

Device Modeling Report

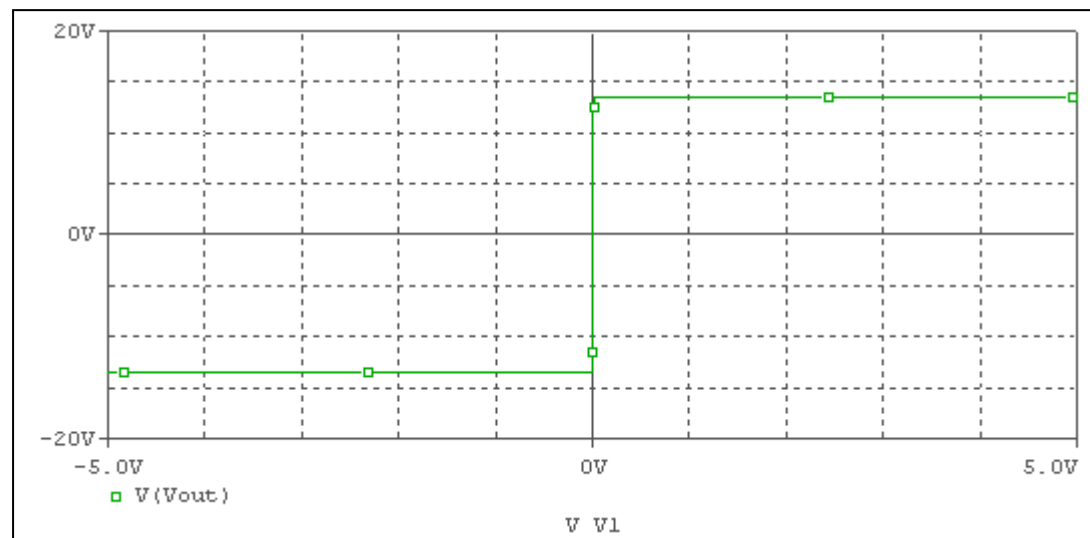
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: NJM082BM
MANUFACTURER: NEW JAPAN RADIO CO.,LTD



Bee Technologies Inc.

