

Device Modeling Report

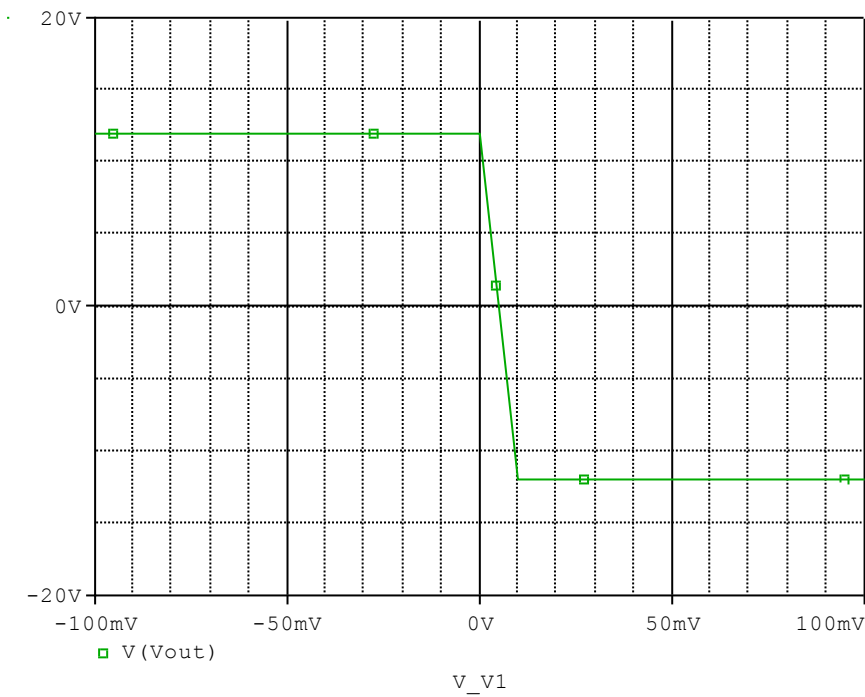
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM1458
MANUFACTURER: NEW JAPAN RADIO CO.,LTD



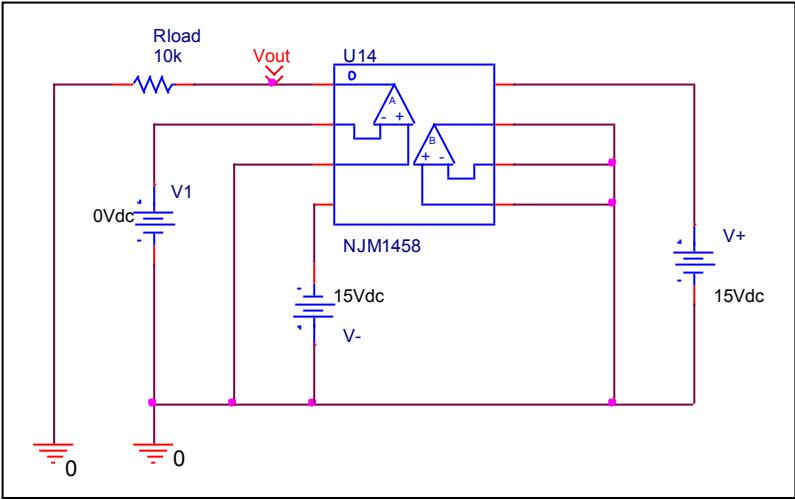
Bee Technologies Inc.

