

Device Modeling Report

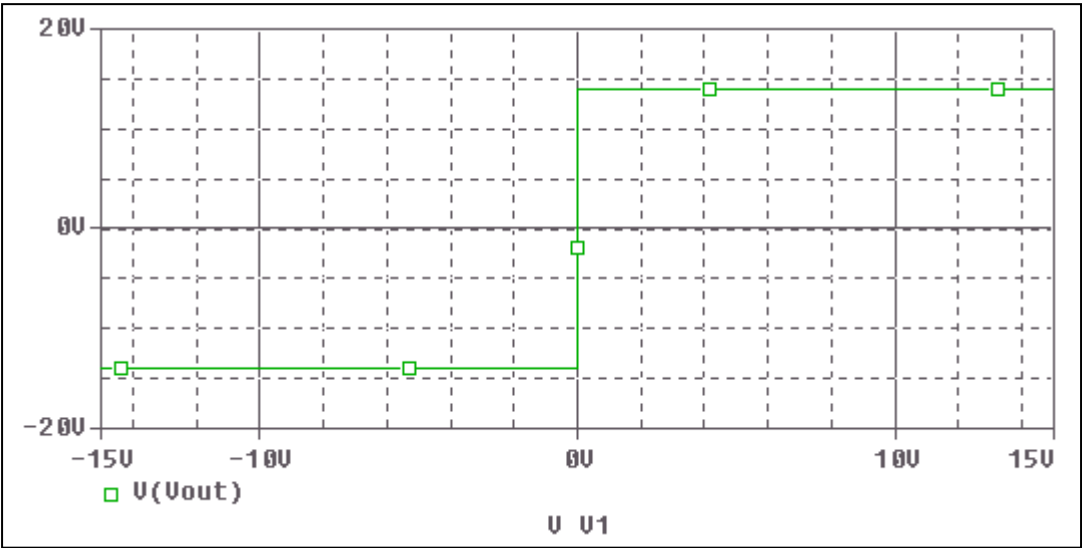
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: uPC4556G2
MANUFACTURER: NEC ELECTRONICS



Bee Technologies Inc.

