

Device Modeling Report

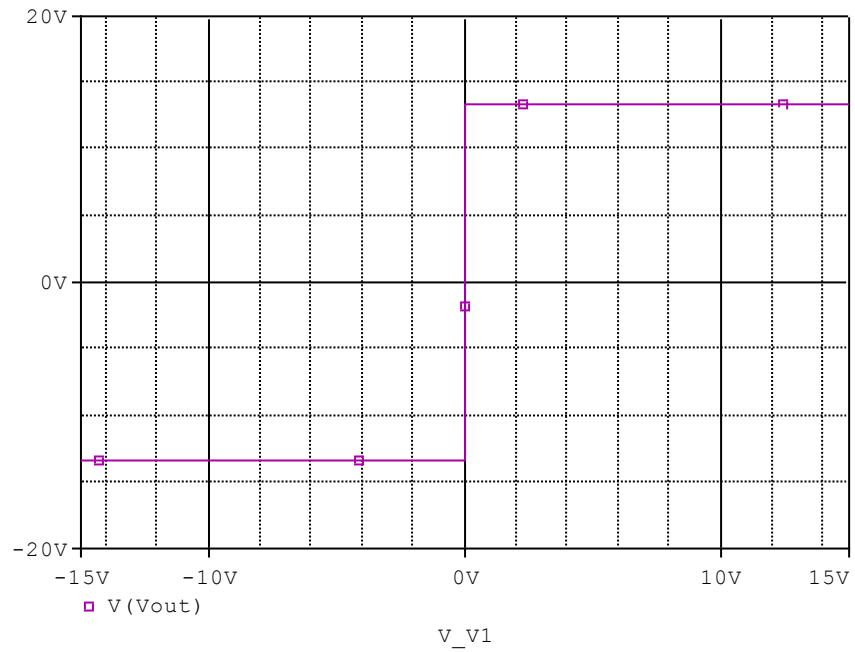
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM074
MANUFACTURER: NEW JAPAN RADIO CO., LTD



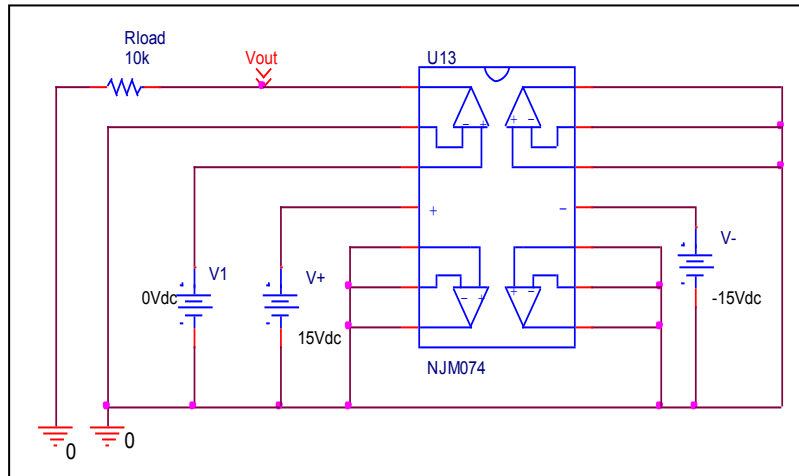
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