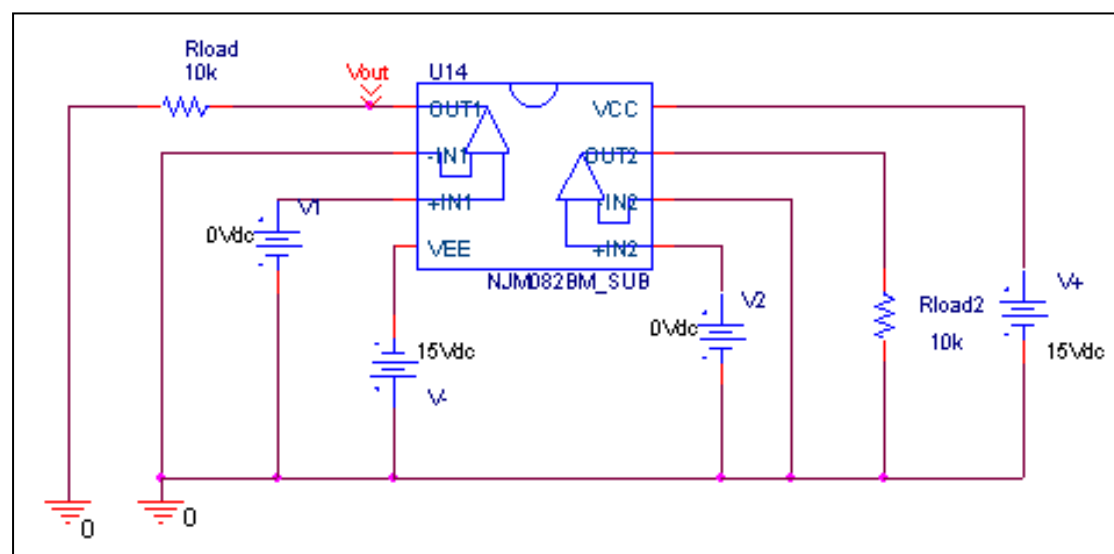
Output Voltage Swing, +Vout and –Vout

Simulation result



These simulation results are compared with $\pm V_{out}$

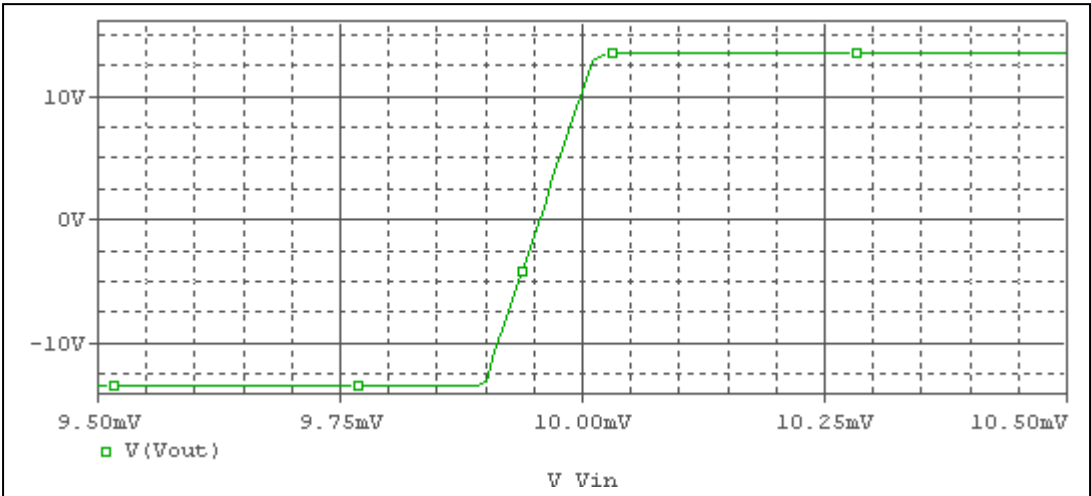
Evaluation circuit



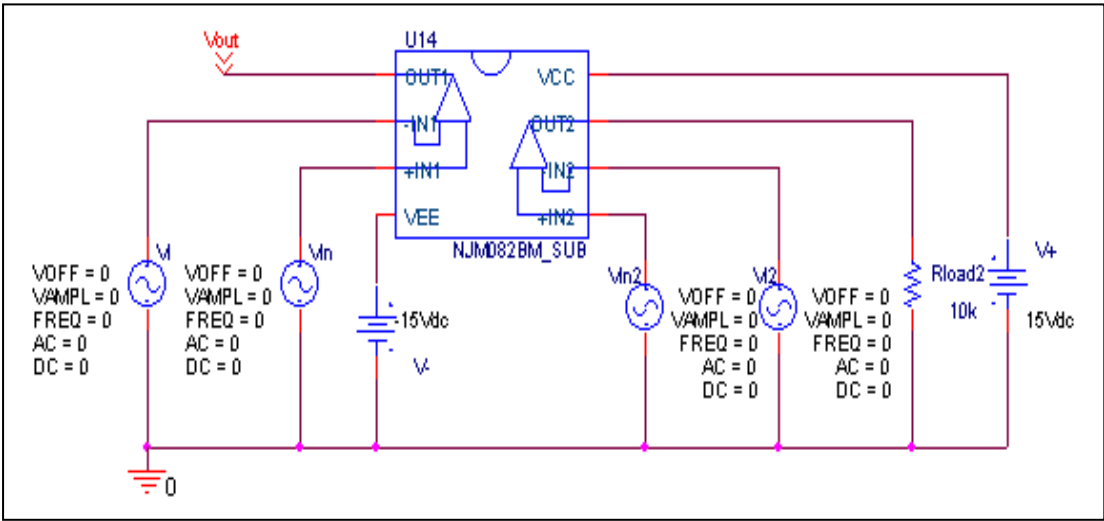
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+13.5	+13.492	0.059
-Vout(V)	-13.5	-13.492	0.059