Output Voltage Swing

Simulation result



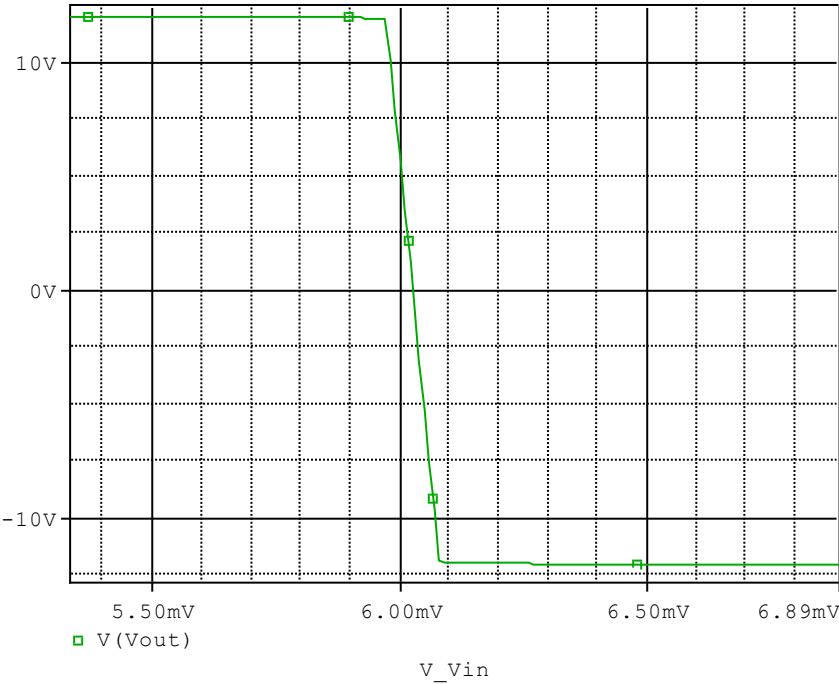
Evaluation circuit



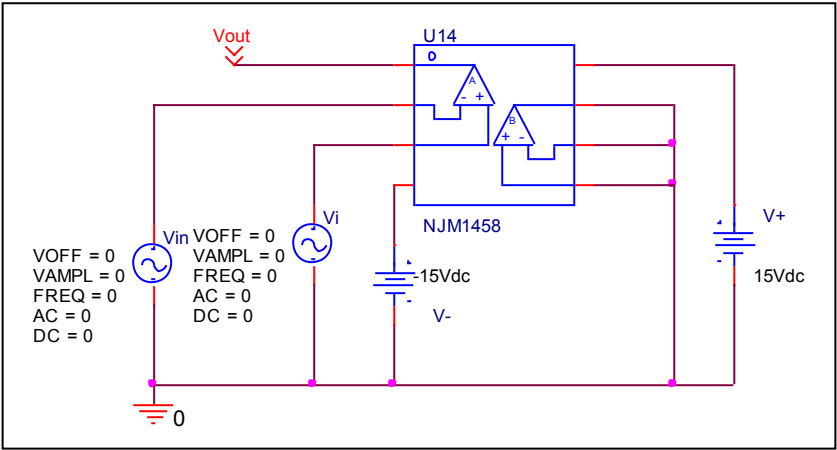
Output Voltage Swing	Data sheet	Simulation	%Error
+ $V_{out}(V)$	12.000	11.994	-0.050
- $V_{out}(V)$	12.000	11.994	-0.050

