

Device Modeling Report

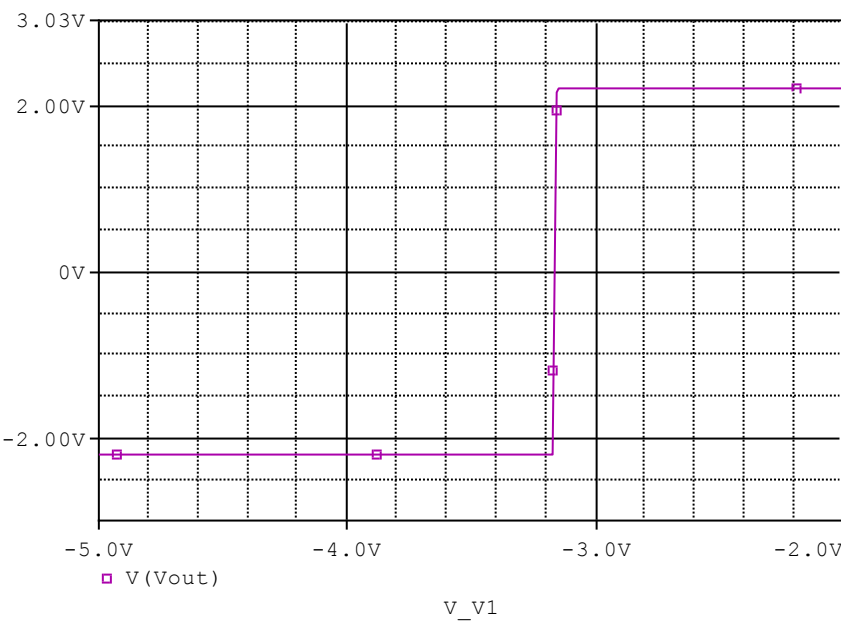
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM2112
MANUFACTURER: NEW JAPAN RADIO CO.,LTD



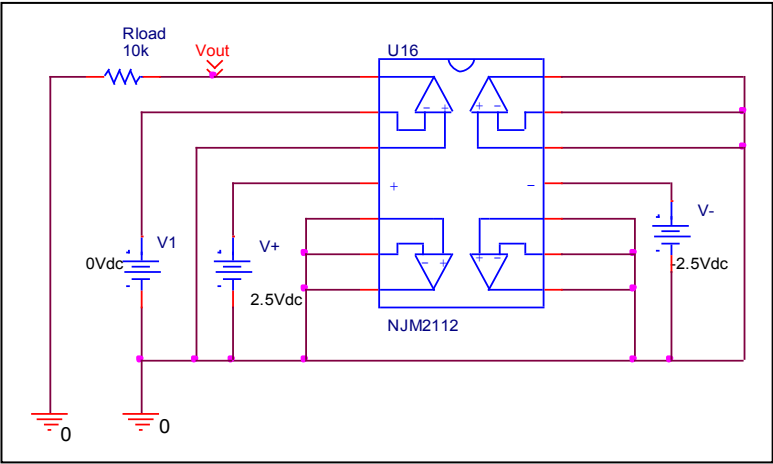
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