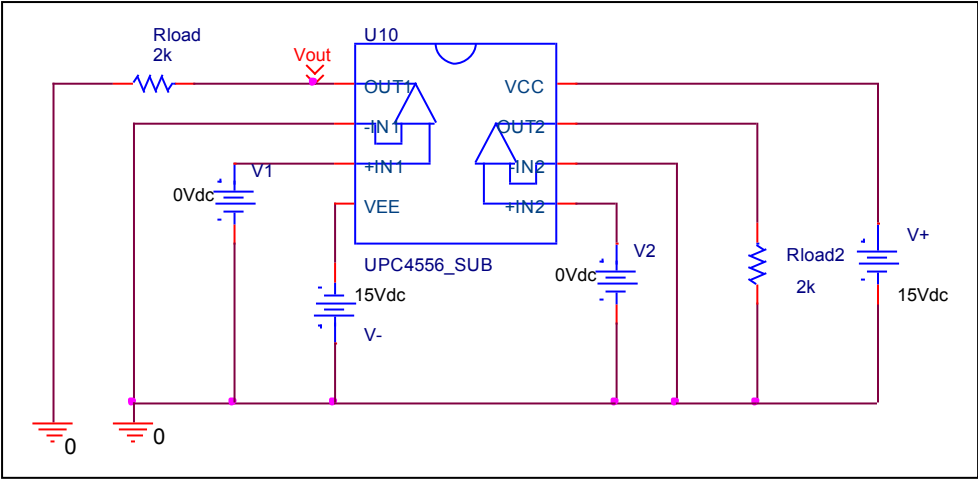
Output Voltage Swing, +Vout and –Vout

Simulation result



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

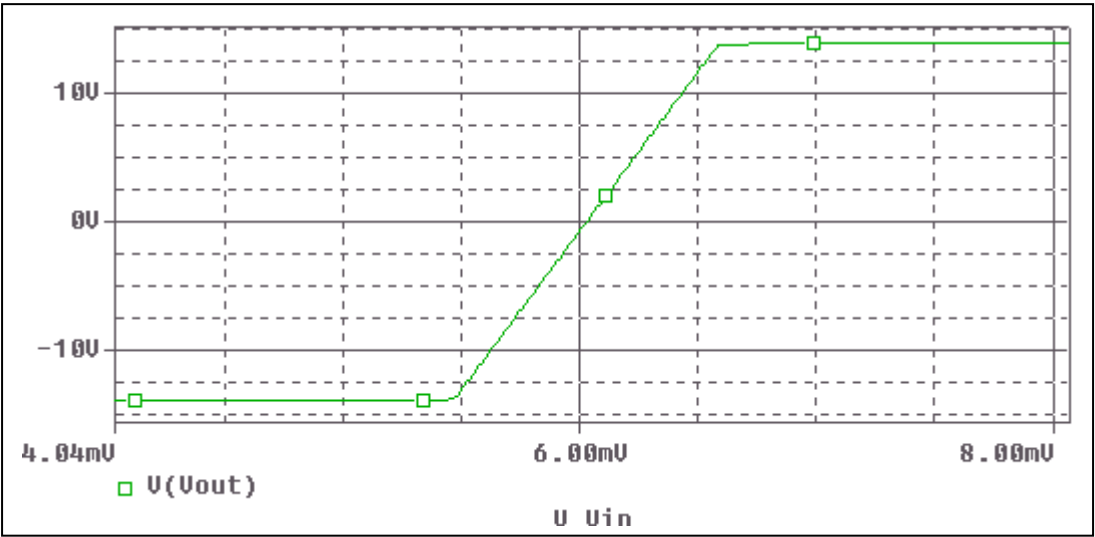
Evaluation circuit



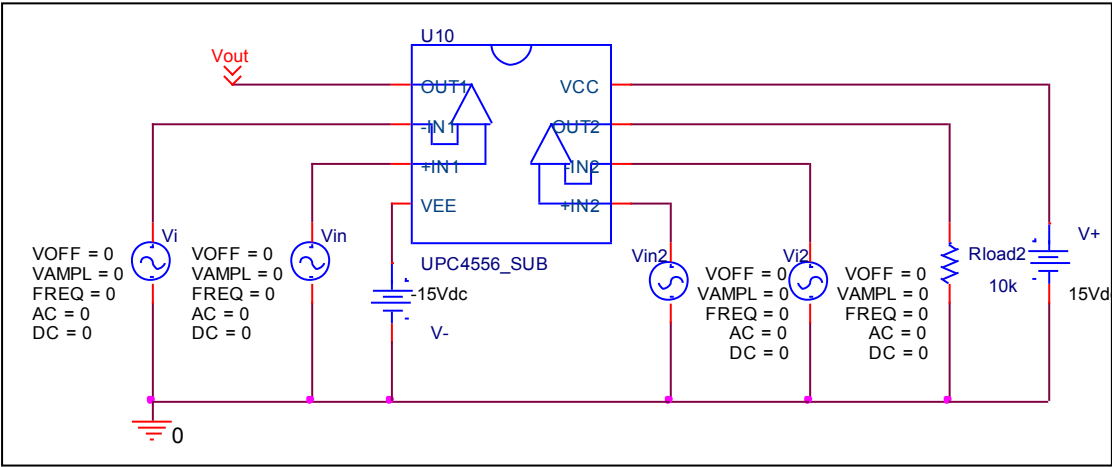
Output Voltage Swing	Data sheet	Simulation	%Error
+Vout(V)	+14	+13.998	0.014
-Vout(V)	-14	-13.998	0.014

