

Device Modeling Report

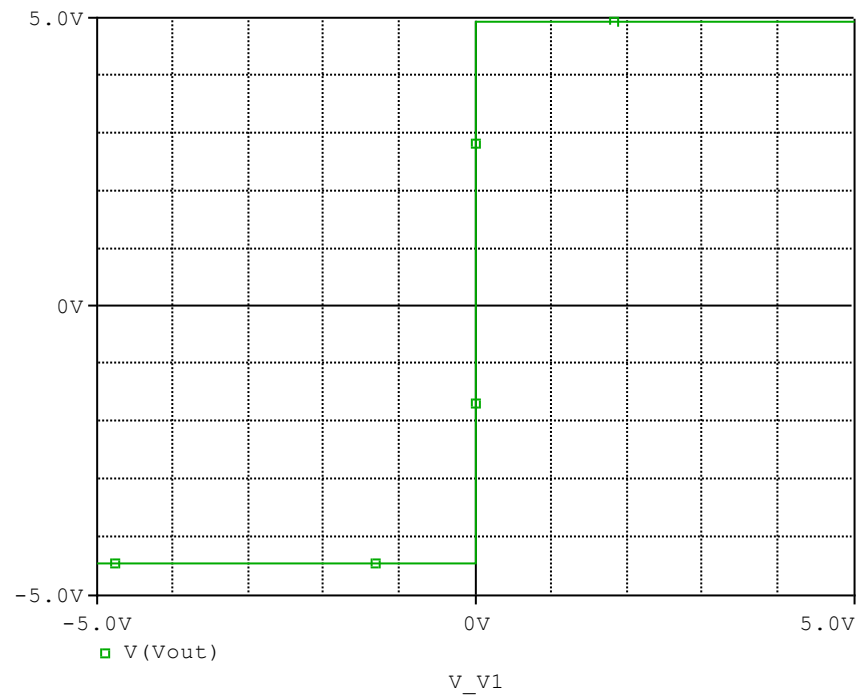
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM2141
MANUFACTURER: NEW JAPAN RADIO CO., LTD



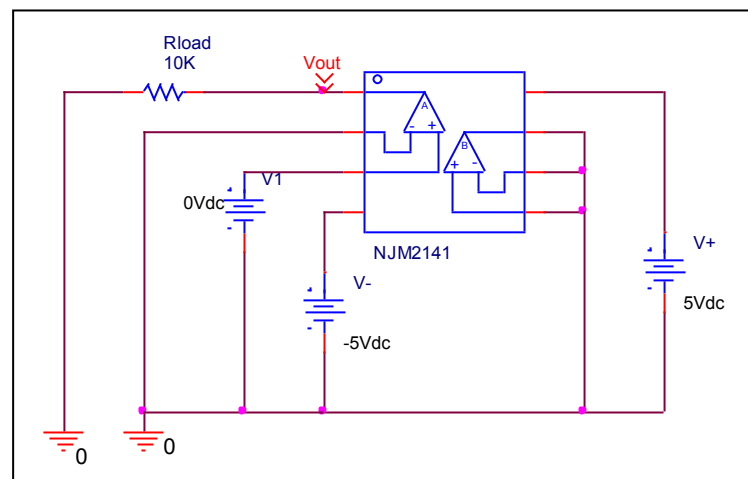
Bee Technologies Inc.

