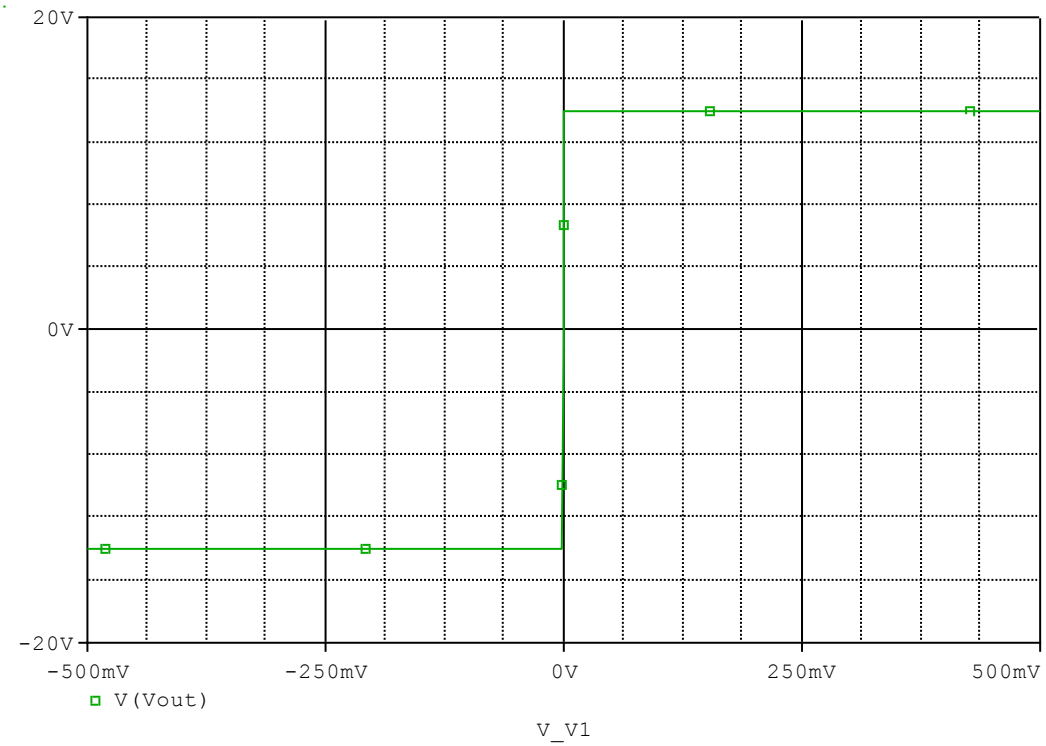
Device Modeling Report

COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: MC1458
MANUFACTURER: STMicroelectronics

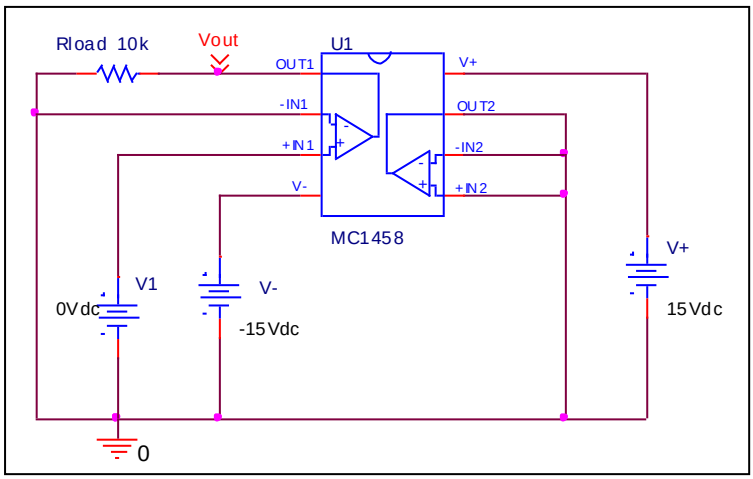
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

