

Device Modeling Report

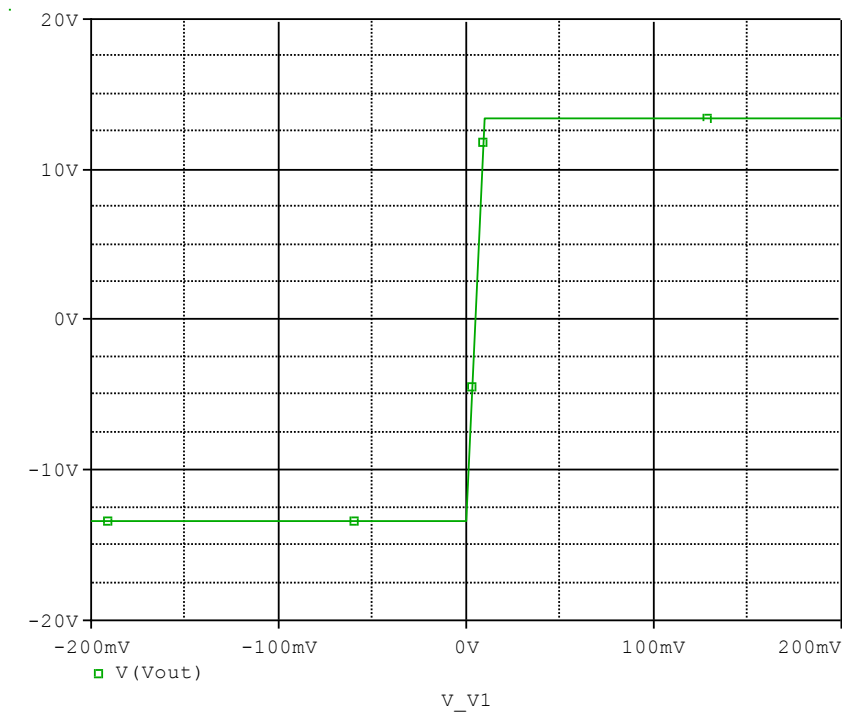
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: UPC4570C
MANUFACTURER: NEC



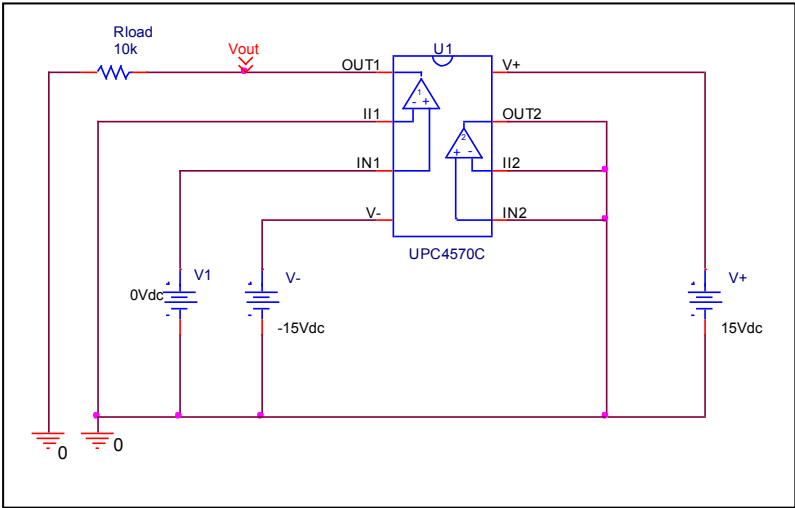
Bee Technologies Inc.