Input Offset Voltage

Simulation result



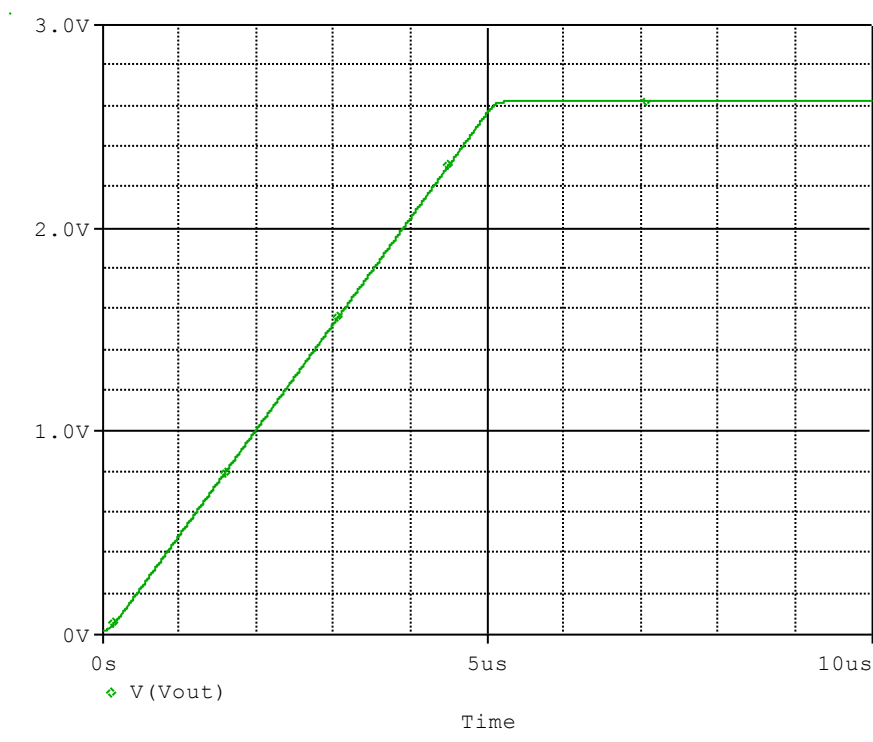
Evaluation circuit



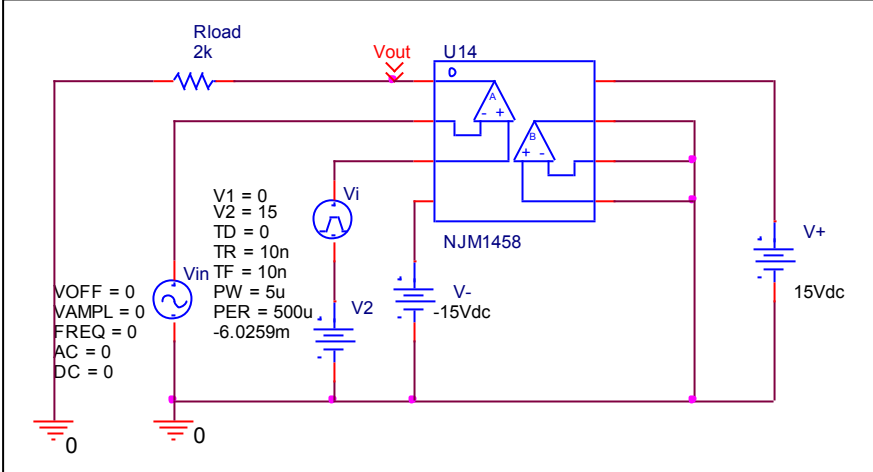
Vos	Measurement		Simulation		Error	
	6.000	mV	6.0259	mV	0.431	%