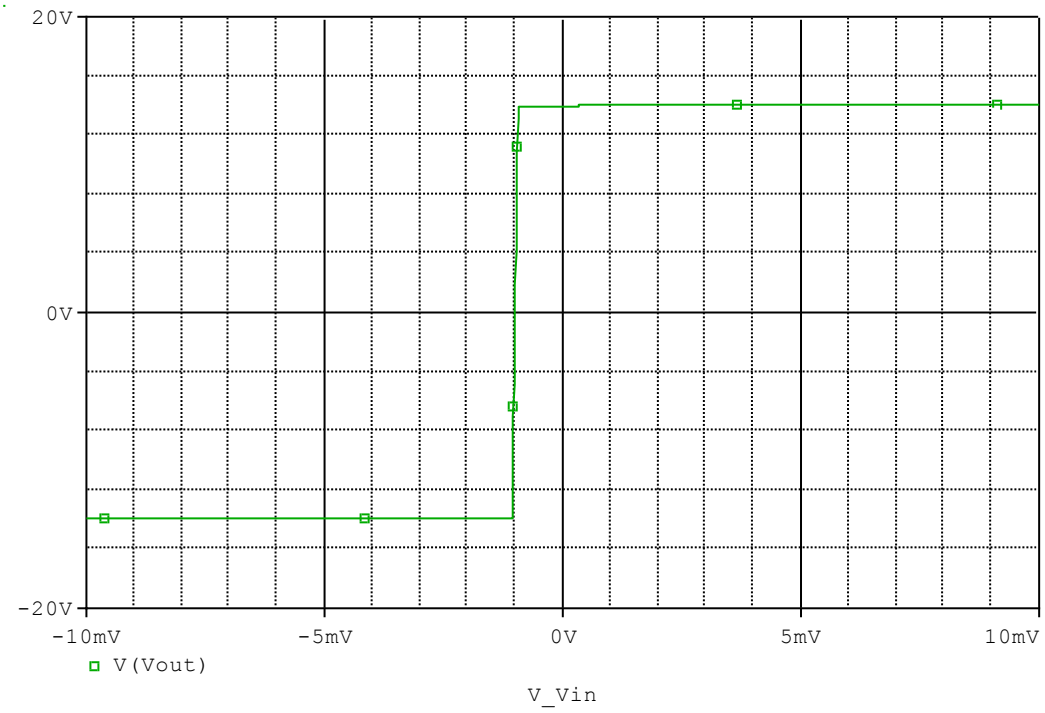


Comparison table

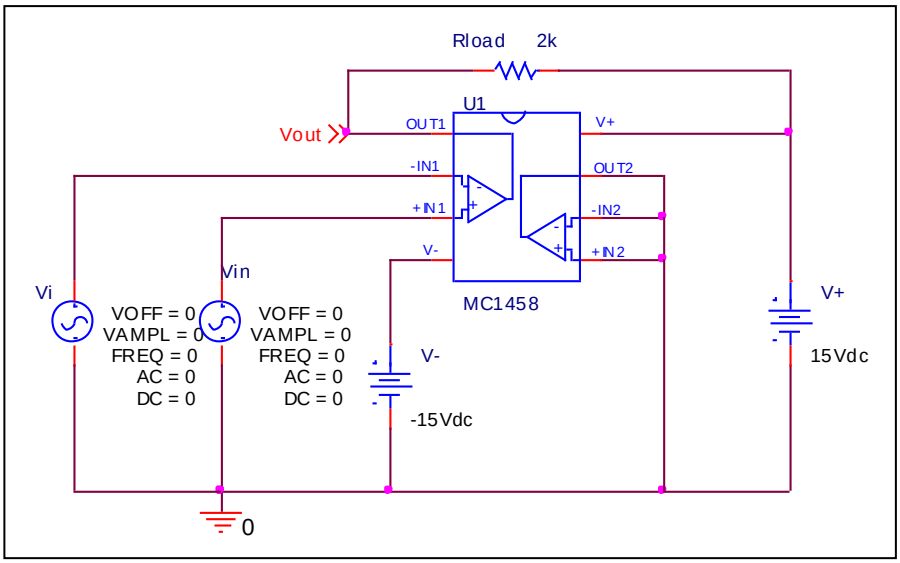
Output Voltage Swing	Measurement	Simulation	%Error
+Vout(V)	14.000	13.999	-0.007
-Vout(V)	-14.000	-13.999	-0.007

