

Device Modeling Report

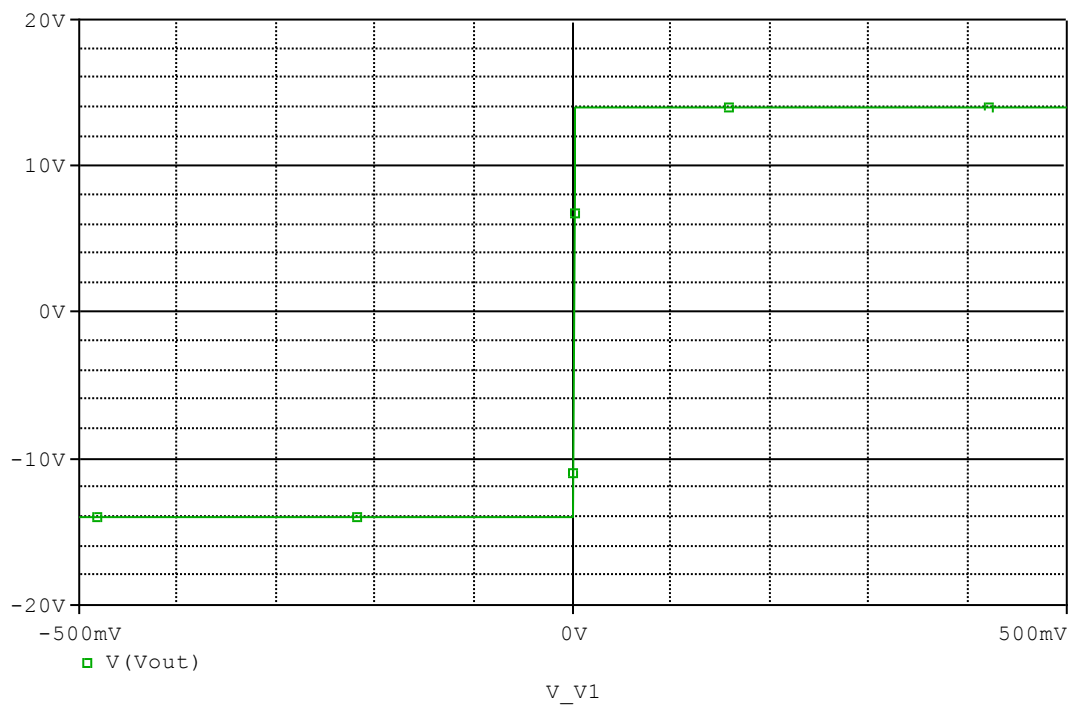
COMPONENTS: OPERATIONAL AMPLIFIER
PART NUMBER: MC4558
MANUFACTURER: STMicroelectronics



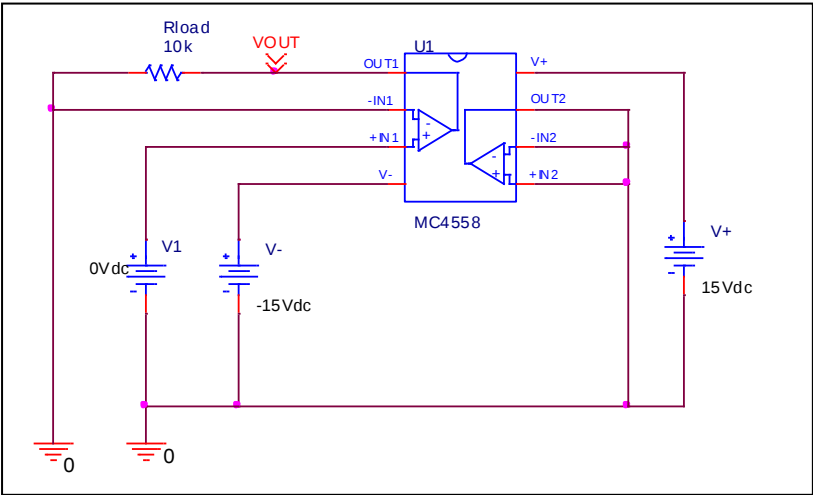
Bee Technologies Inc.