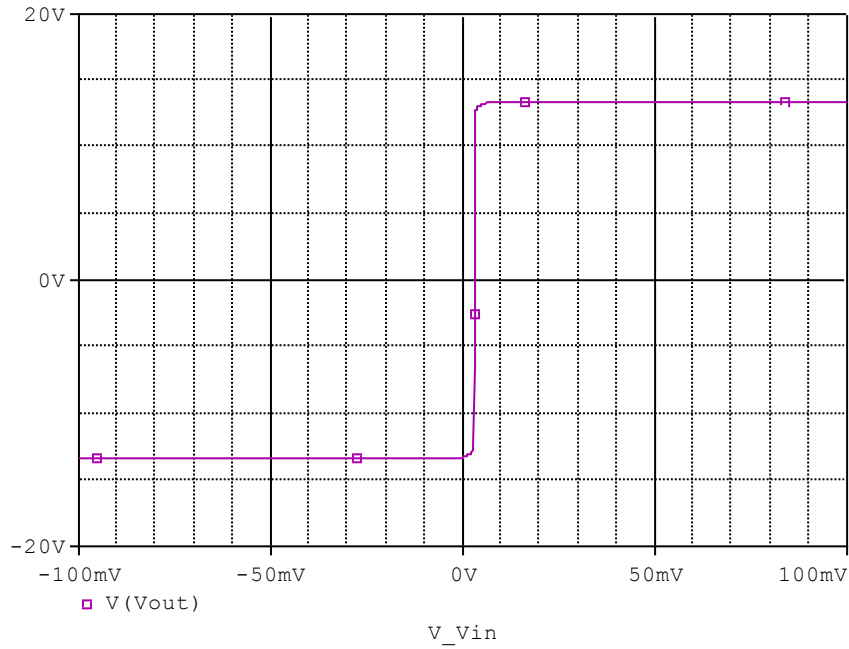


Comparison table

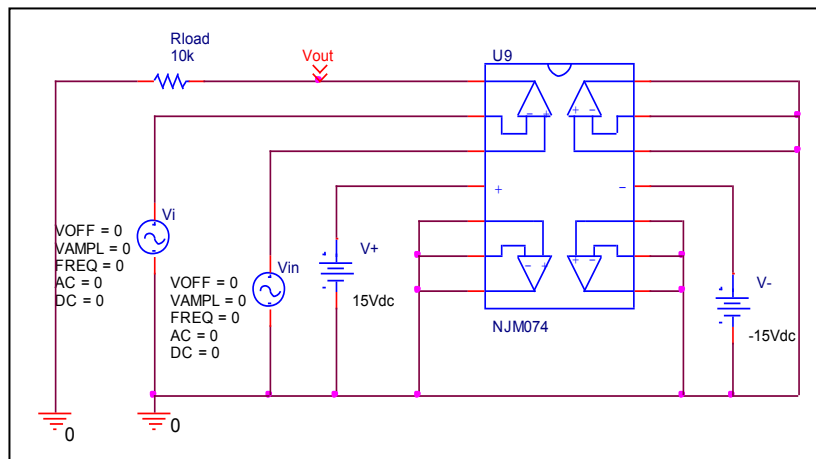
Output Voltage Swing	Data sheet	Simulation	%Error
V_{opp}	27	26.894	-0.392