Input Offset Voltage

Simulation result



Evaluation circuit

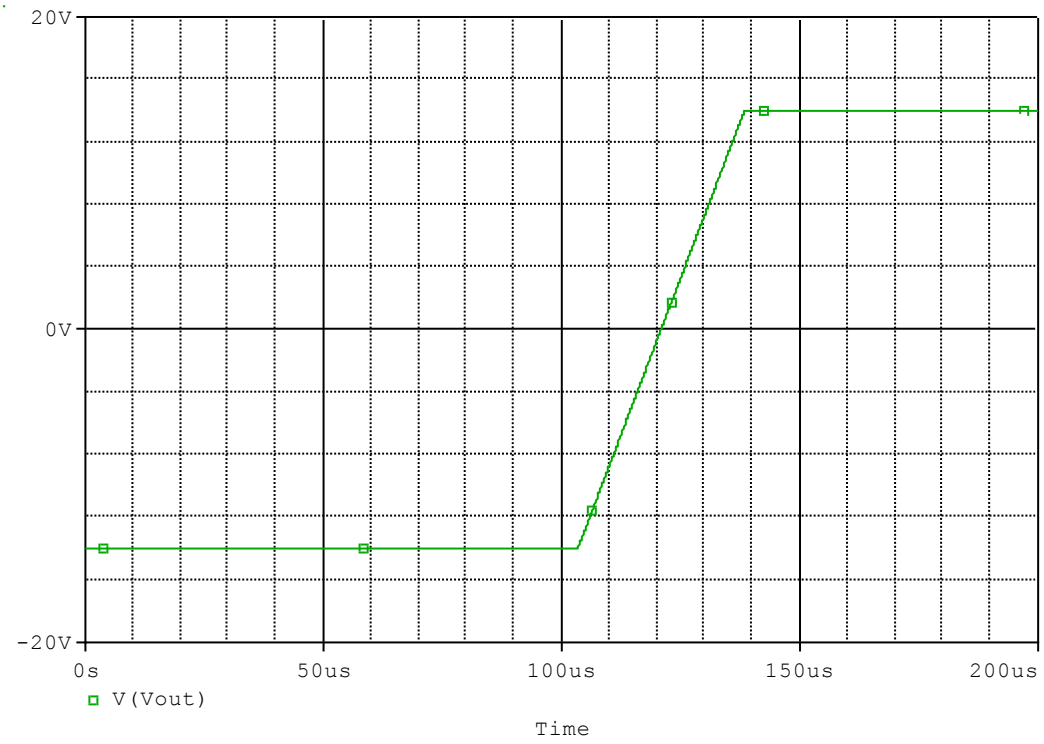


Comparison table

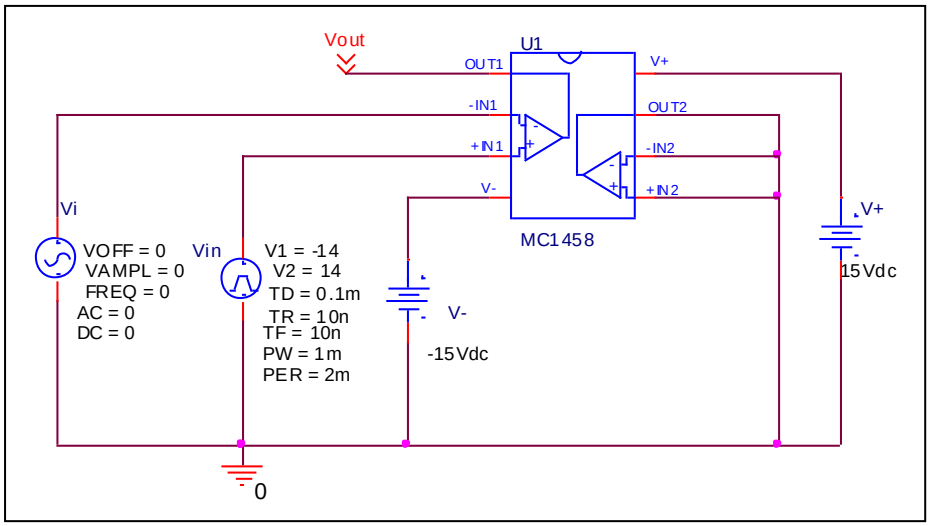
Vos(mV)	Measurement	Simulation	%Error
	1.000	0.999	-0.140