Output Voltage Swing

Simulation result



Evaluation circuit

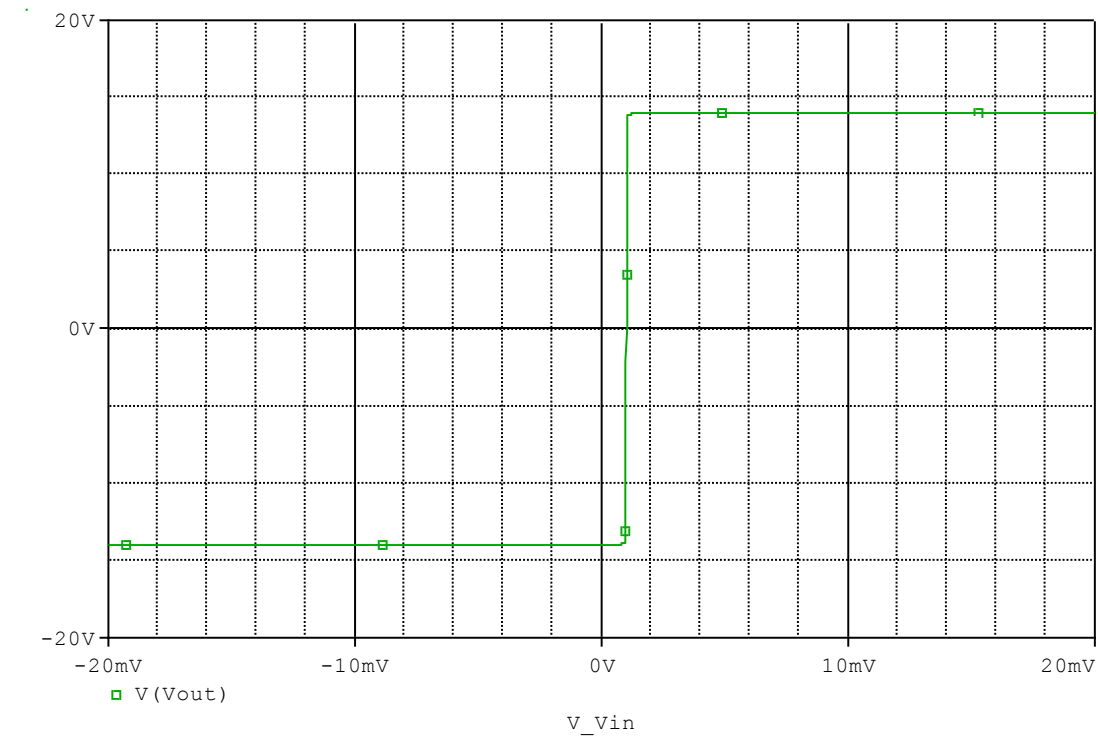


Comparison table

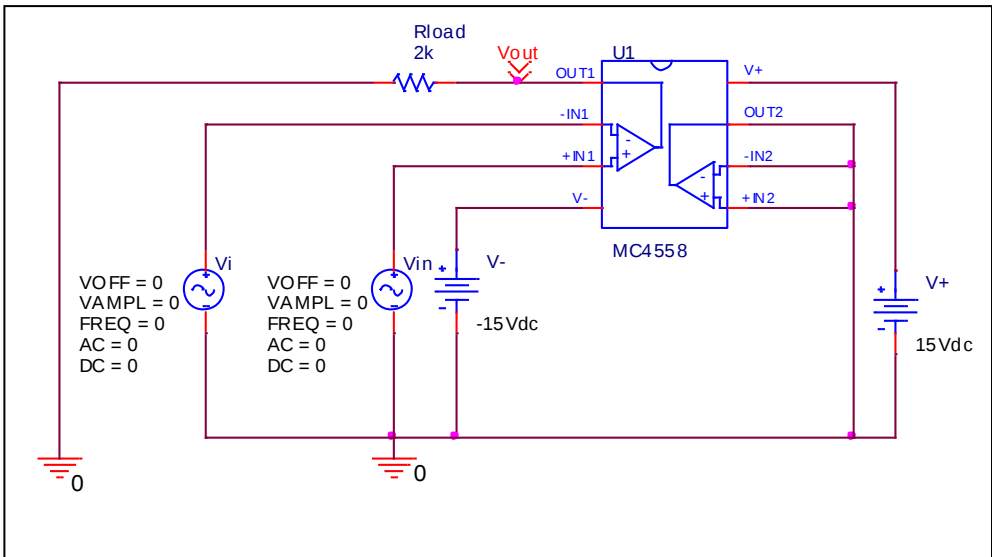
Output Voltage Swing	Measurement	Simulation	%Error
+Vout(V)	14.000	13.999	-0.007
-Vout(V)	-14.000	-13.999	-0.007