Input Offset Voltage

Simulation result



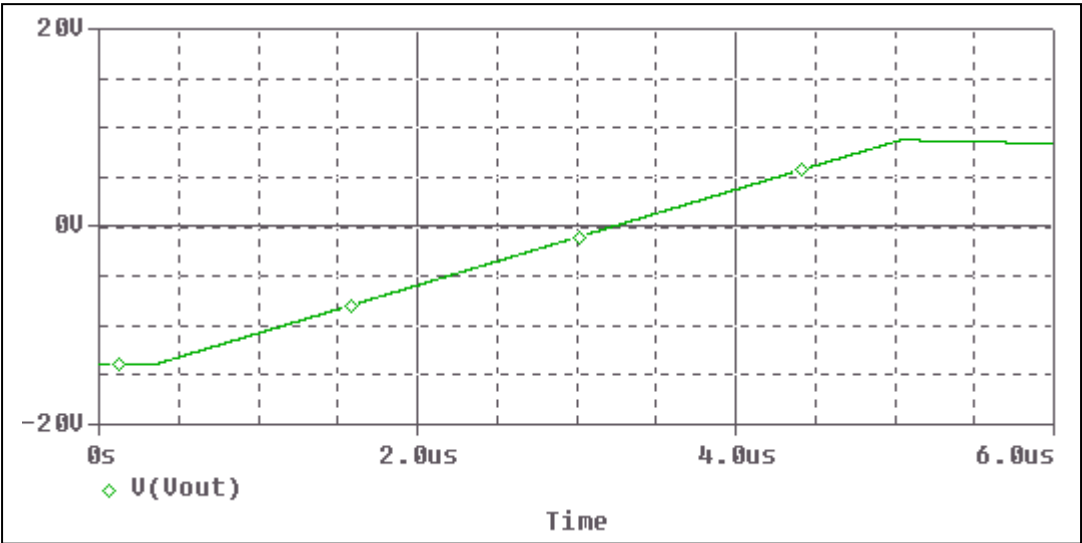
Evaluation circuit



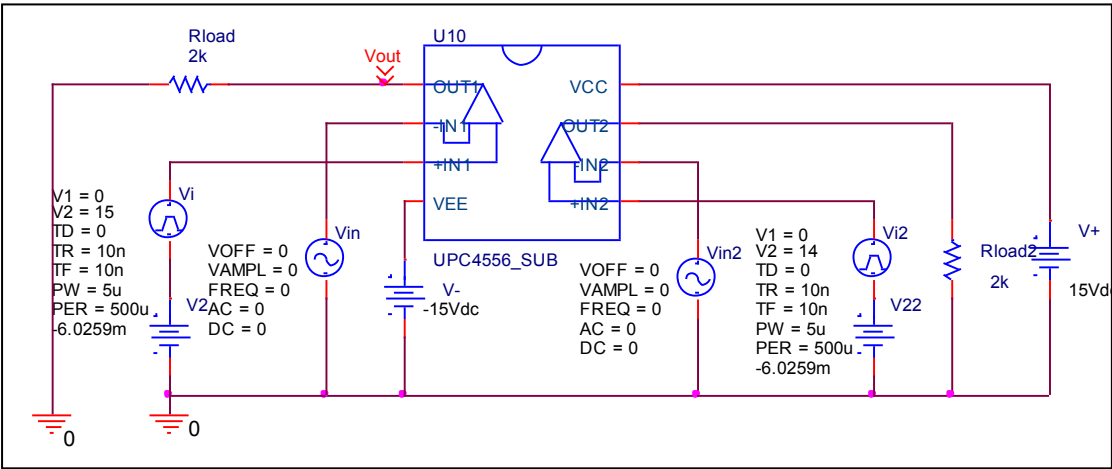
Vos	Measurement		Simulation		Error	
	6	mV	6.0259	mV	0.431	%