Slew Rate

Simulation result



Evaluation circuit

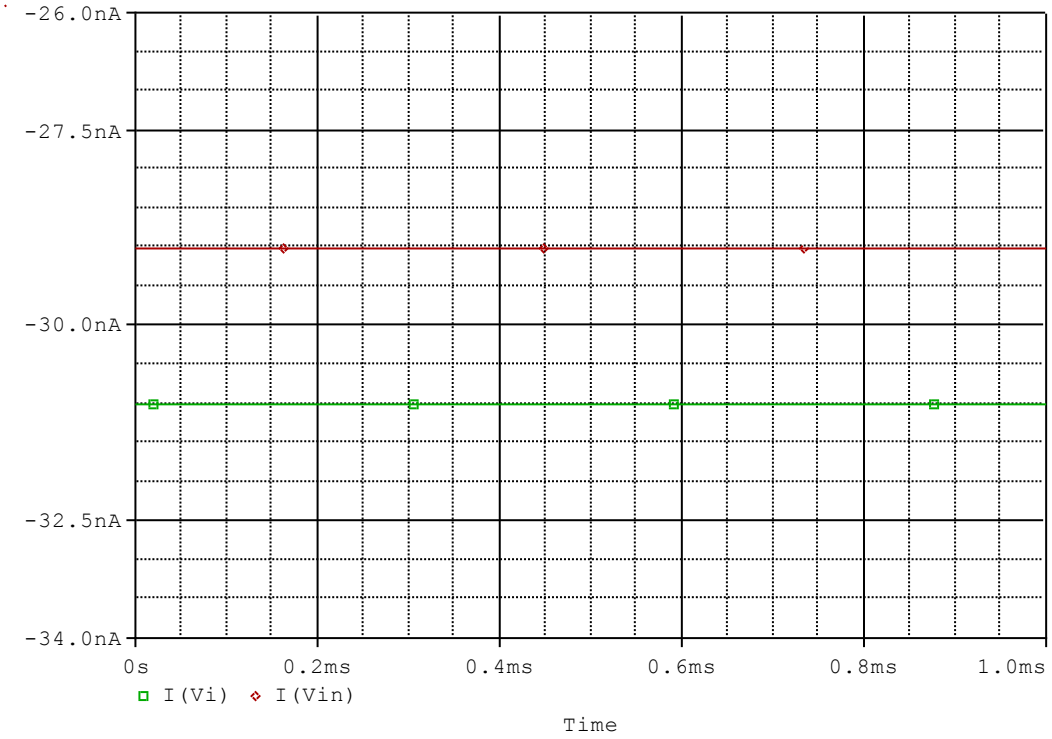


Comparison table

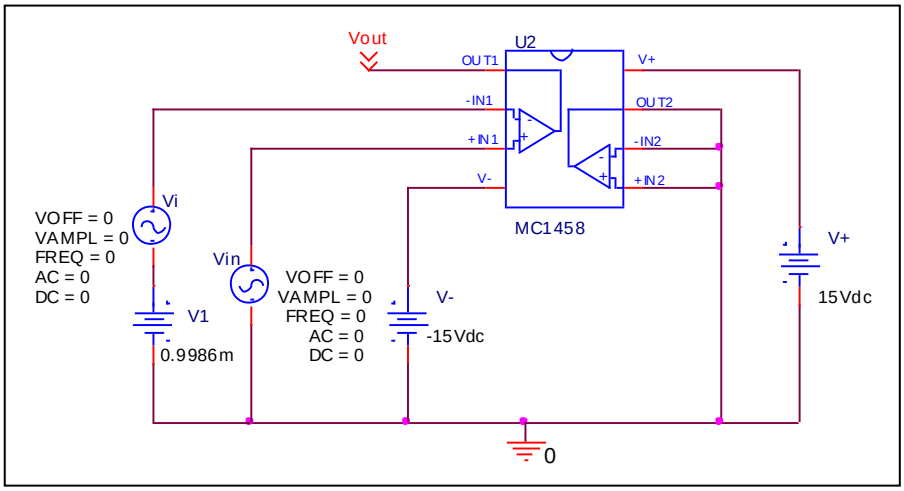
Slew Rate(v/us)	Measurement	Simulation	%Error
	0.800	0.8	0.000

