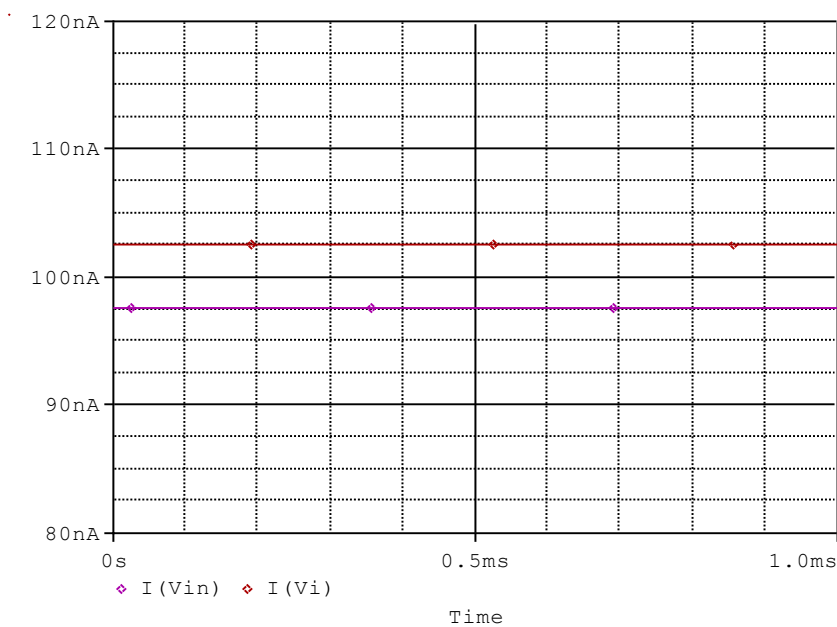


Comparison table

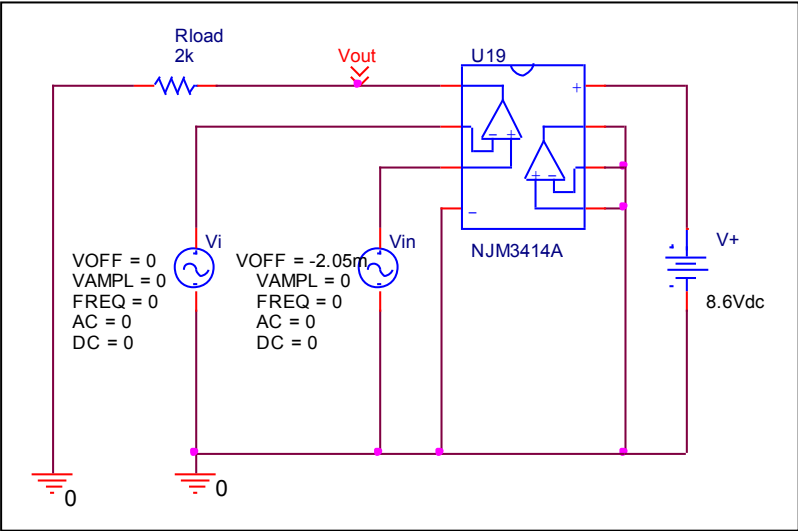
Slew Rate(v/us)	Data sheet	Simulation	%Error
	1	0.993	-0.7