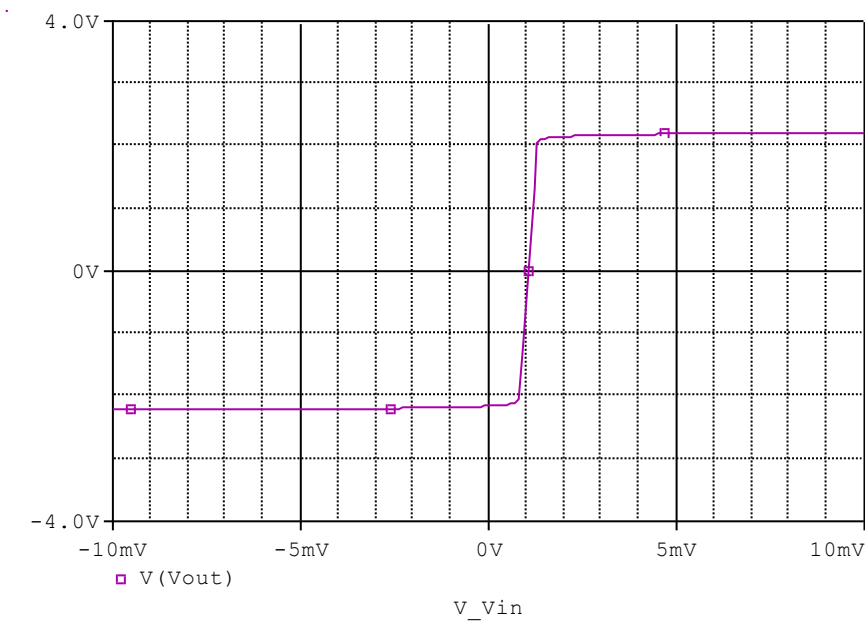


Comparison table

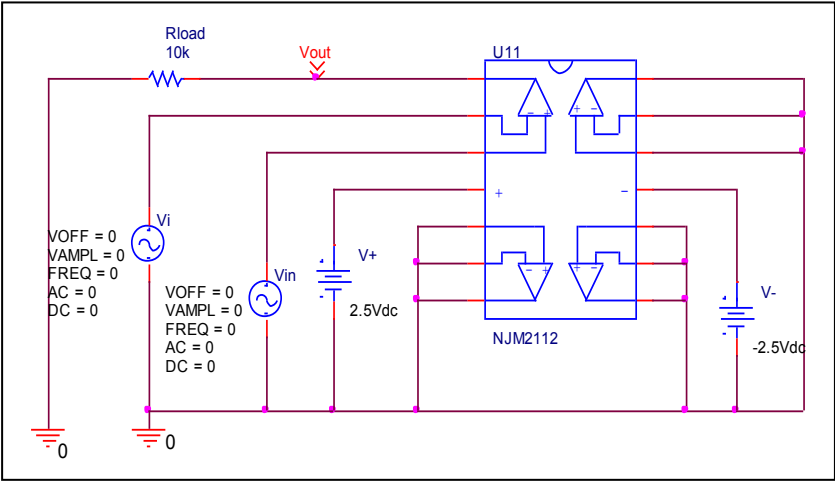
Output Voltage Swing	Data sheet	Simulation	%Error
V+	2.2	2.2	0
V-	2.2	2.2	0