Output Voltage Swing

Simulation result



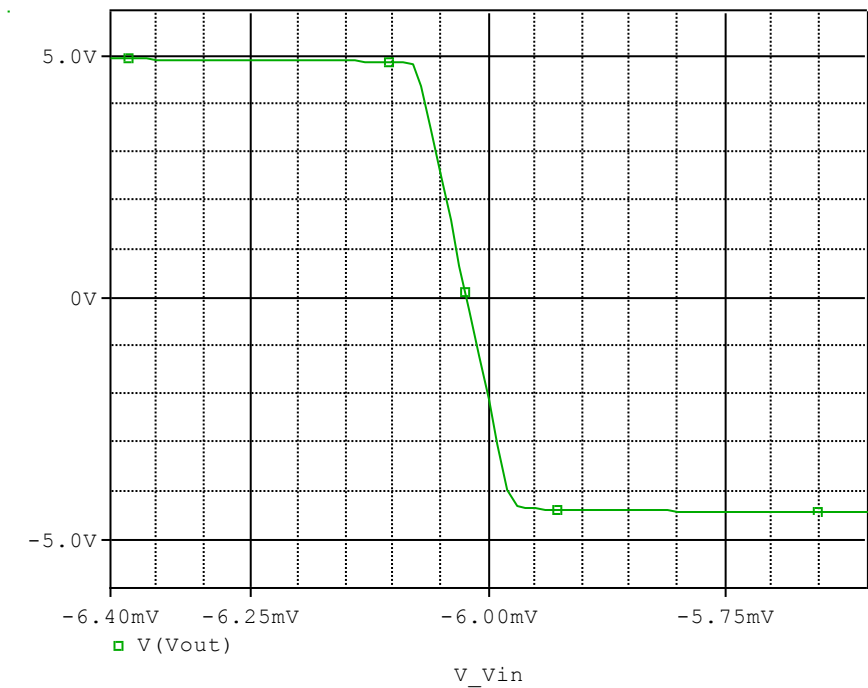
Evaluation circuit



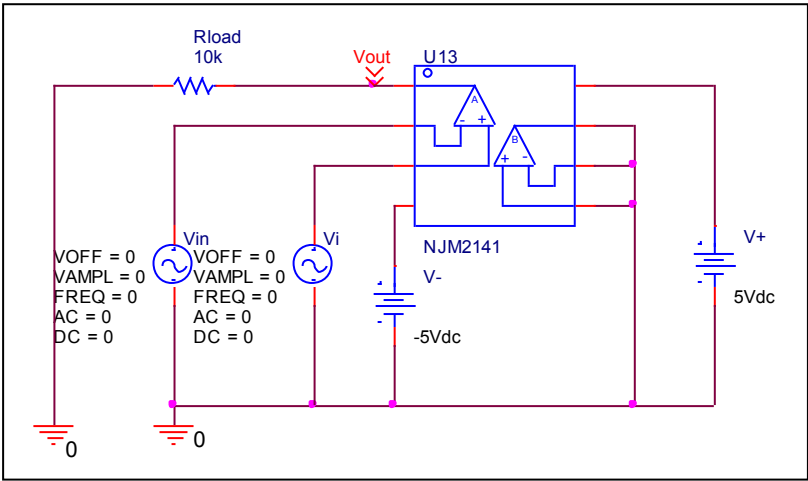
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	5.000	4.943	1.140
-Vout(V)	4.500	4.444	1.240