Input current Ib, Ibos

Simulation result



Evaluation circuit

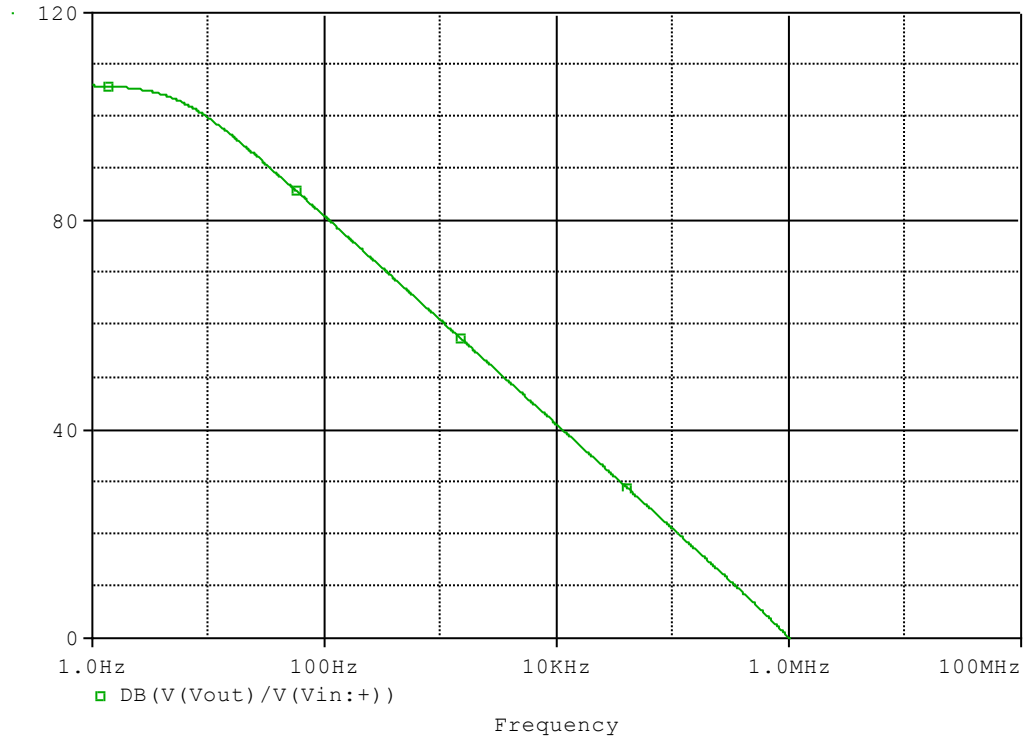


Comparison table

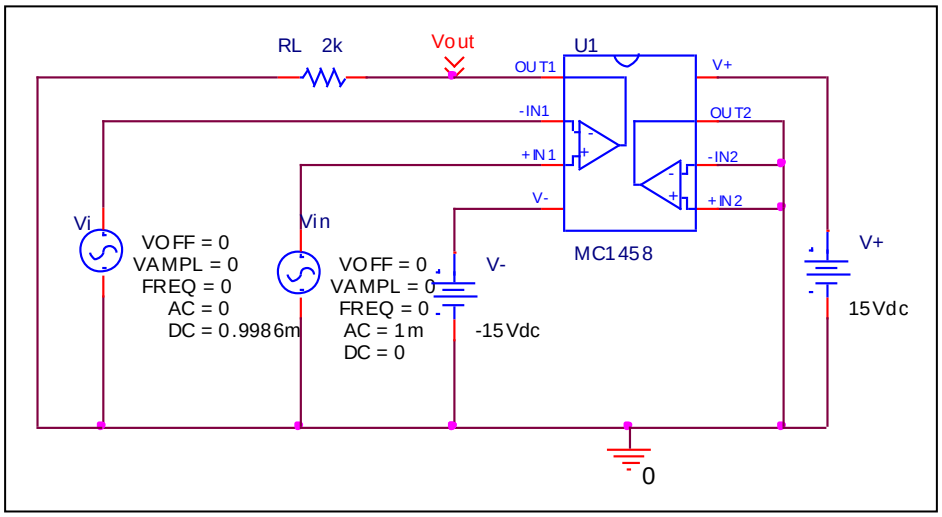
	Measurement	Simulation	%Error
Ib(nA)	30.000	30.010	0.033
Ibos(nA)	2.000	2.005	0.270