Input Offset Voltage

Simulation result



Evaluation circuit

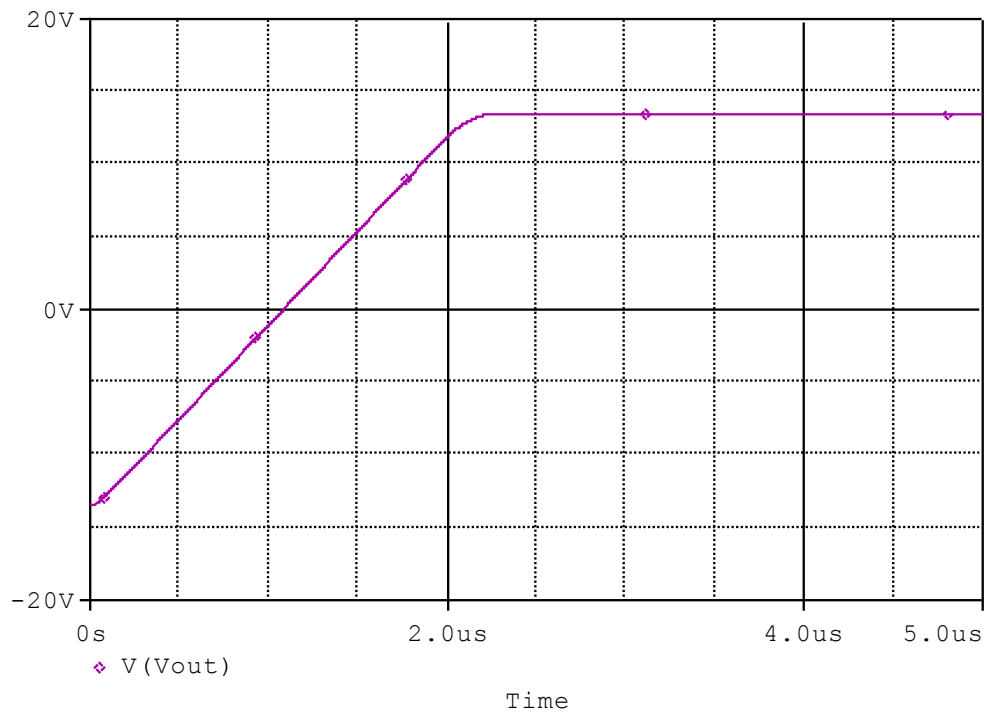


Comparison table

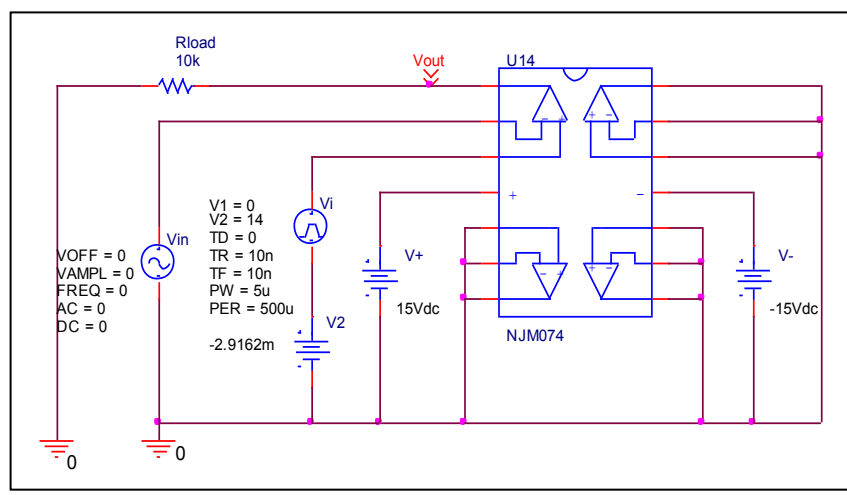
Vos	Measurement		Simulation		Error	
	3	mV	2.916	mV	-2.8	%