Input Offset Voltage

Simulation result



Evaluation circuit

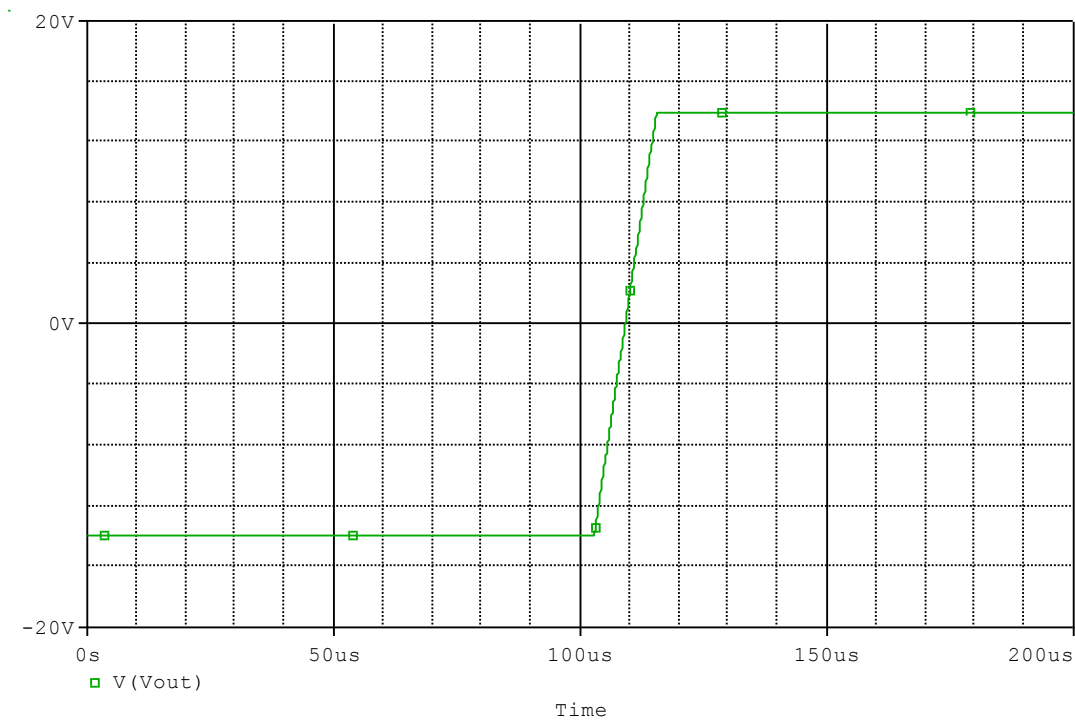


Comparison table

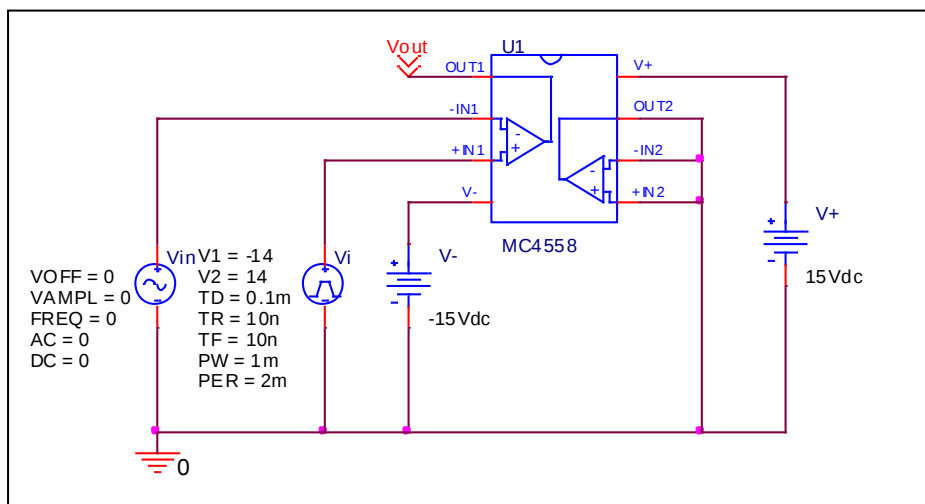
Vos(mV)	Measurement	Simulation	%Error
	1.000	1.000	0.030