Input Offset Voltage

Simulation result



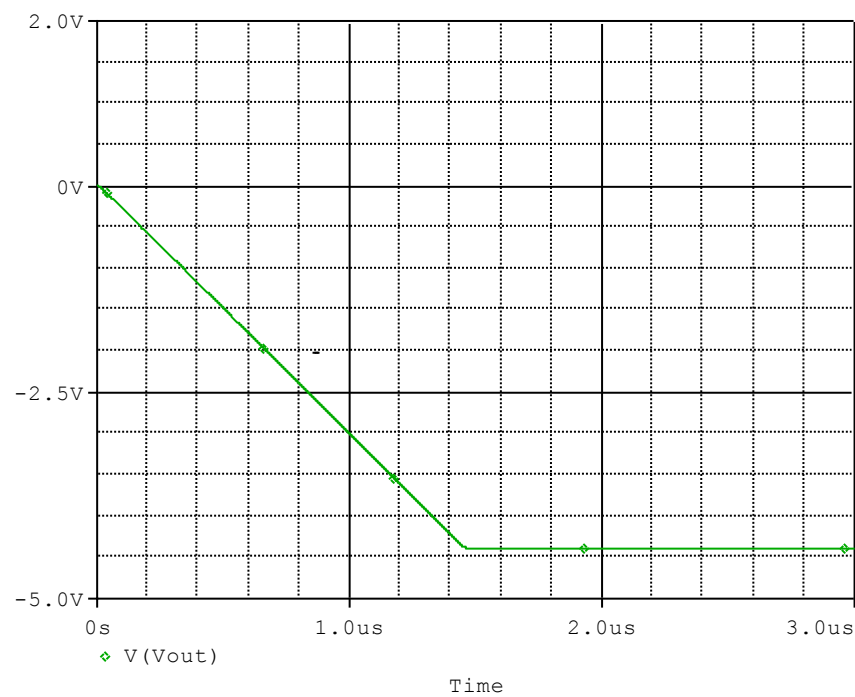
Evaluation circuit



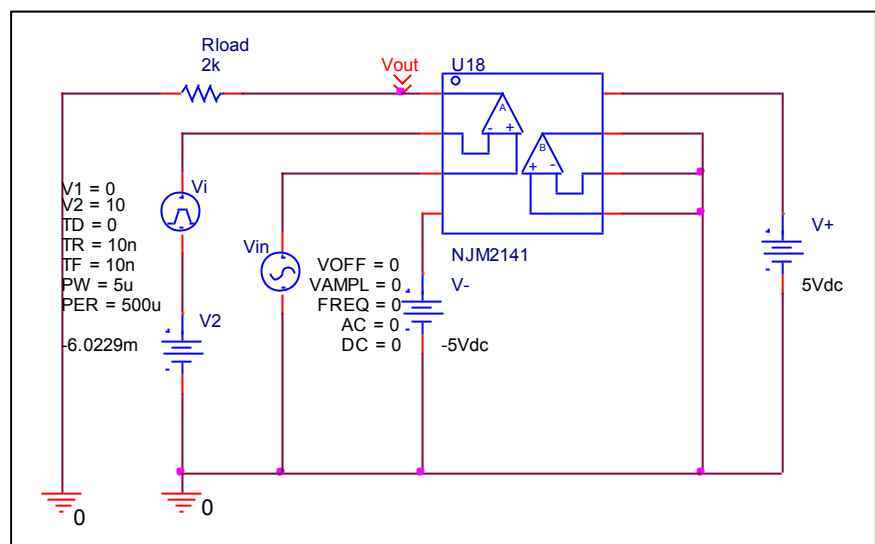
Vos	Measurement		Simulation		Error	
	6.000	mV	6.022	mV	0.381	%