Slew Rate

Simulation result



Evaluation circuit

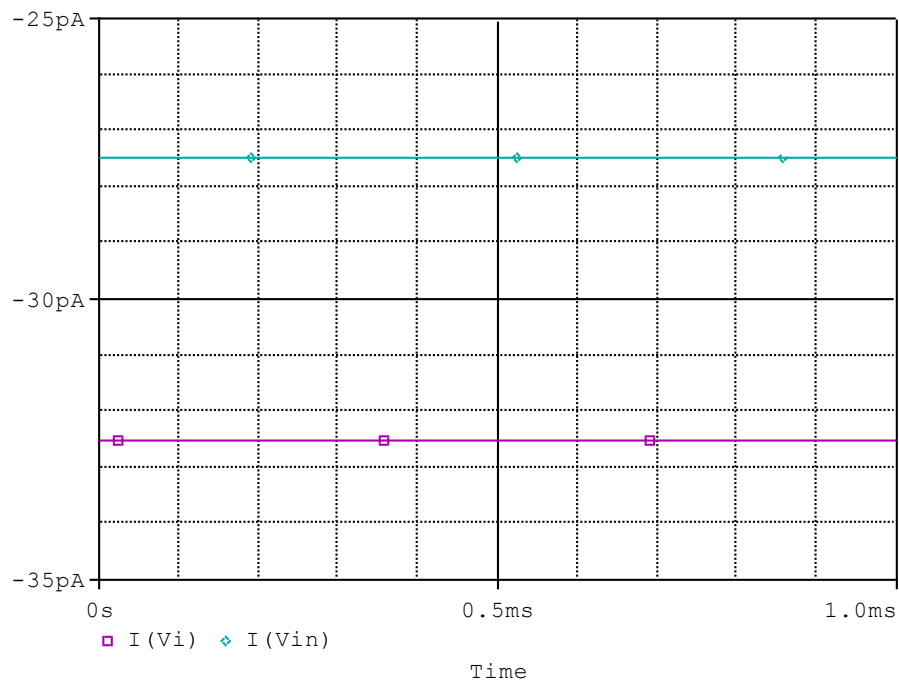


Comparison table

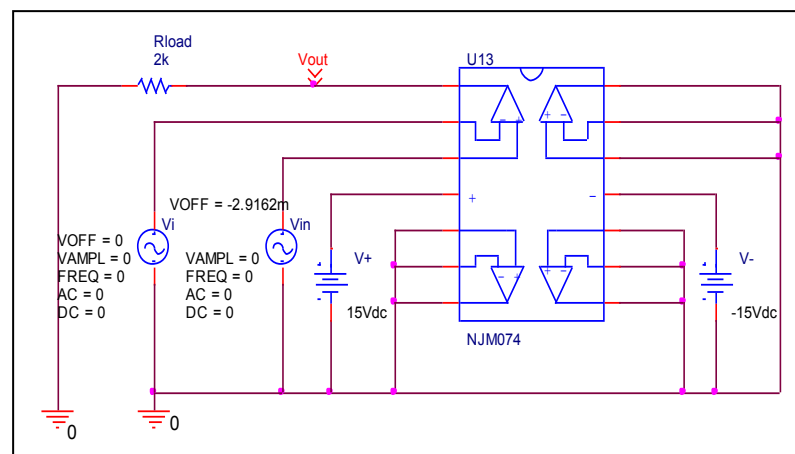
Slew Rate(v/us)	Data sheet	Simulation	%Error
		13	12.925

Input current

Simulation result



Evaluation circuit

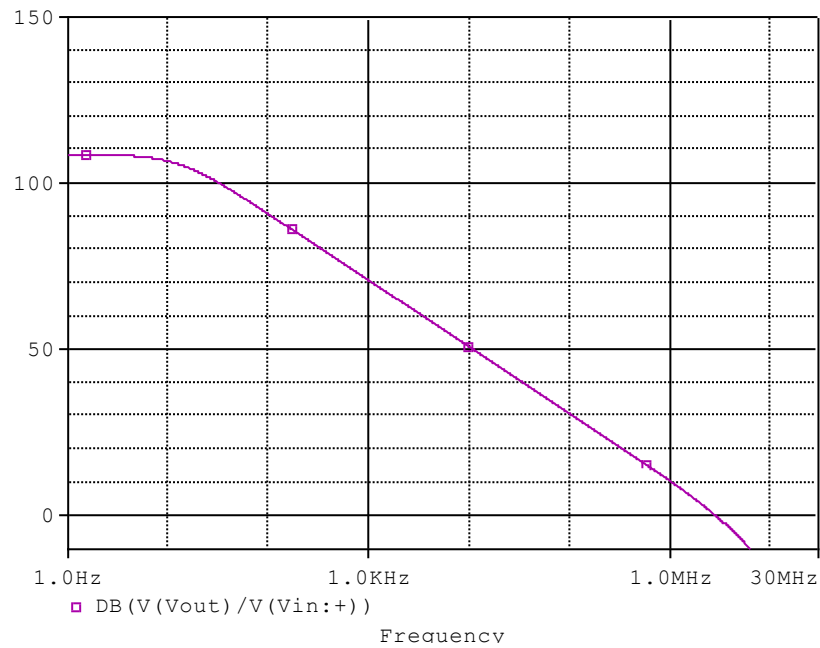


Comparison table

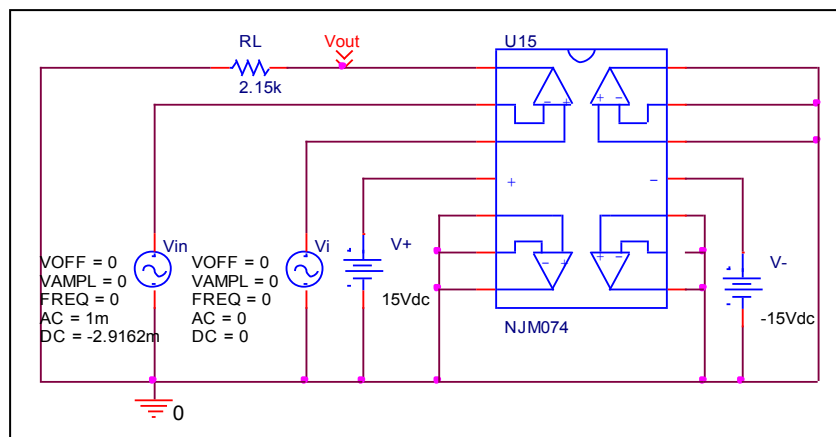
	Data sheet	Simulation	%Error
I_b(nA)	30	29.998	-0.006
I_{bos}(nA)	5	5.014	0.28