Slew Rate

Simulation result



Evaluation circuit

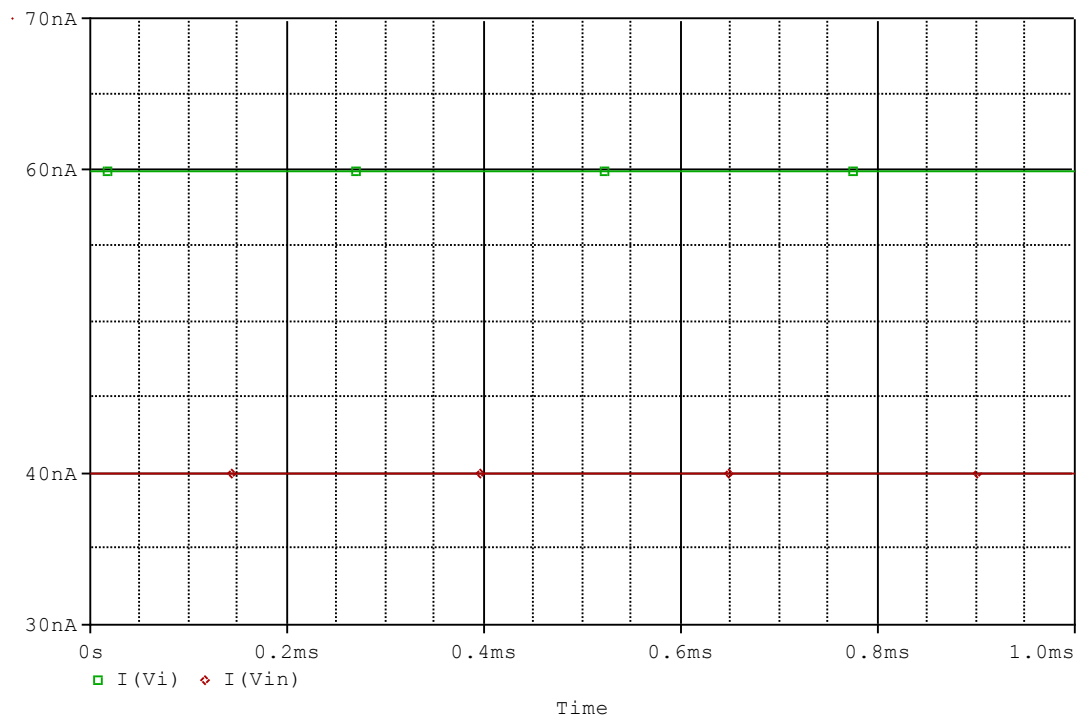


Comparison table

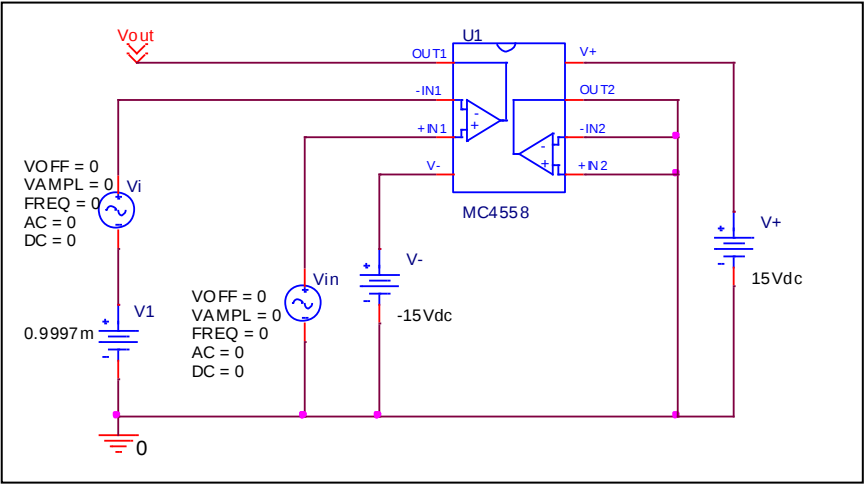
Slew Rate(v/us)	Measurement	Simulation	%Error
	2.200	2.208	-0.364