Input Offset Voltage

Simulation result



Evaluation circuit

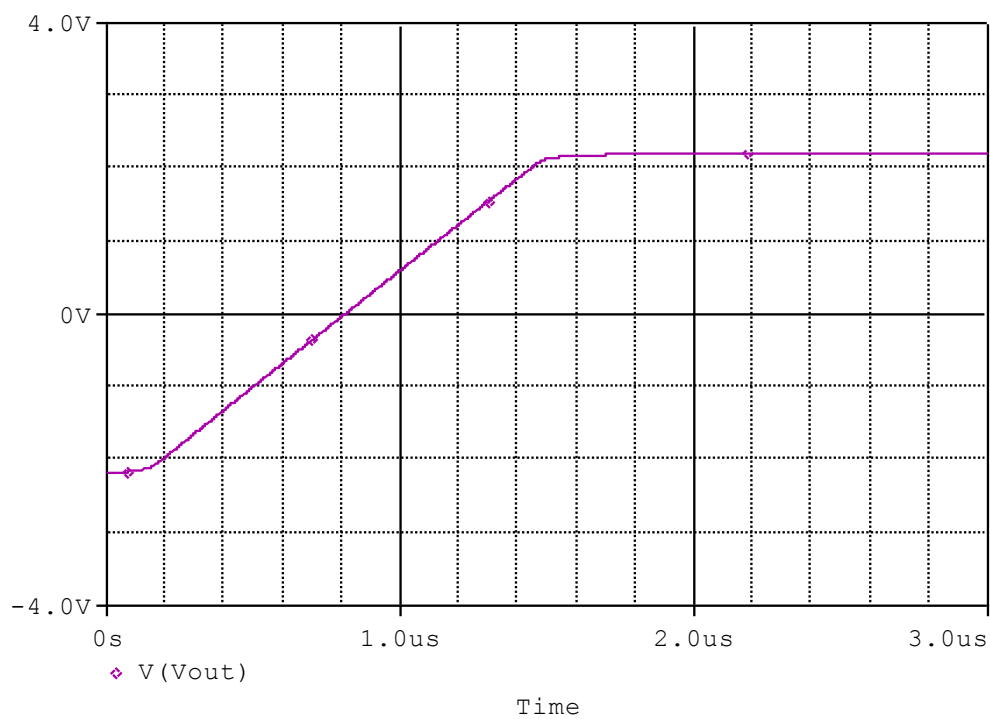


Comparison table

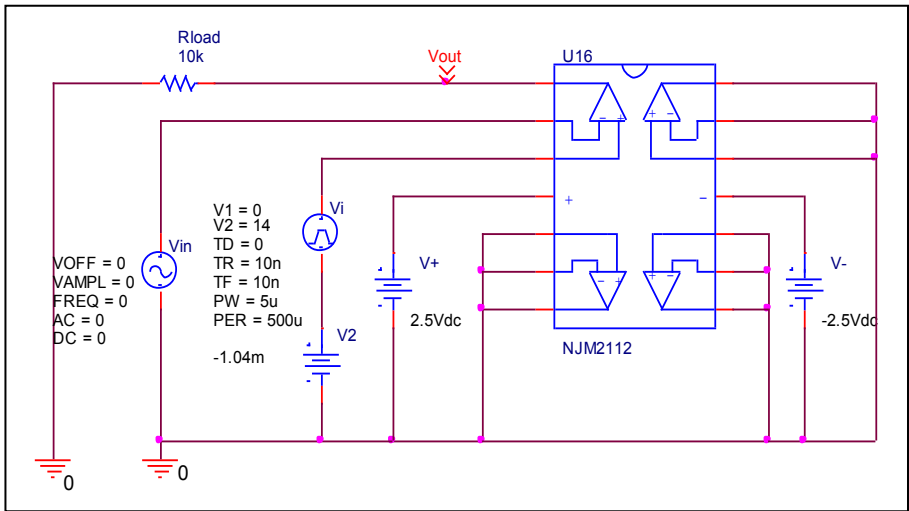
Vos	Measurement		Simulation		Error	
	1	mV	1.04	mV	4	%