Open Loop Voltage Gain vs. Frequency

Simulation result



Evaluation circuit

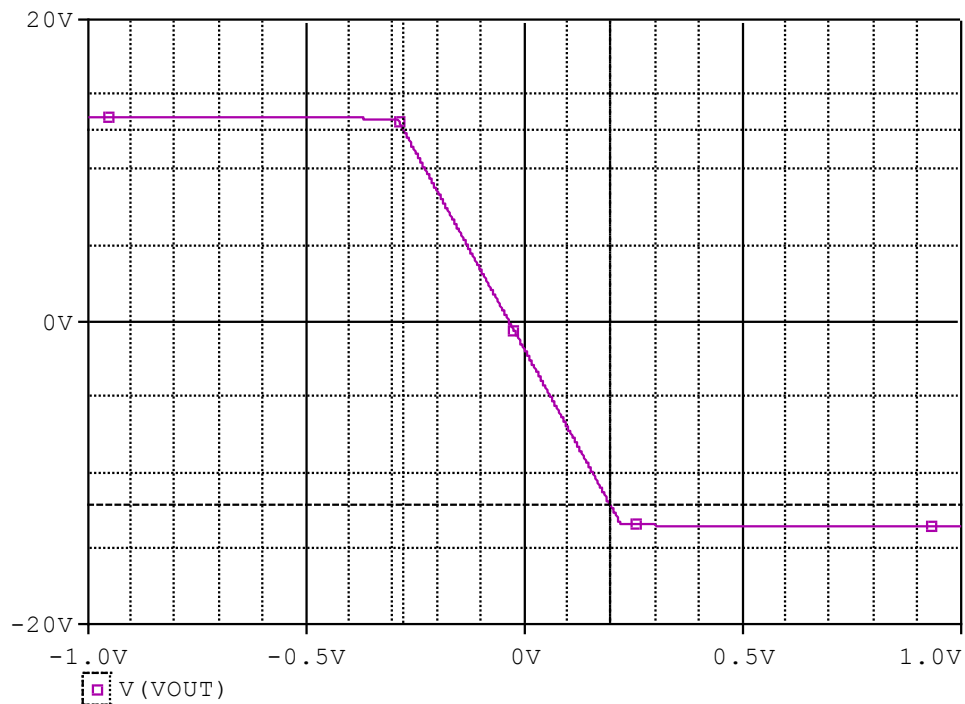


Comparison table

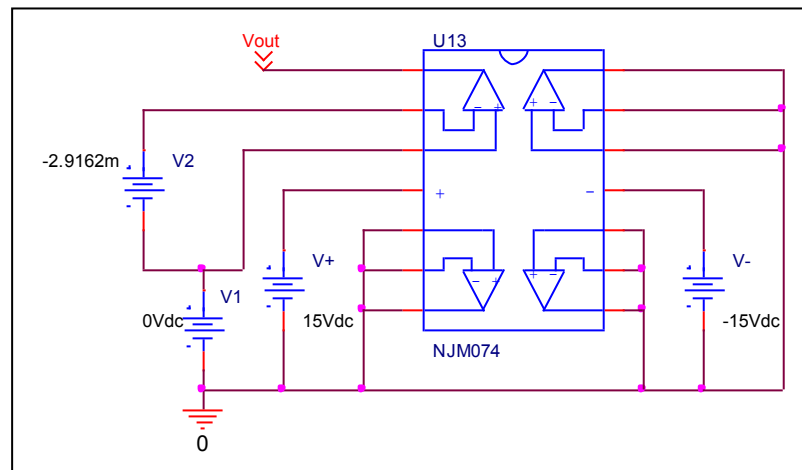
	Data sheet	Simulation	%Error
f-0dB(MHz)	3	2.976	-0.8
Av-dc	106	108.695	2.54

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio = $272113.444 / 52.35 = 5197.964 = 74.316\text{dB}$

Comparison table

CMRR(dB)	Data sheet	Simulation	%Error
		76	74.316