Slew Rate

Simulation result



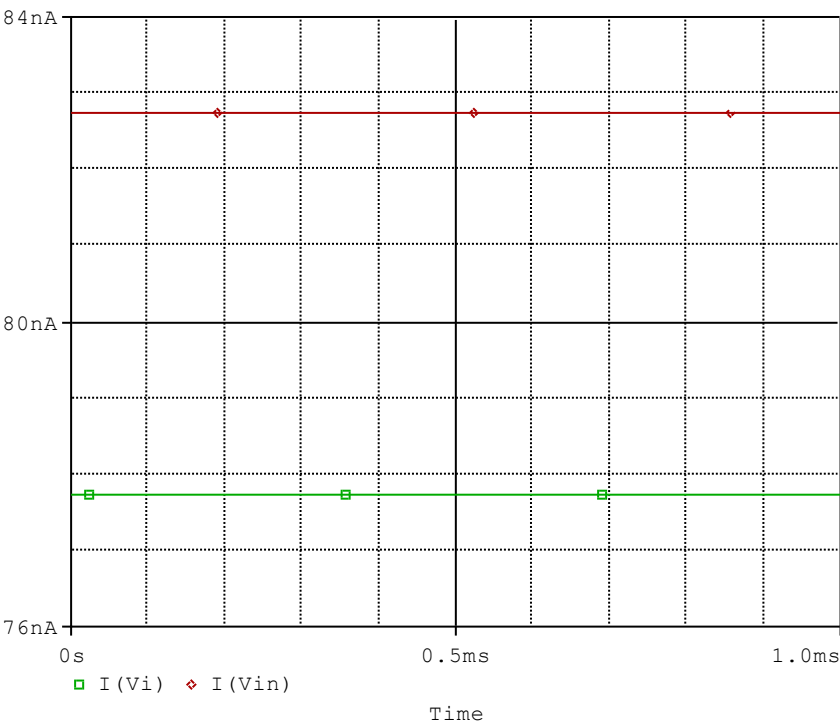
Evaluation circuit



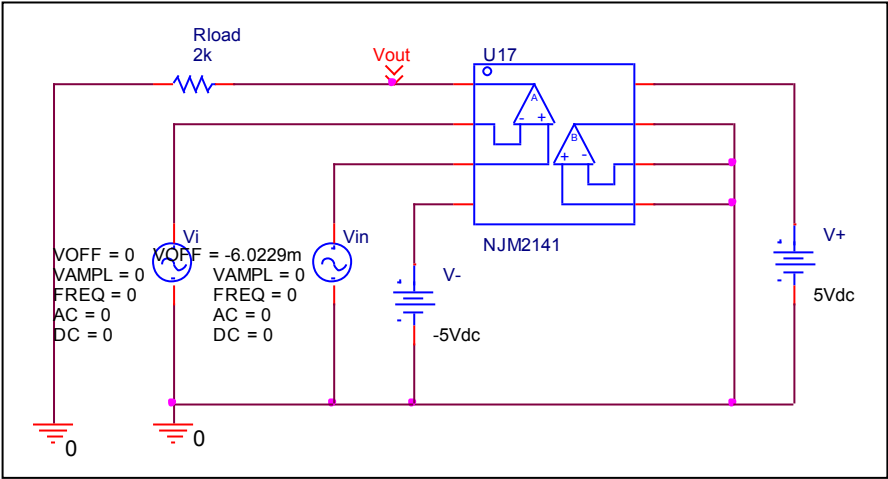
Slew Rate(v/us)	Data sheet	Simulation	%Error
	3.000	3.110	3.700

Input current

Simulation result



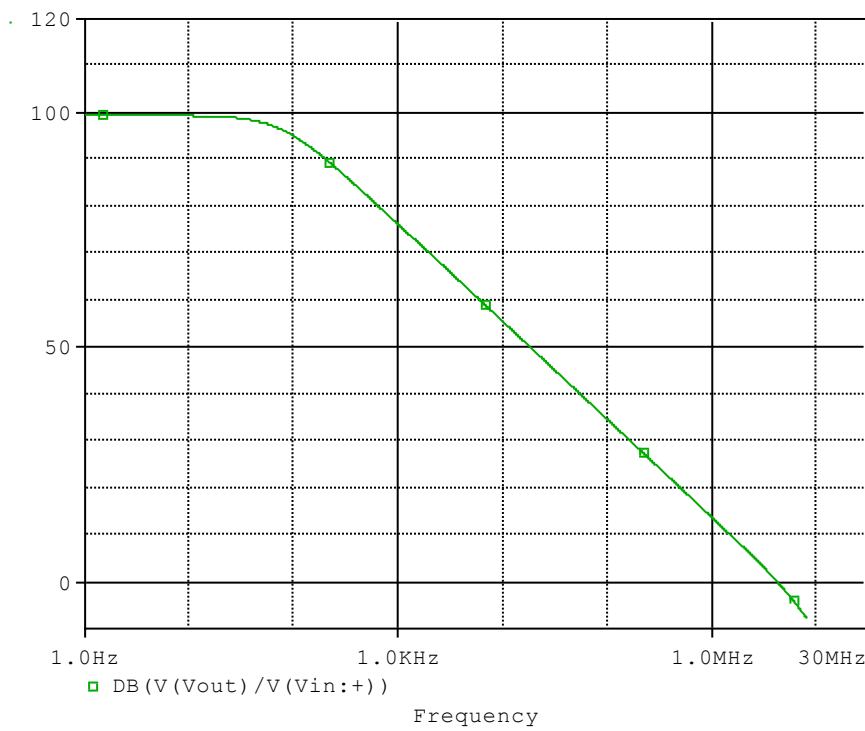
Evaluation circuit



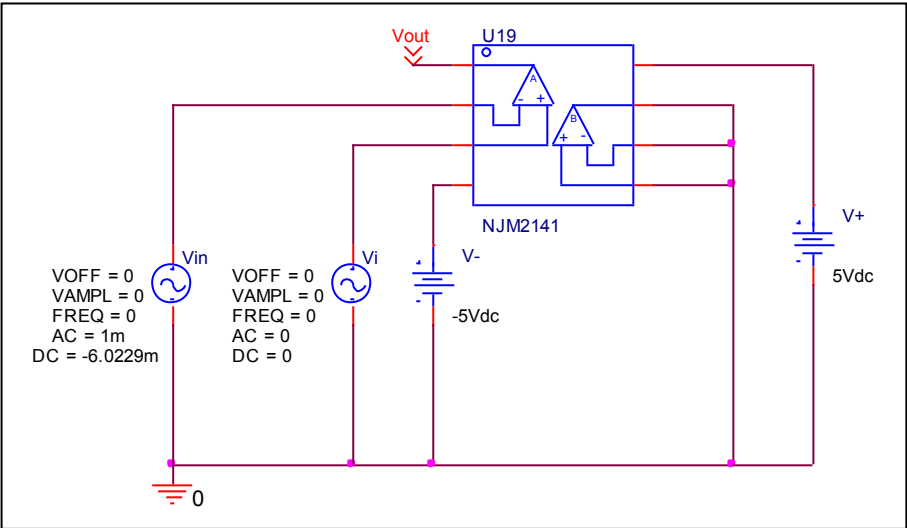
	Data sheet	Simulation	%Error
Ib(nA)	80.000	80.200	0.250
Ibos(nA)	5.000	5.011	0.230