Slew Rate, +SR, -SR

Simulation result



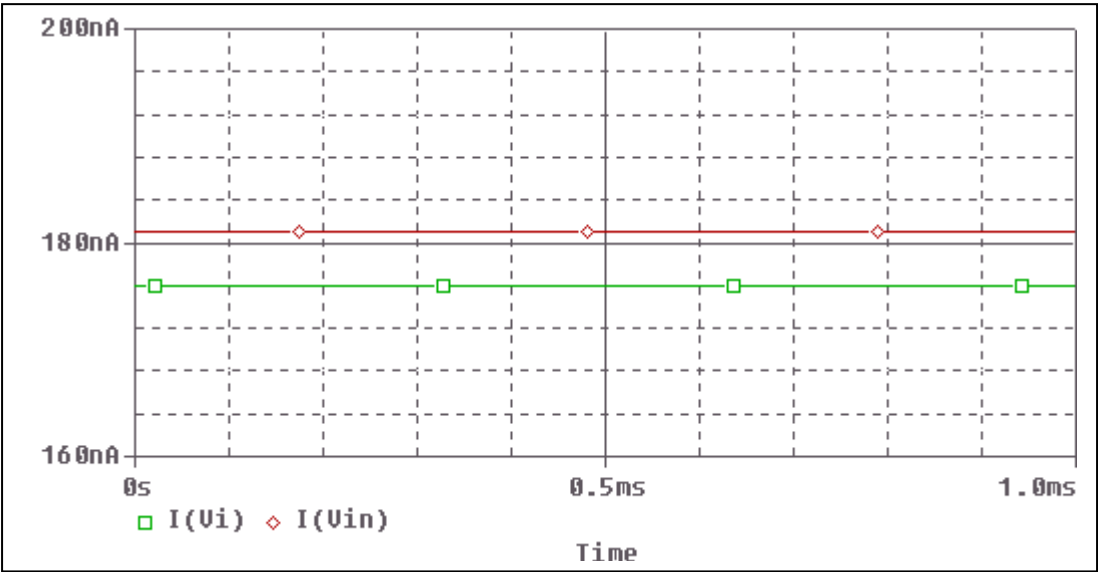
Evaluation circuit



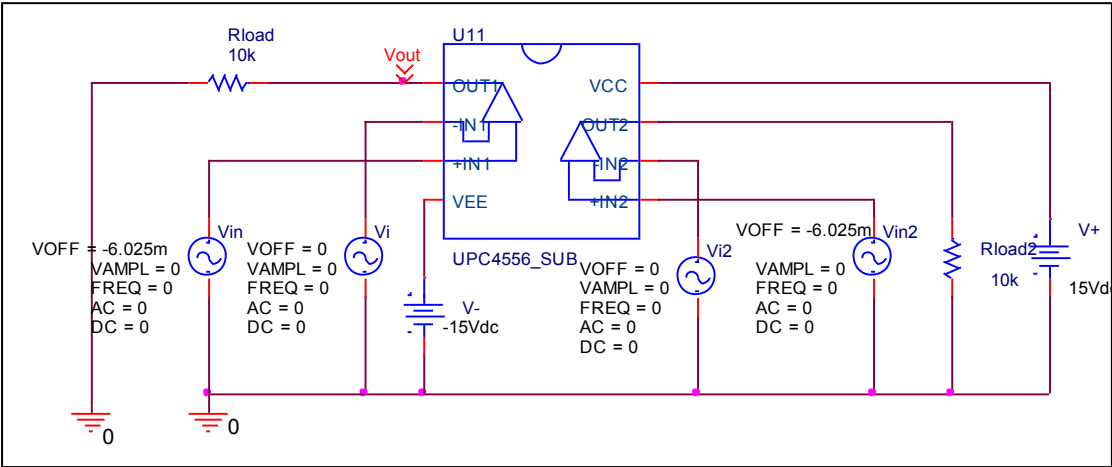
Slew Rate(v/us)	Data sheet	Simulation	%Error
	5V/us	4.851V/us	2.98