Output Voltage Swing

Simulation result



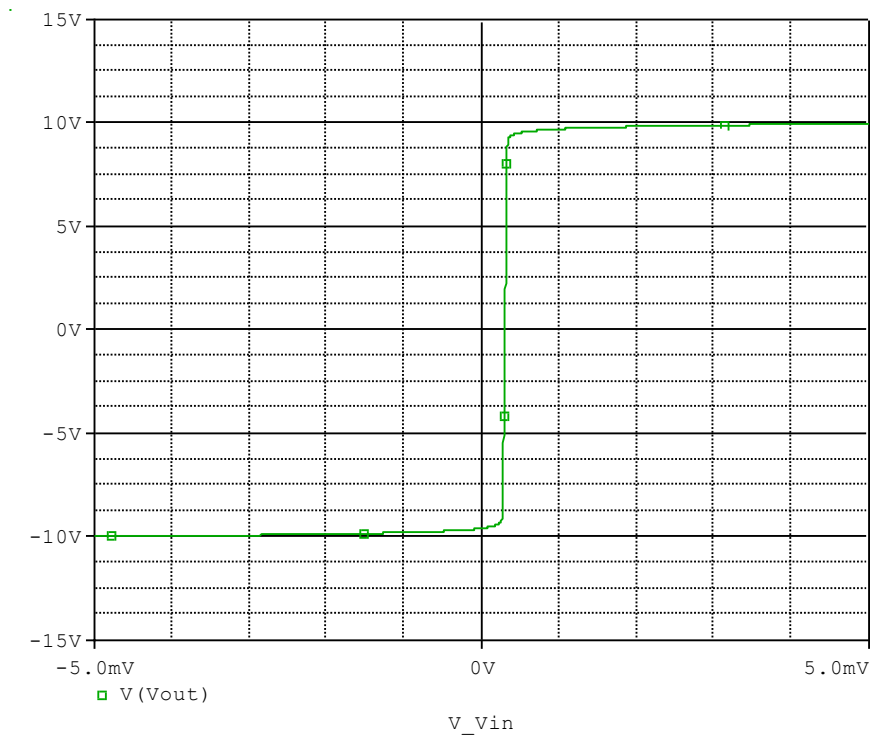
Evaluation circuit



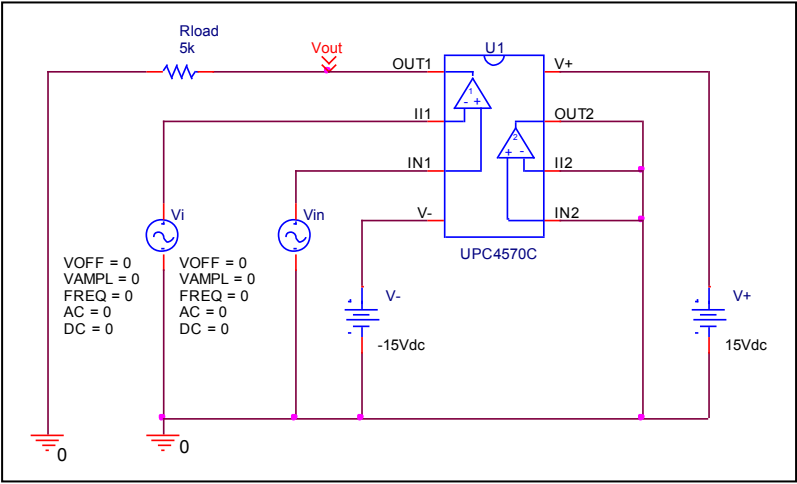
Output Voltage Swing	Measurement	Simulation	%Error
+Vout(V)	+13.400	+13.384	-0.119
-Vout(V)	-13.400	-13.384	-0.119