Input current

Simulation result



Evaluation circuit

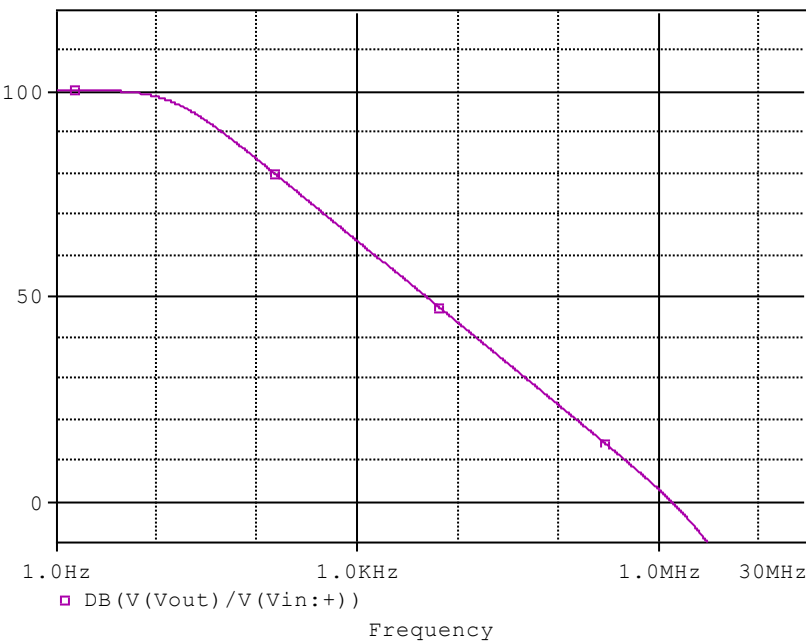


Comparison table

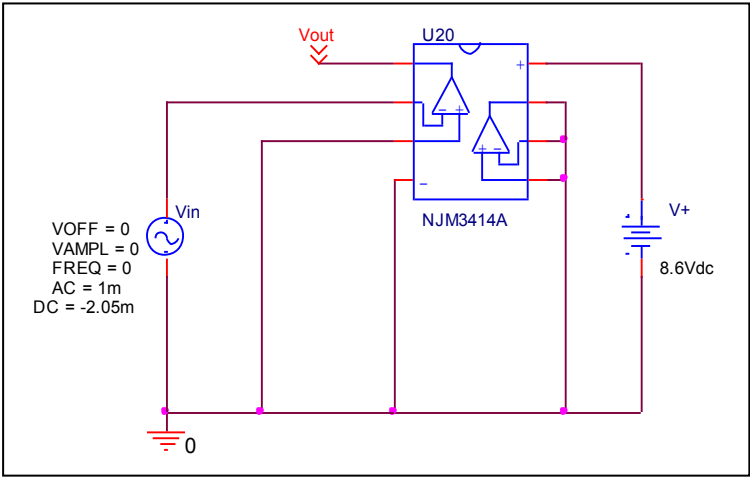
	Data sheet	Simulation	%Error
Ib(nA)	100	100.05	0.05
Iio(nA)	5	5.026	0.52

Open Loop Voltage Gain vs. Frequency

Simulation result



Evaluation circuit

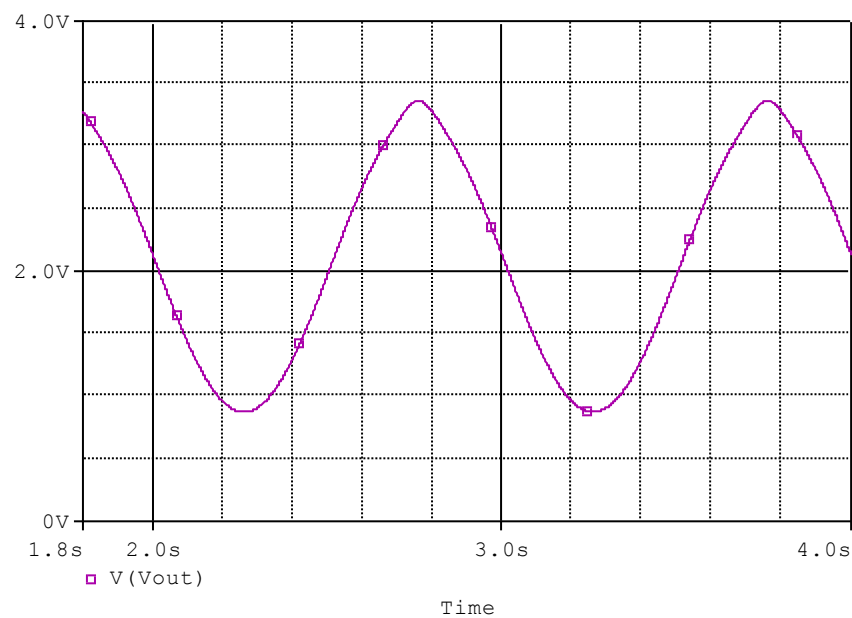


Comparison table

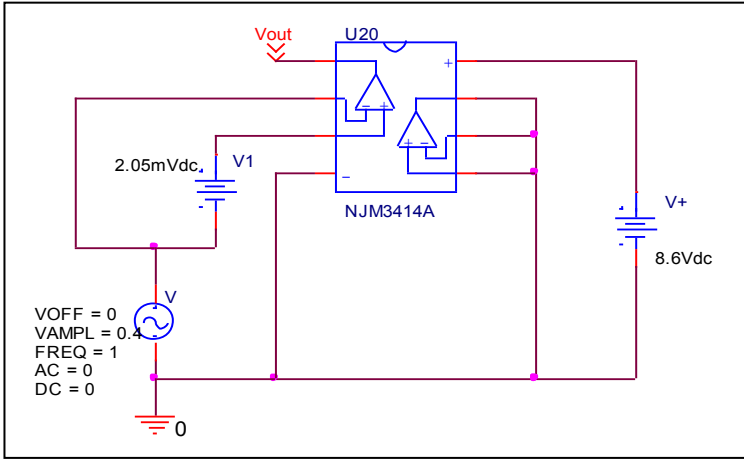
	Data sheet	Simulation	%Error
f-0dB(MHz)	1.3	1.34	3.076
Av-dc	100	100.563	0.563

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $106696.457/2.479 = 43040 = 92.677\text{dB}$

Comparison table

CMRR(dB)	Data sheet	Simulation	%Error
	90	92.677	2.974