Slew Rate

Simulation result



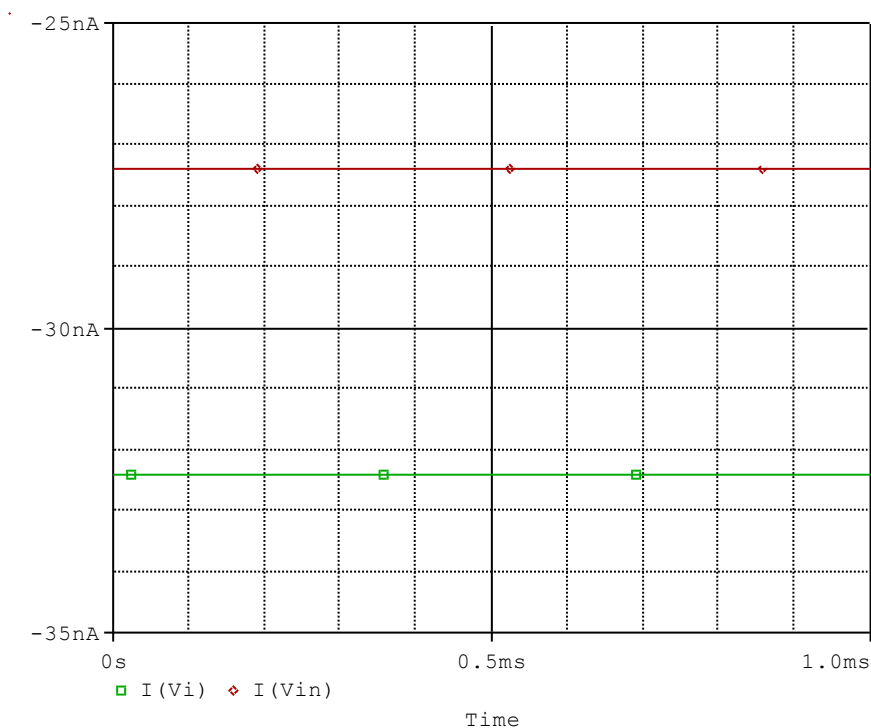
Evaluation circuit



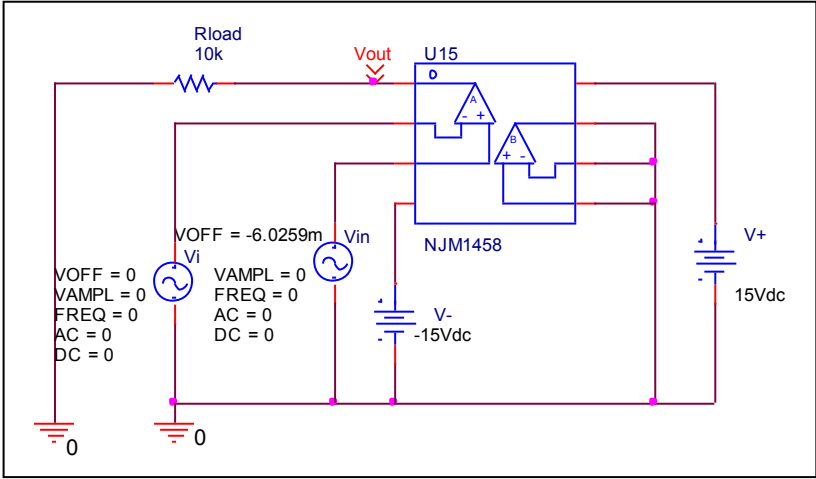
Slew Rate(v/us)	Data sheet	Simulation	%Error
	0.500	0.524	4.800

Input current

Simulation result



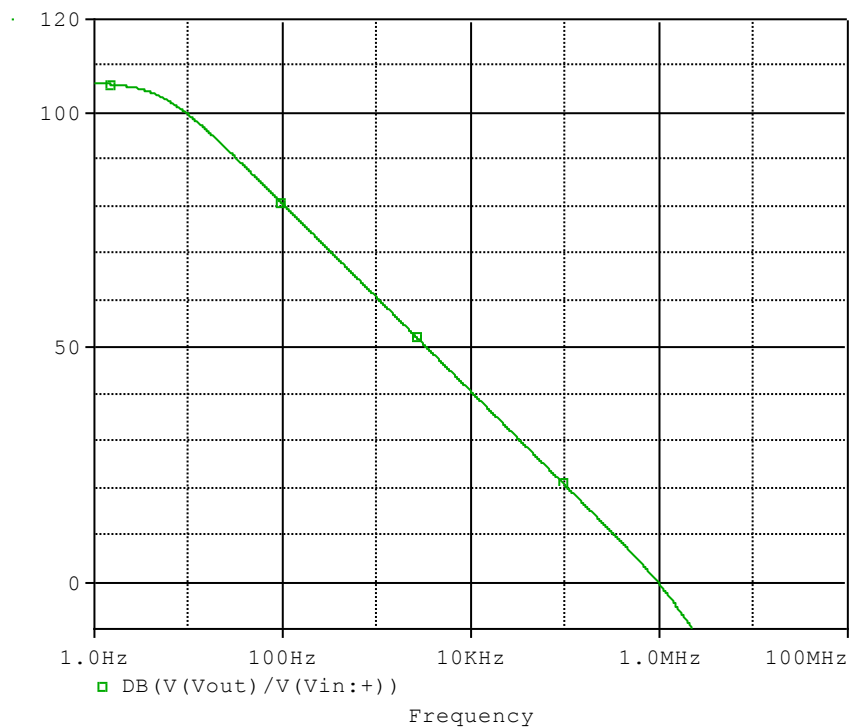
Evaluation circuit



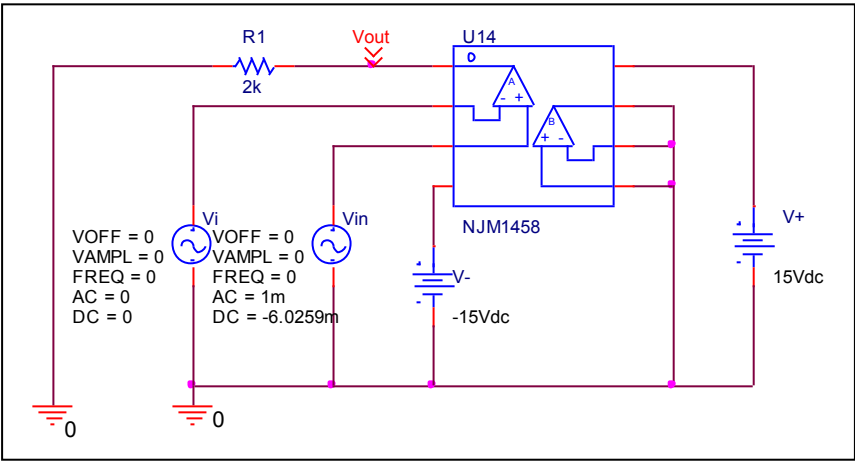
	Data sheet	Simulation	%Error
Ib(pA)	30.000	29.894	-0.353
Ibos(pA)	5.000	5.000	0.000