Input Offset Voltage

Simulation result



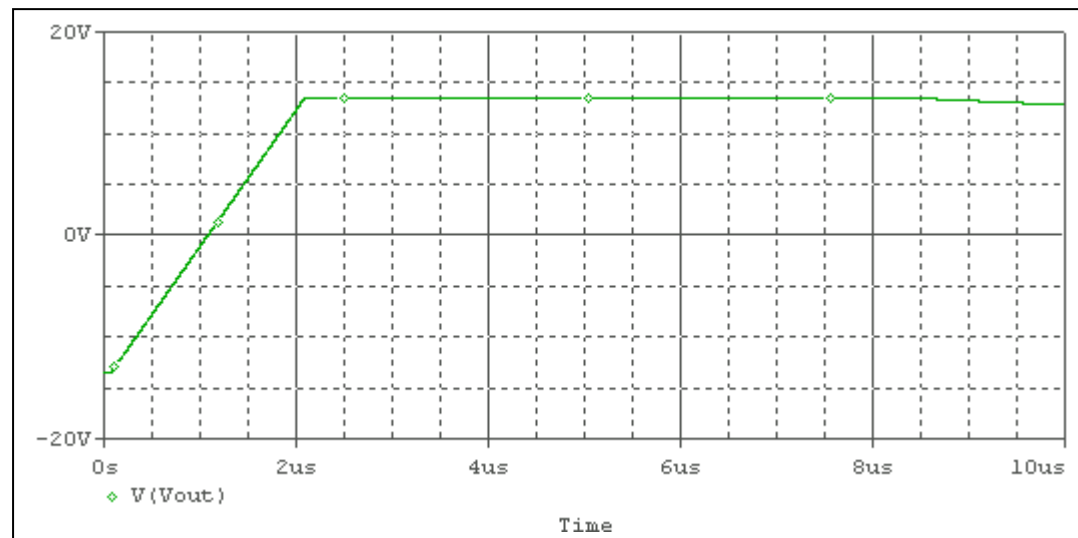
Evaluation circuit



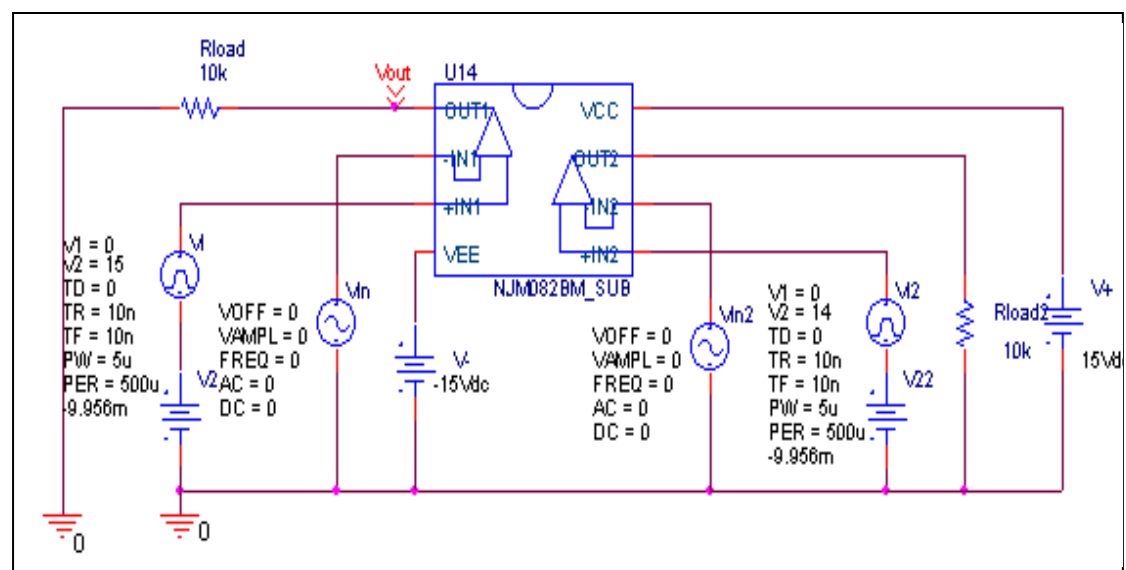
Vos	Measurement		Simulation		Error	
	10	mV	9.956	mV	0.44	%