Slew Rate

Simulation result



Evaluation circuit

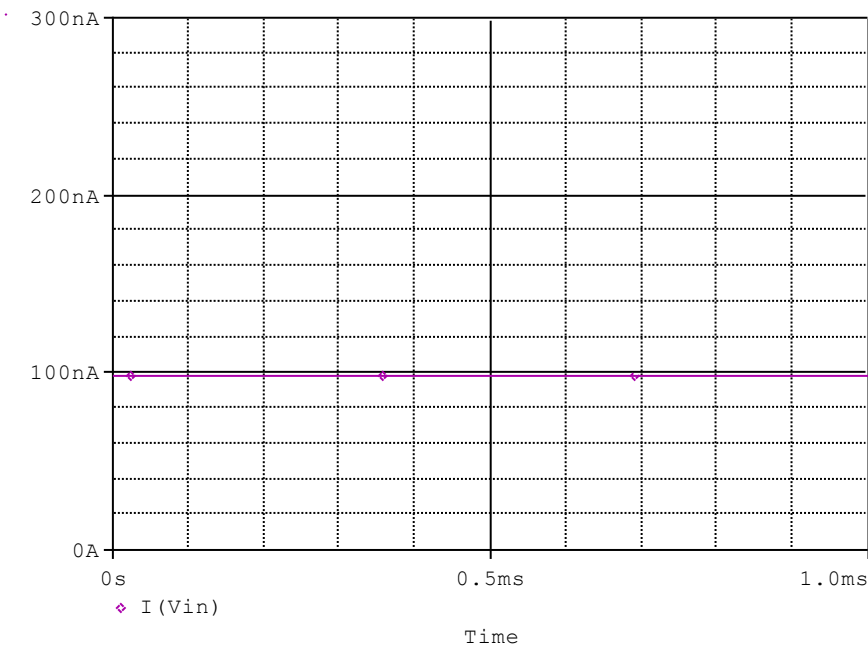


Comparison table

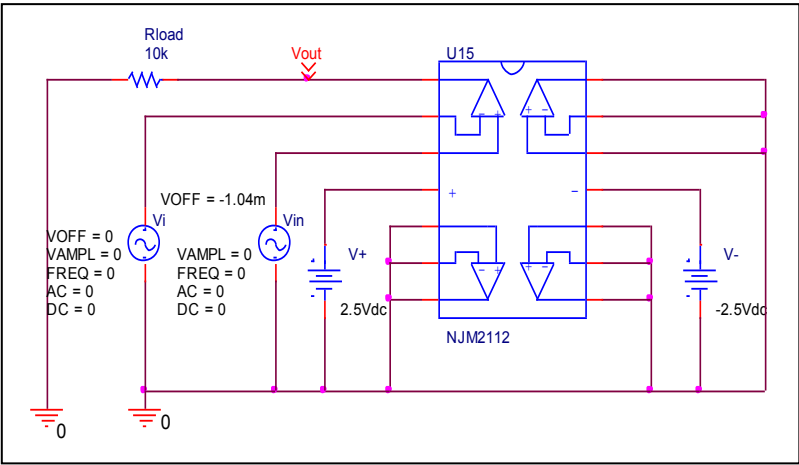
Slew Rate(v/us)	Data sheet	Simulation	%Error
	3.2	3.201	0.031

Input current

Simulation result



Evaluation circuit

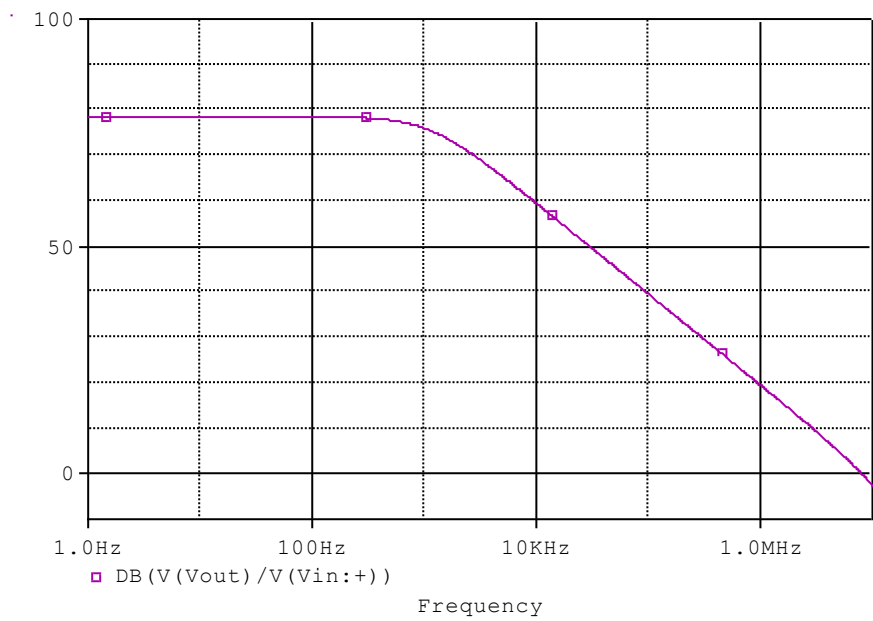


Comparison table

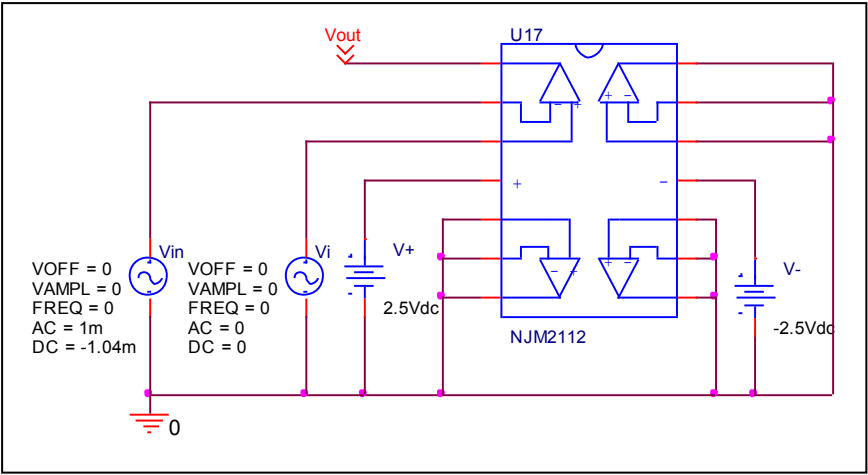
	Data sheet	Simulation	%Error
Ib(nA)	100	98.310	-1.69