Input current Ib, Ibos

Simulation result



Evaluation circuit

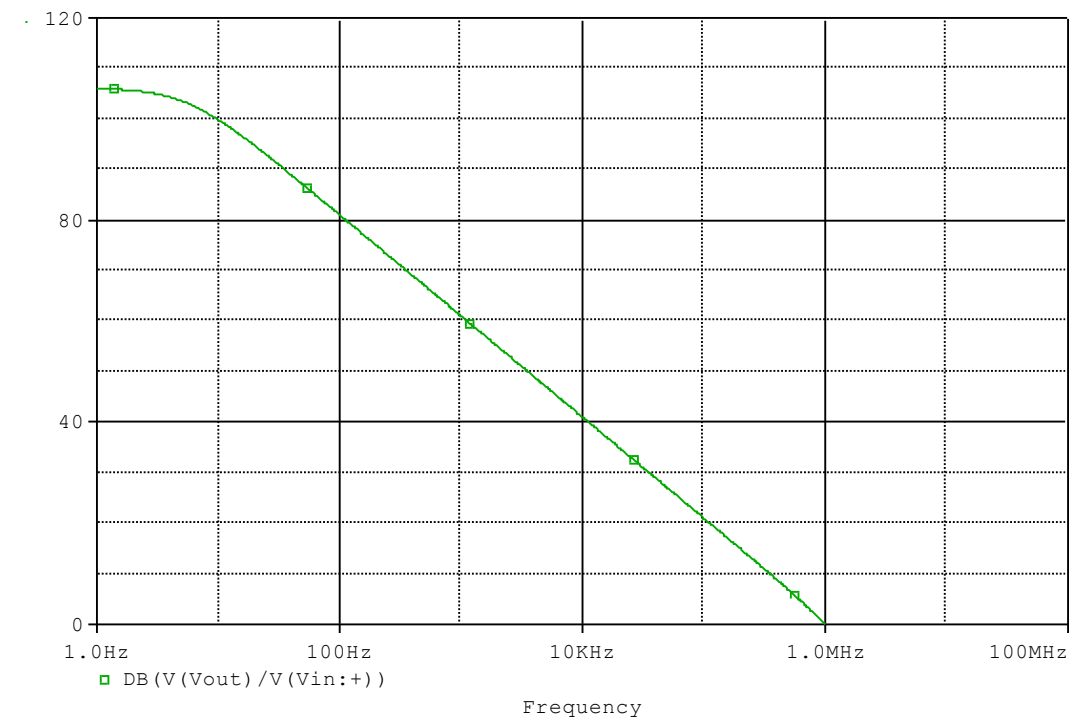


Comparison table

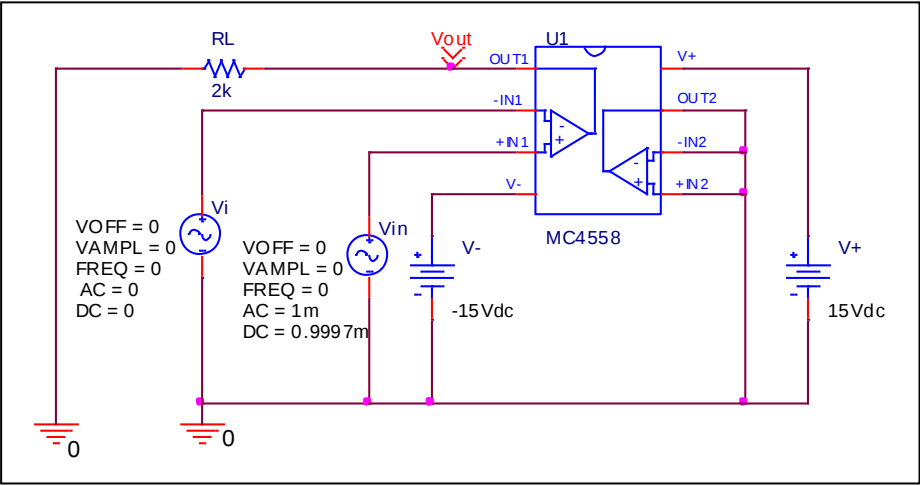
	Measurement	Simulation	%Error
Ib(nA)	50.000	49.978	0.044
Ibos(nA)	20.000	19.924	0.380