Input Offset Voltage

Simulation result



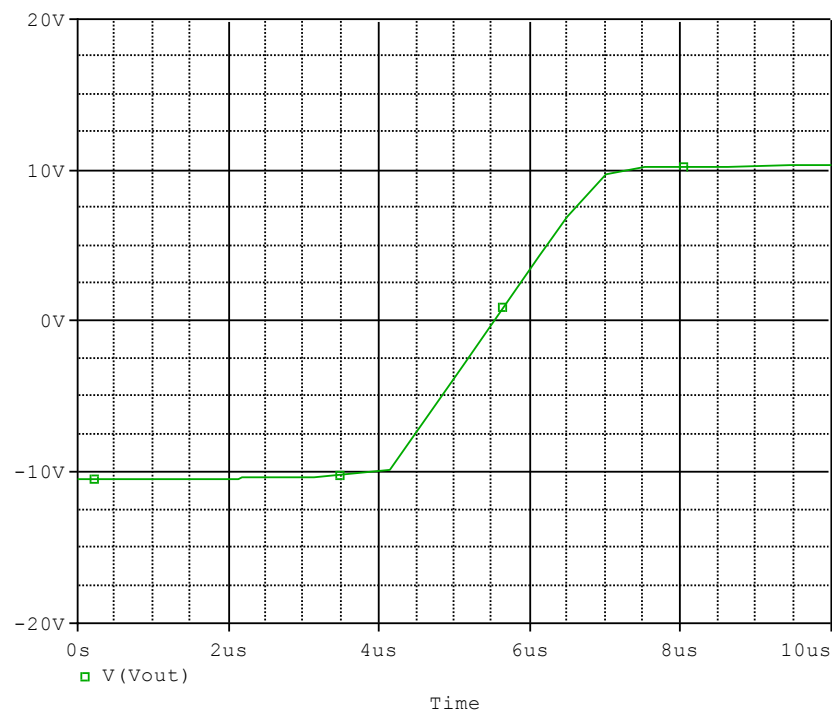
Evaluation circuit



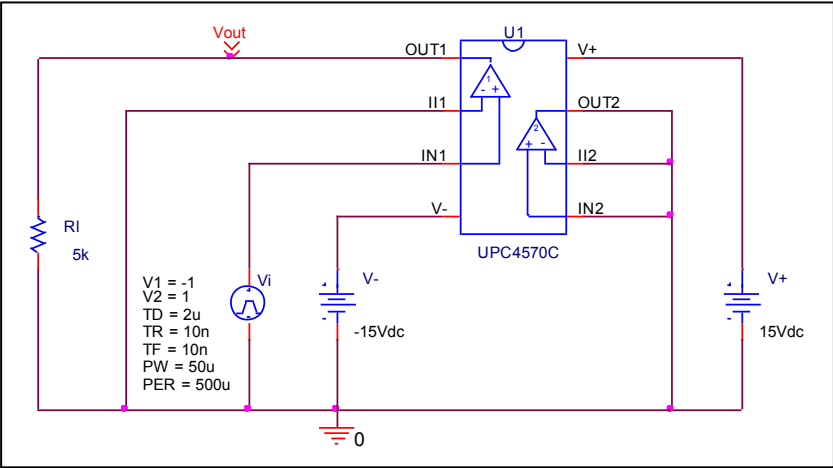
Vos	Measurement		Simulation		Error	
	0.300	mV	0.299	mV	-0.333	%