Open Loop Voltage Gain vs. Frequency

Simulation result



Evaluation circuit

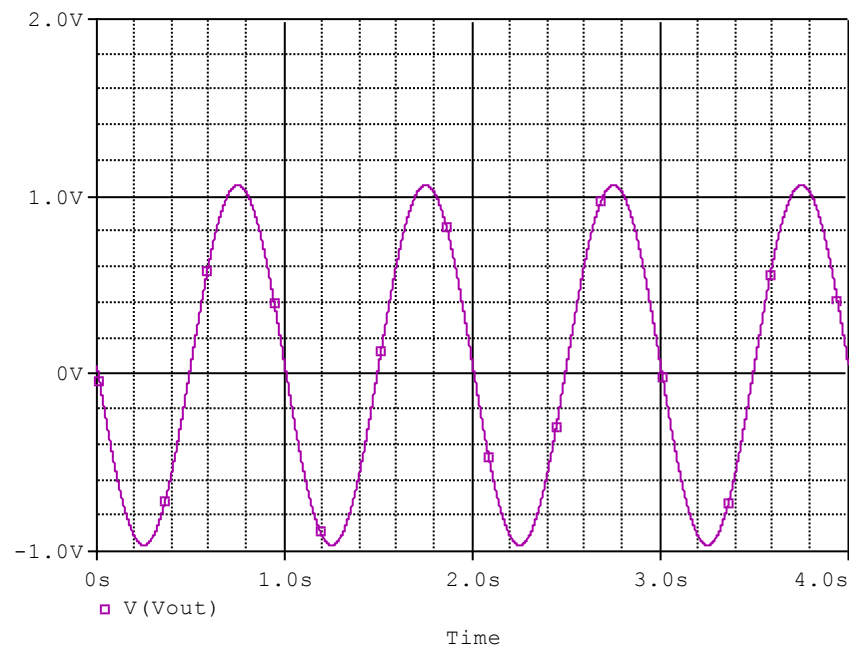


Comparison table

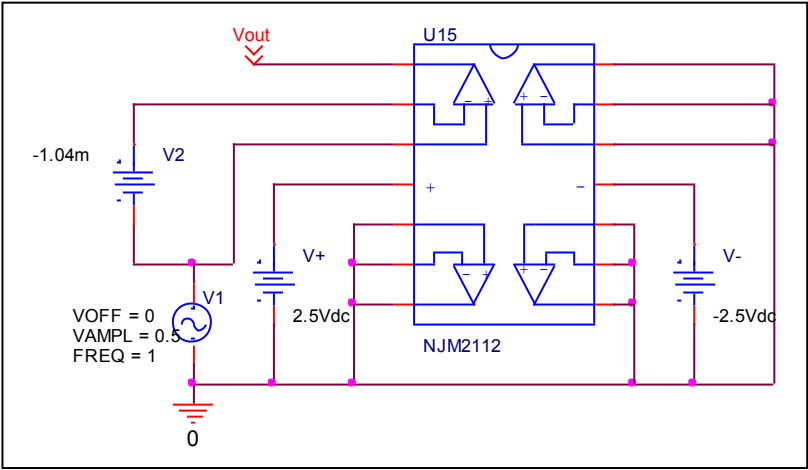
	Data sheet	Simulation	%Error
f-0dB(MHz)	9	8.833	-1.855
Av-dc	80	79.672	-0.41

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $9629.417/2.204 = 4369.06 = 77.94\text{dB}$

Comparison table

CMRR(dB)	Data sheet	Simulation	%Error
	74	72.80	1.621