Input current Ib, Ibos

Simulation result



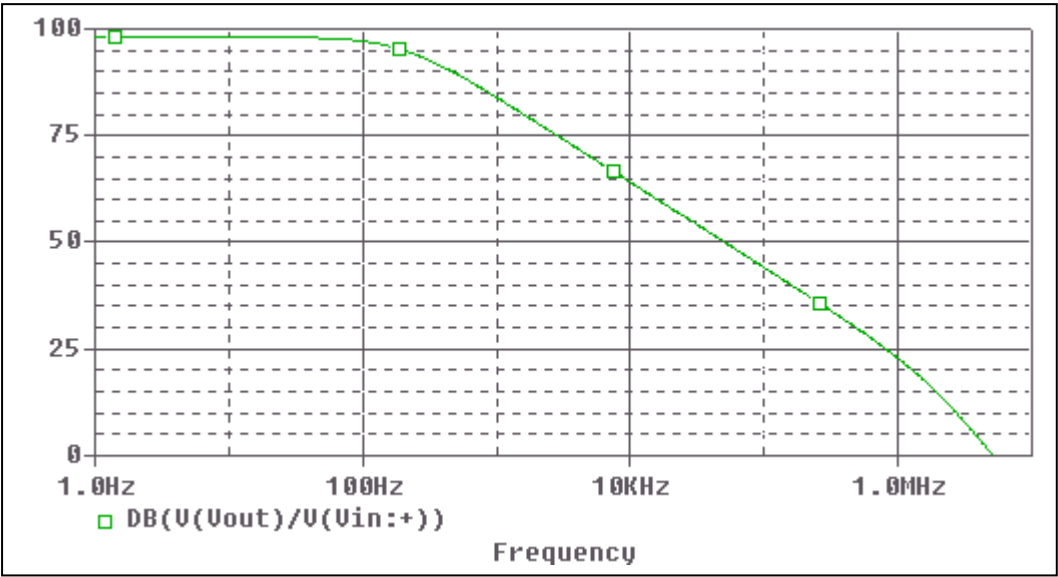
Evaluation circuit



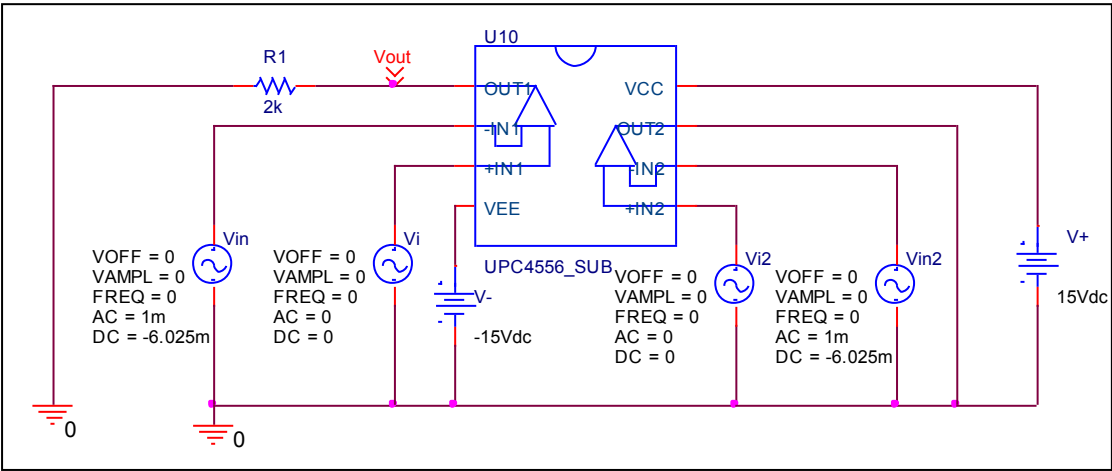
	Data sheet	Simulation	%Error
Ib(pA)	180	178.5	0.833
Ibos(pA)	5	5.035	0.7