Slew Rate, +SR, -SR

Simulation result



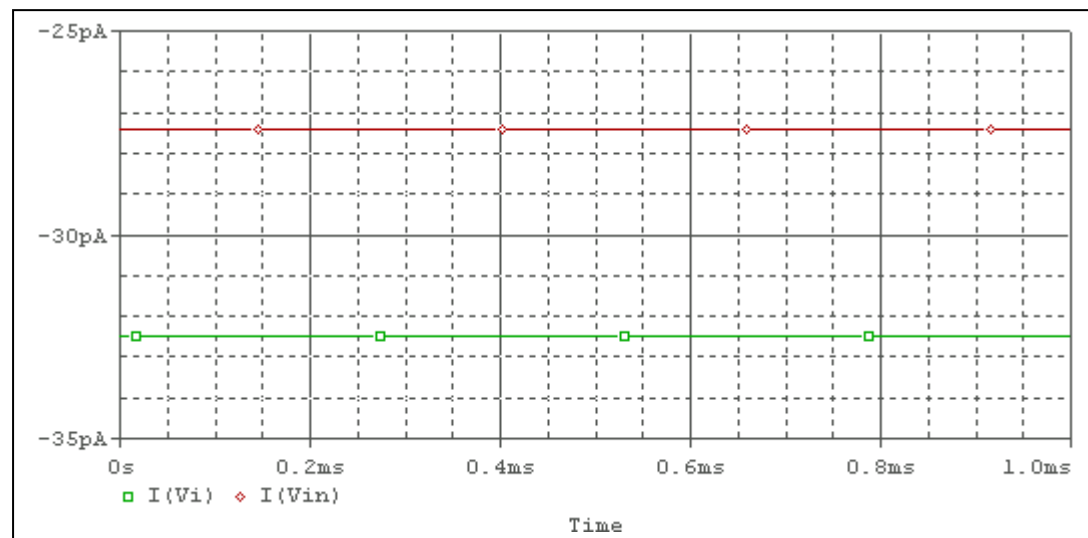
Evaluation circuit



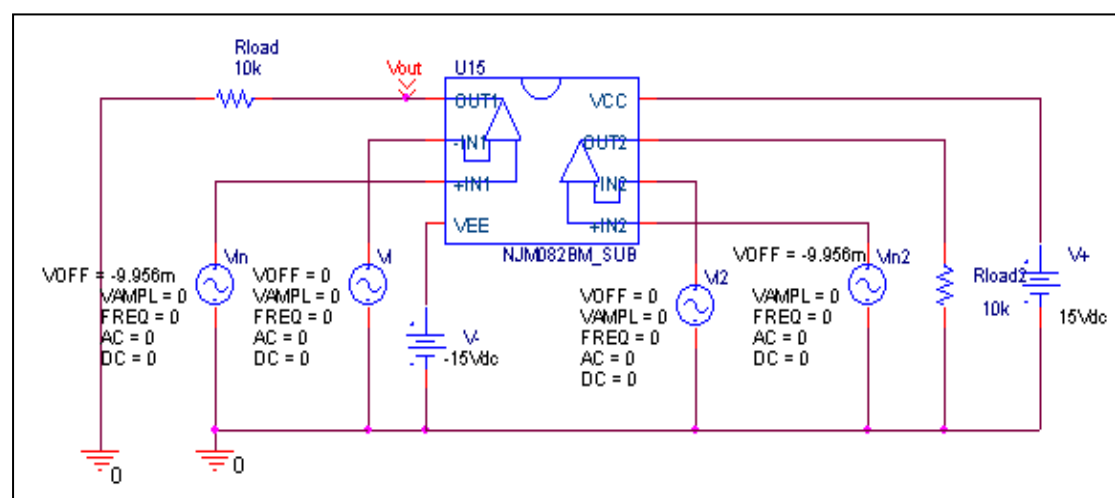
Slew Rate(v/us)	Data sheet	Simulation	%Error
	13V/us	13.4V/us	3.076