Slew Rate

Simulation result



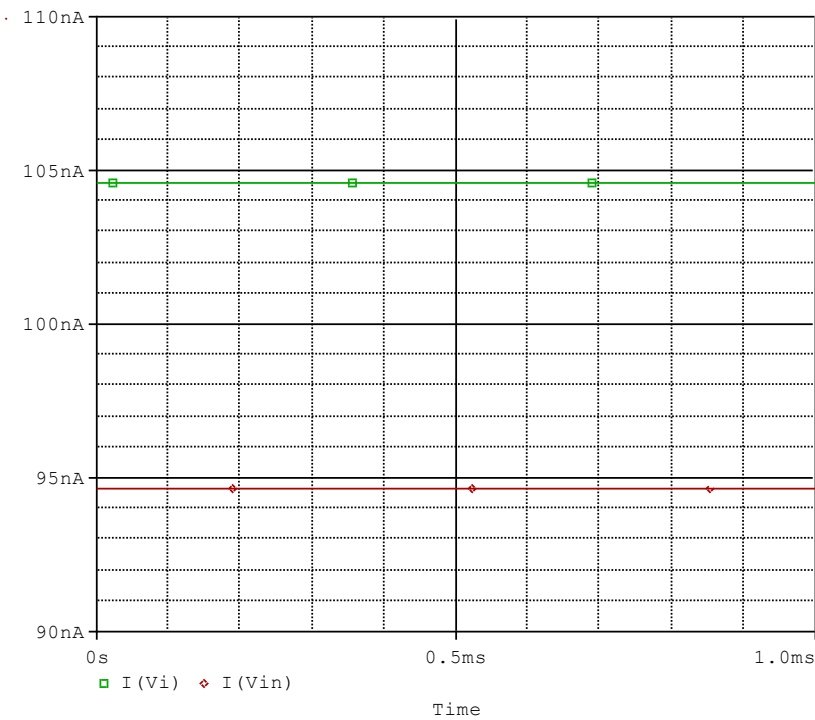
Evaluation circuit



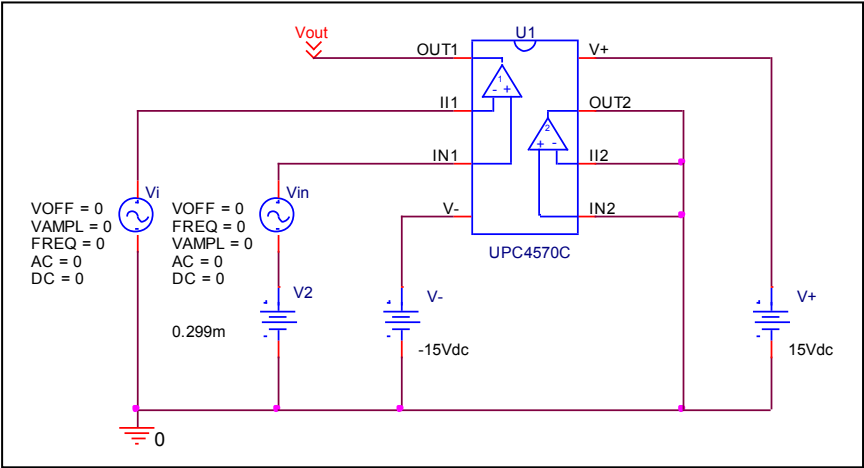
Slew Rate(v/us)	Measurement	Simulation	%Error
	7.000	6.835	-2.357

Input current Ib, Ibos

Simulation result



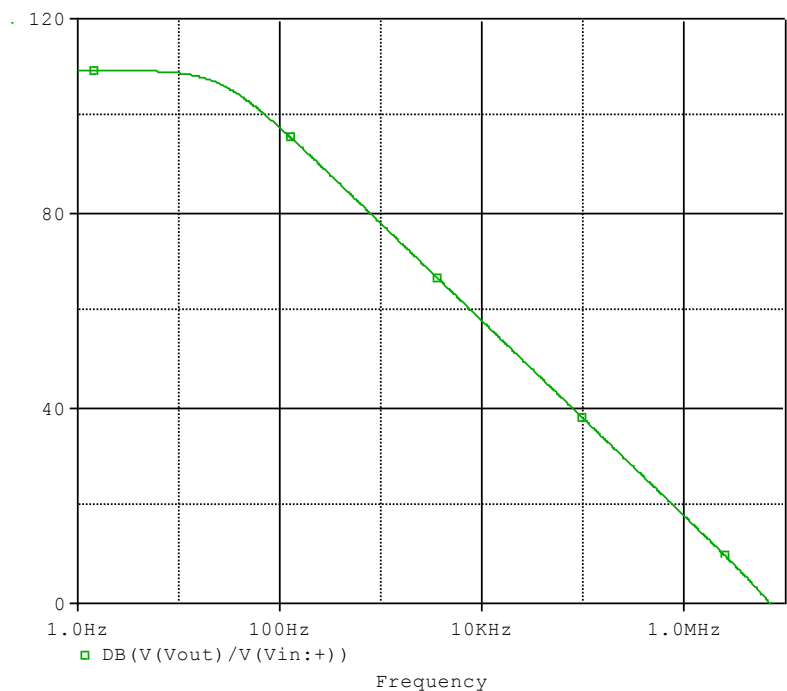
Evaluation circuit



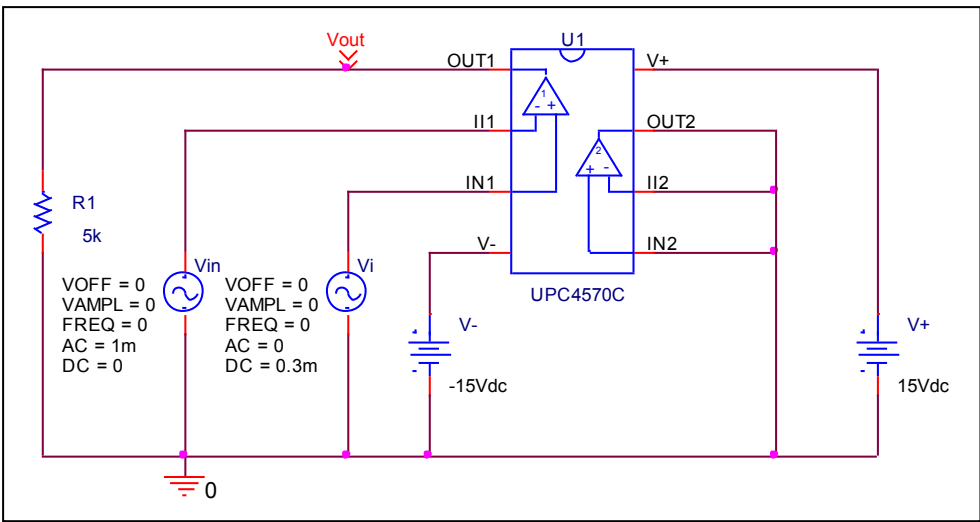
	Measurement	Simulation	%Error
$I_b(nA)$	100.000	99.631	-0.369
$I_{bos}(nA)$	10.000	9.968	-0.320