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

Simulation result



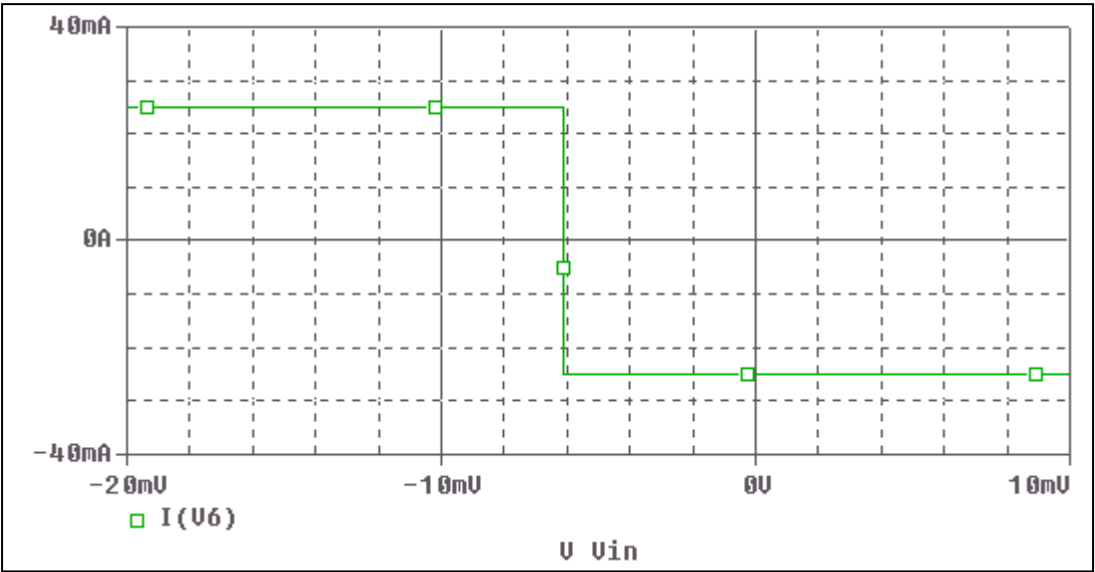
Evaluation circuit



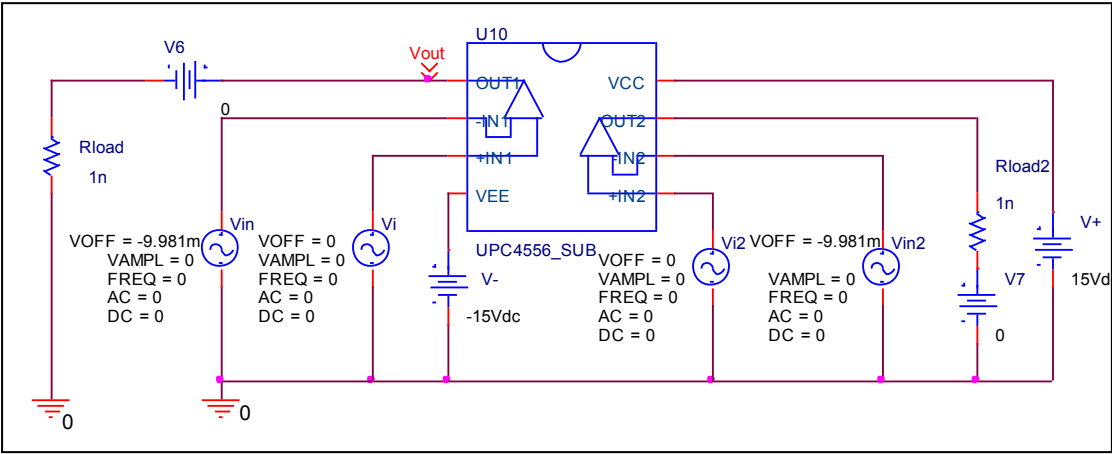
	Data sheet	Simulation	%Error
f-0dB(MHz)	5	4.88	2.4
Av-dc(dB)	100	99.6	0.4