Input current I_b , I_{bos}

Simulation result



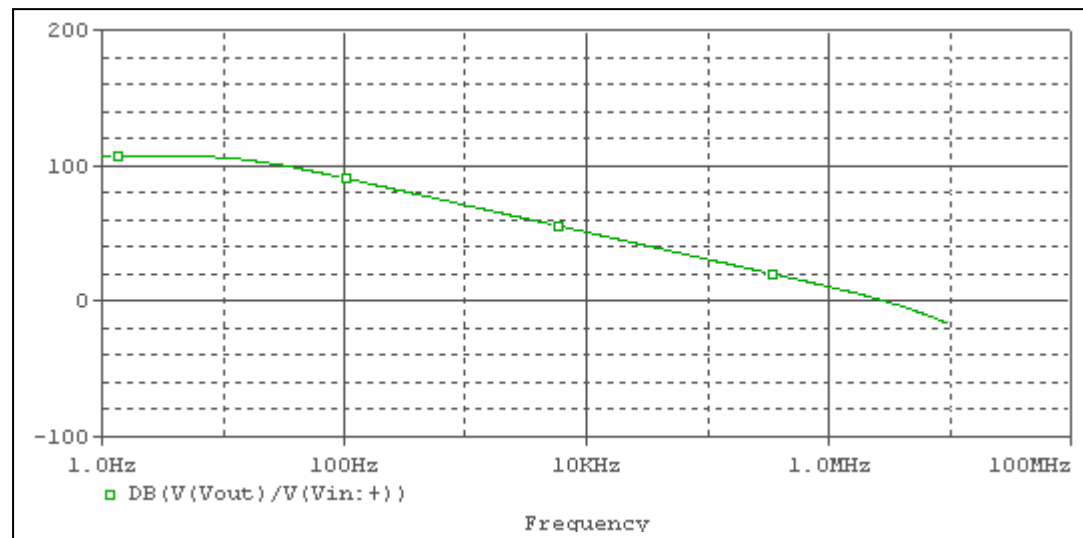
Evaluation circuit



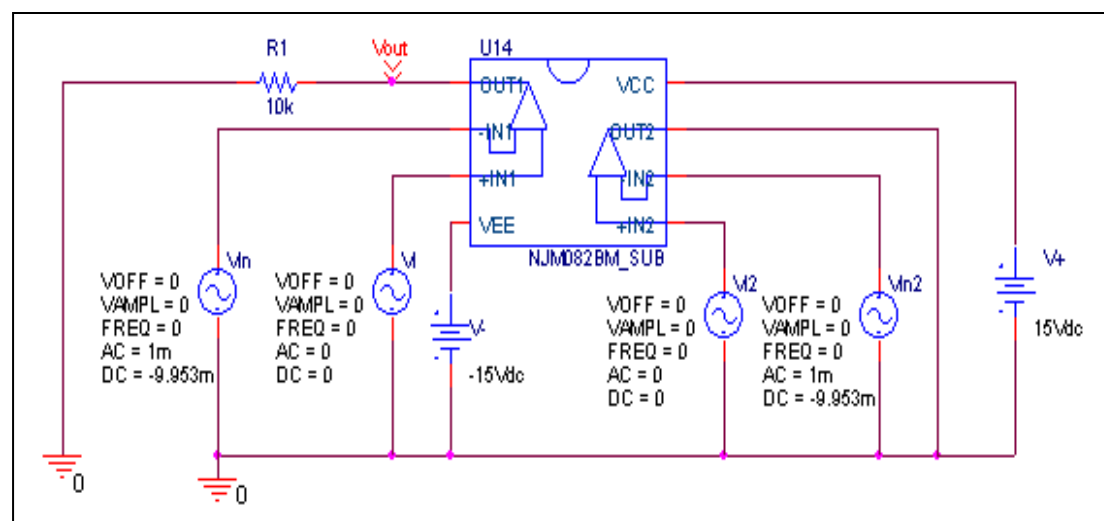
	Data sheet	Simulation	%Error
$I_b(pA)$	30	29.953	0.156
$I_{bos}(pA)$	5	5.048	0.93