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

Simulation result



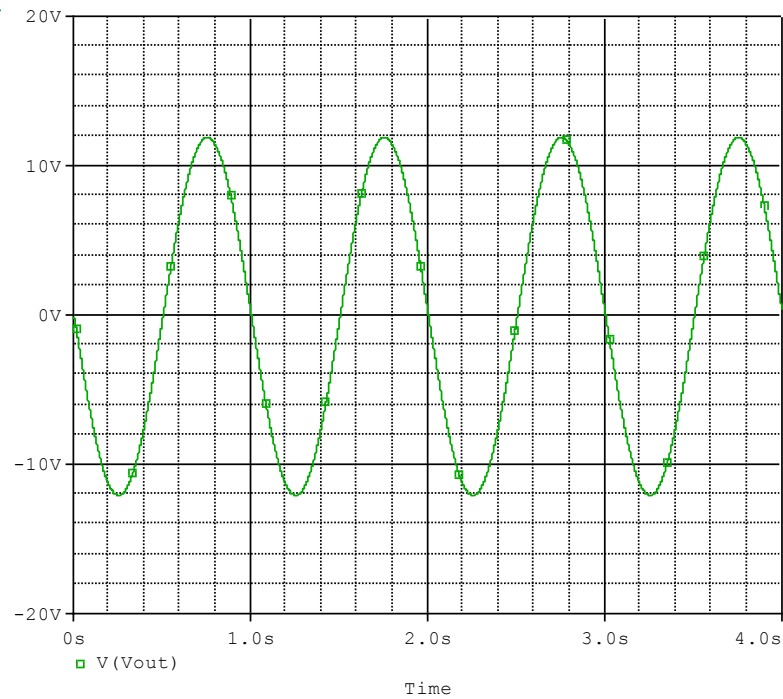
Evaluation circuit



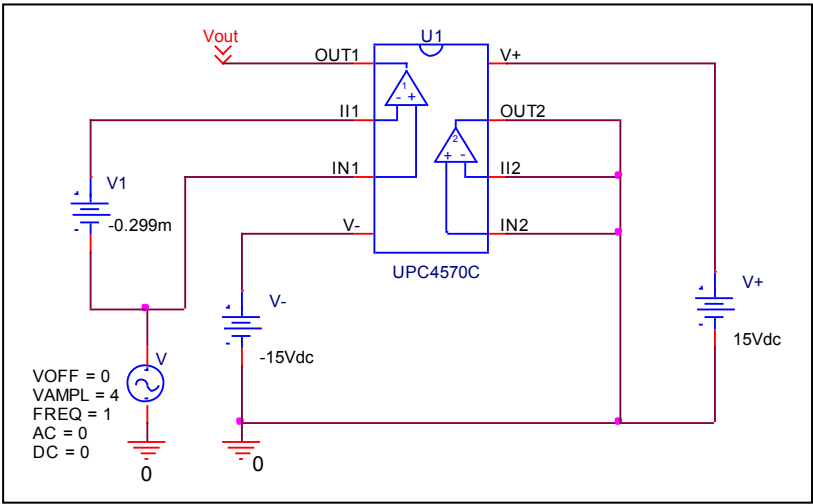
	Measurement	Simulation	%Error
f-0dB(MHz)	7.000	7.003	0.043
Av-dc(dB)	109.540	109.395	-0.132

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



$CMRR=20*LOG(294951.0863/(23.952/8)) = 99.870 \text{ dB}$

CMRR (dB)	Measurement	Simulation	%Error
	100.000	99.870	-0.130