Output Short Circuit Current - Ios

Simulation result



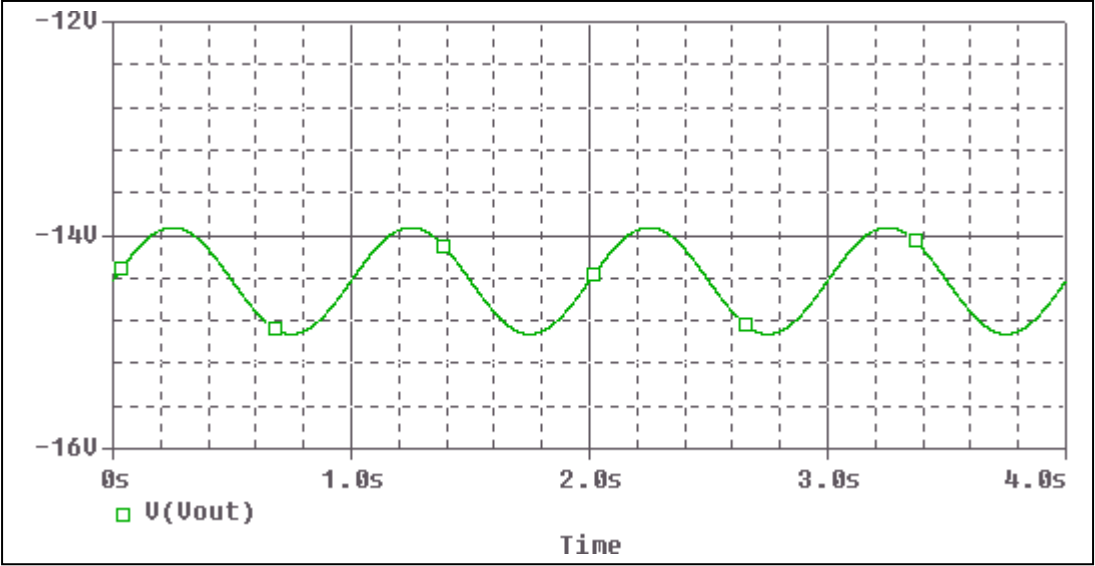
Evaluation circuit



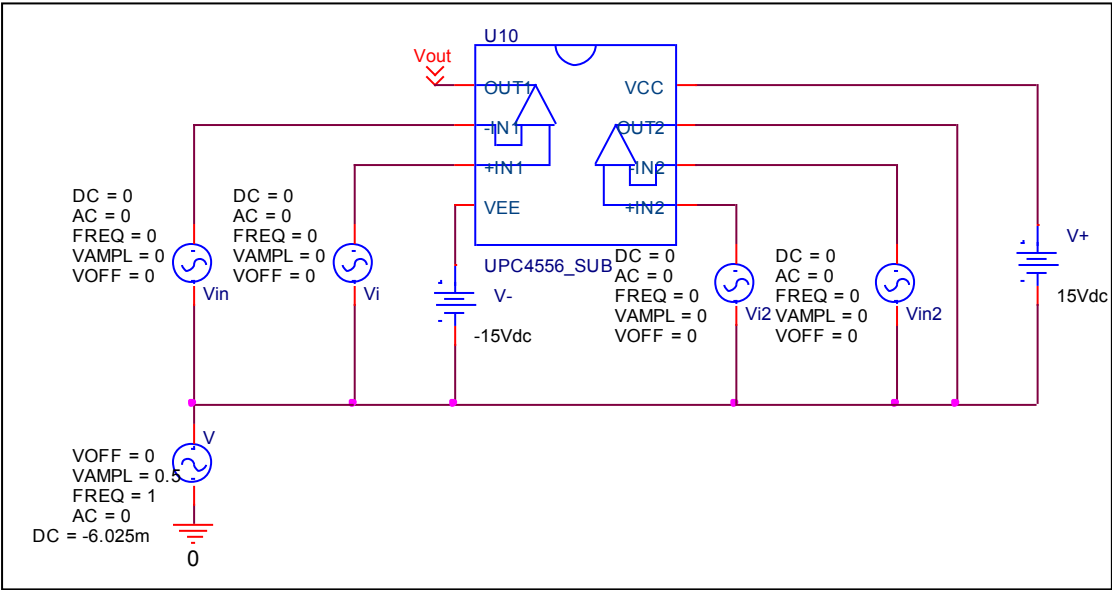
Short Circuit Current	Data sheet	Simulation	%Error
	25mA	25.063mA	0.252

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common mode gain=3.16/1
Common Mode Reject Ratio=95499/3.16=30221

CMRR	Data sheet	Simulation	%Error
	31622	30221	4.43