Open Loop Voltage Gain vs. Frequency

Simulation result



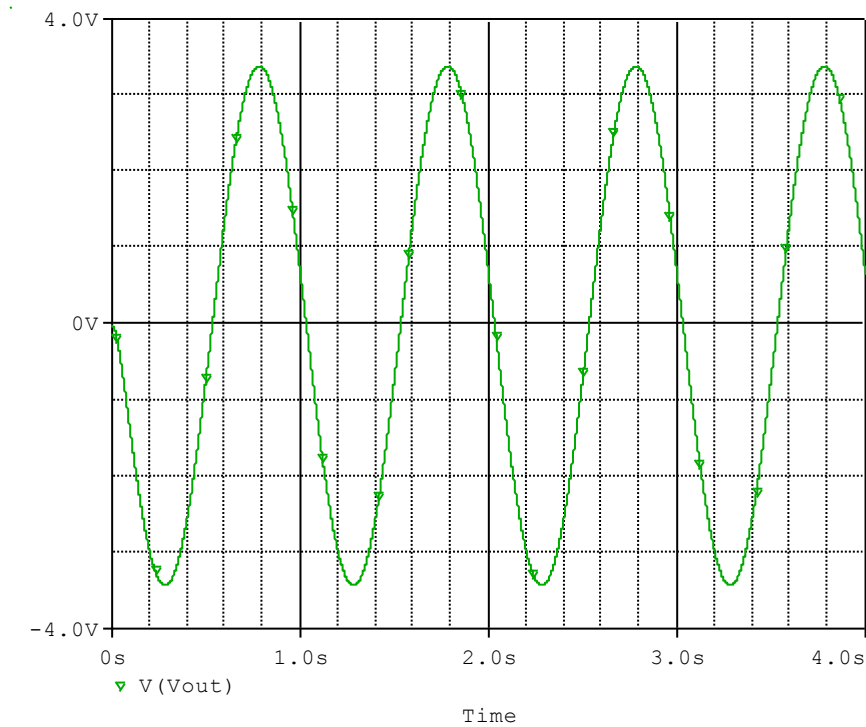
Evaluation circuit



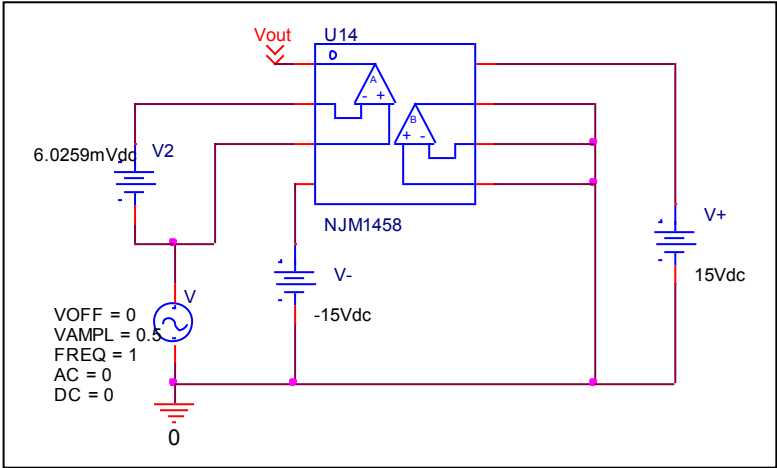
	Data sheet	Simulation	%Error
f-0dB(MHz)	1.000	0.982	-1.800
Av-dc	106.000	106.320	0.301

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $206538/6.817=30297$

CMRR	Data sheet	Simulation	%Error
	90.000	89.628	-0.413