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

Simulation result



Evaluation circuit

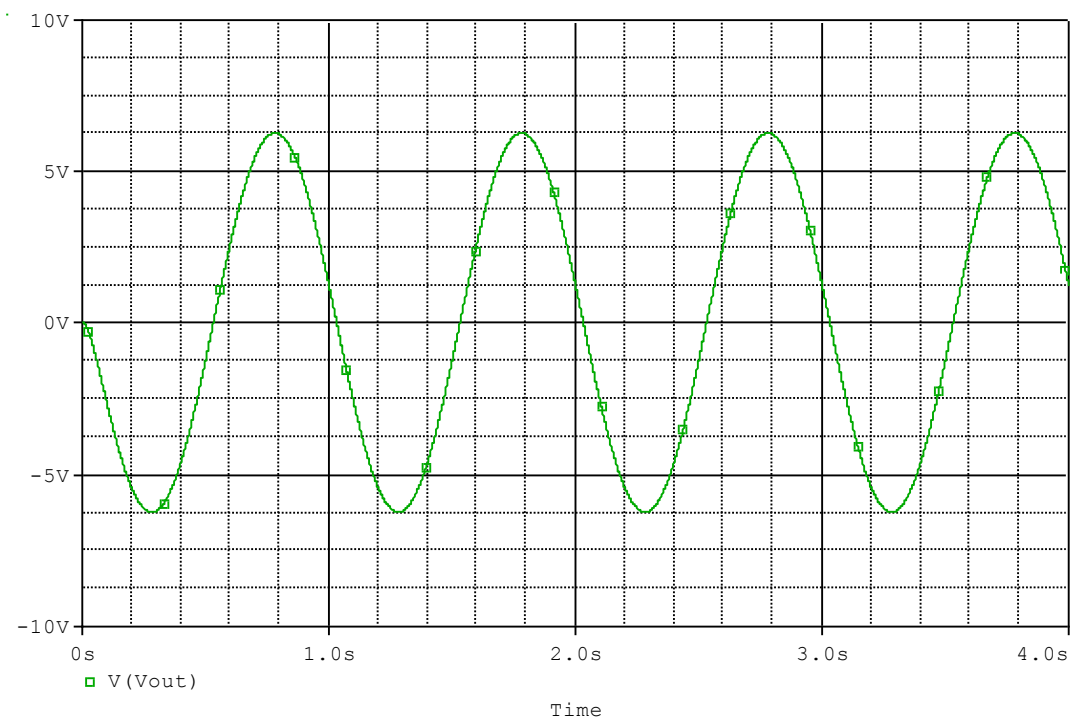


Comparison table

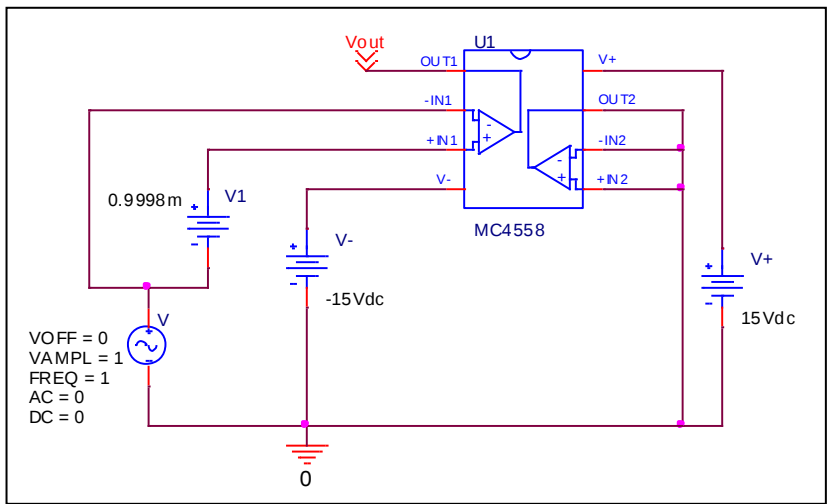
	Measurement	Simulation	%Error
f-0dB(MHz)	1.000	1.000	0.000
Av-dc(dB)	106.000	106.007	-0.007

Common-Mode Rejection Voltage gain

Simulation result



Evaluation circuit



Common Mode Reject Ratio= $20 \times \text{LOG}(199687.0955/(12.504/2)) = 90.0866 \text{ dB}$

CMRR (dB)	Measurement	Simulation	%Error
	90.000	90.087	-0.096