Open Loop Voltage Gain vs. Frequency

Simulation result



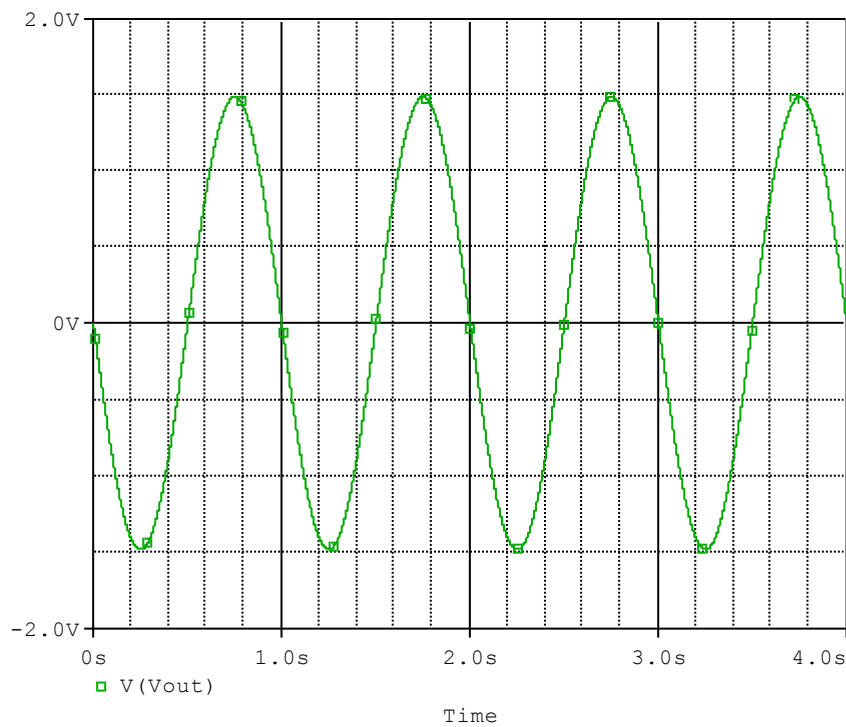
Evaluation circuit



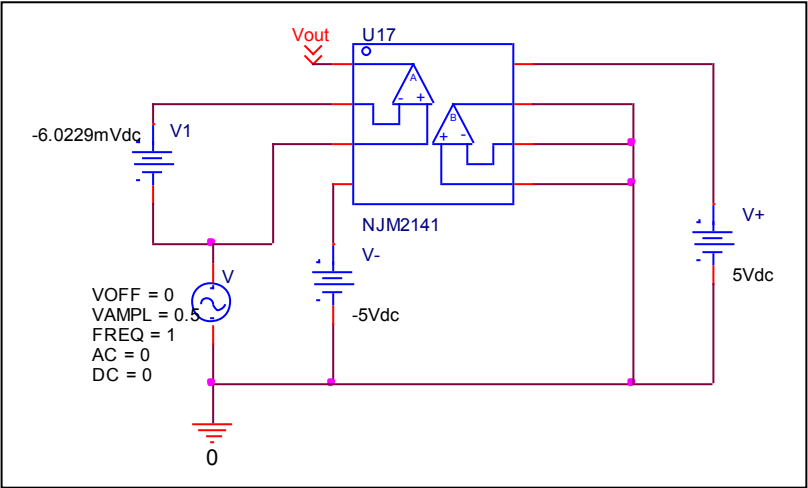
	Data sheet	Simulation	%Error
f-0dB(MHz)	8.000	7.870	2.375
Av-dc(dB)	100.000	99.610	0.390

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $95609/2.9671=32223$

CMRR	Data sheet	Simulation	%Error
	90.000	90.163	0.181