Open Loop Voltage Gain vs. Frequency , Av-dc, f-0dB

Simulation result



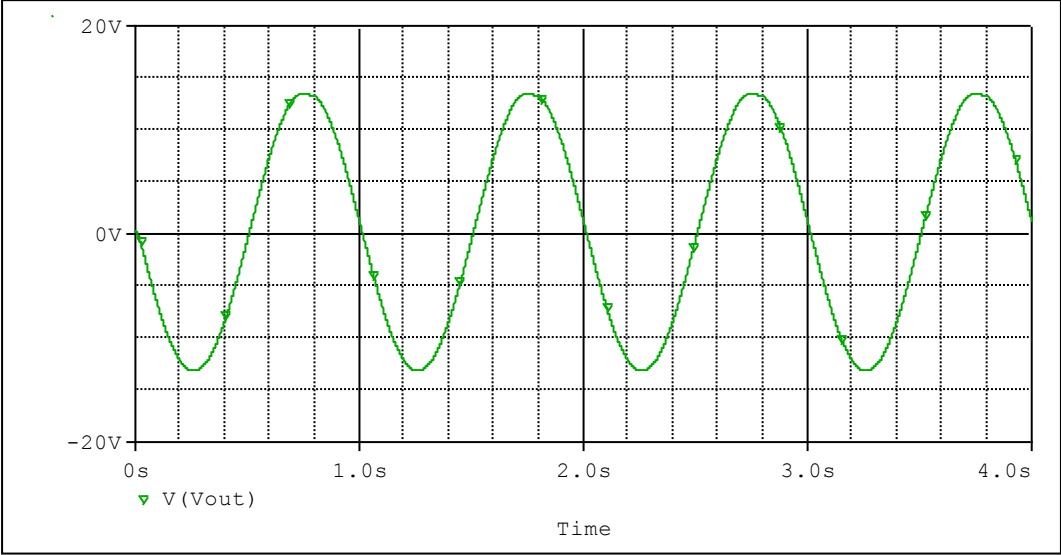
Evaluation circuit



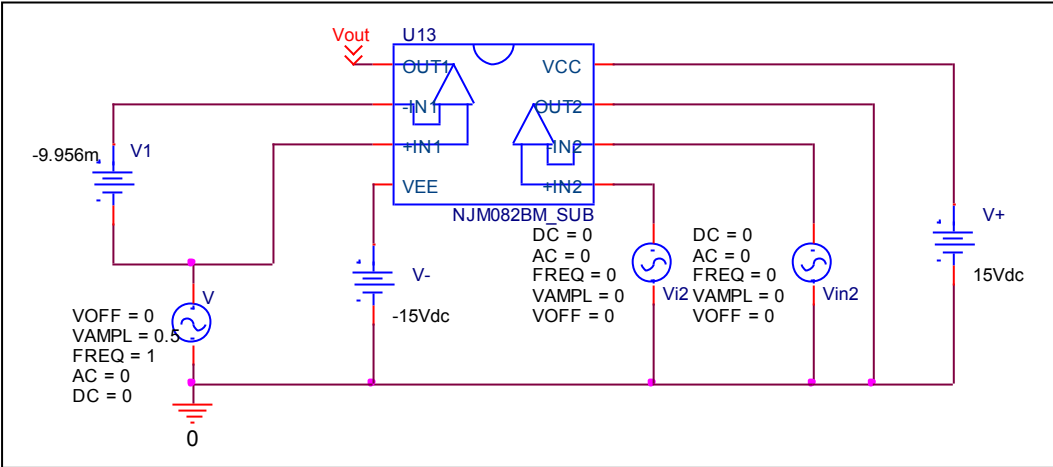
	Data sheet	Simulation	%Error
f-0dB(MHz)	3	2.946	1.8
Av-dc	106	106.4	0.377

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Rejection Ratio=208929/26.528=7875.791

CMRR	Data sheet	Simulation	%Error
	76	77.925	2.534