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

Simulation result



Evaluation circuit

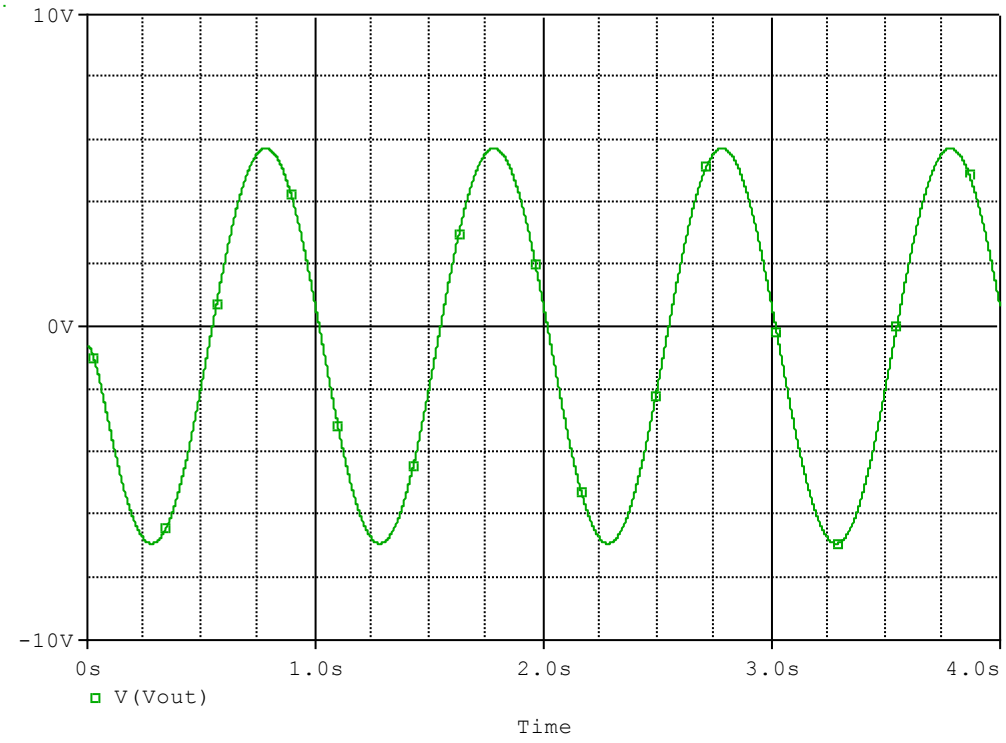


Comparison table

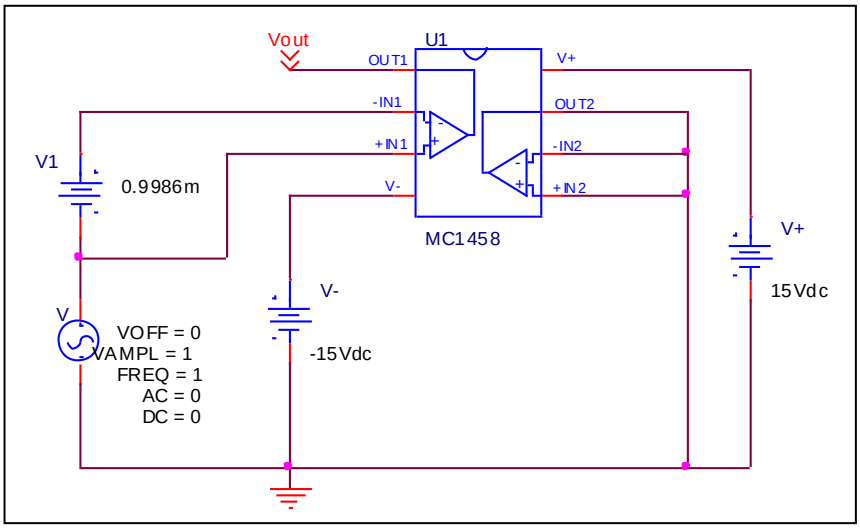
	Measurement	Simulation	%Error
f-0dB(MHz)	1.000	1.000	0.000
Av-dc(dB)	106.000	106.018	0.017

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio=20*LOG(201766.936/10.059) = 86.0459 dB

CMRR (dB)	Measurement	Simulation	%Error
	90.000	90.010	0.011