LTspice Model
Operational Amplifier
Texas Instruments Incorporated.
TL974IPWR

Model Information

Model	A macro model
Call Name	MDC_TL974IPWR_LT
Pin Assign	1:OUT1 2:IN1- 3:IN1+ 4:VCC+ 5:IN2+ 6:IN2- 7:OUT2 8:OUT3 9:IN3- 10:IN3+ 11:VCC- 12:IN4+ 13:IN4- 14:OUT4
File List	Model Library MDC_TL974IPWR_LT.lib Model Report MDC_TL974IPWR_LT.pdf(this file)
Verified Simulator Version	LTspice XVII
Note	

References

The information which was used for modeling is as follow:

[Data Sheet]

- ●Date/Version SLOS467H –OCTOBER 2006–REVISED JANUARY 2015
- ●Product name TL974IPWR
- ●Company name Texas Instruments Incorporated.

[Characteristics listed]

- ●Characteristics Open Loop Gain
  Input offset voltage
  Output current limit
  Slew Rate
  Input Voltage Noise

Simulation Condition

This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

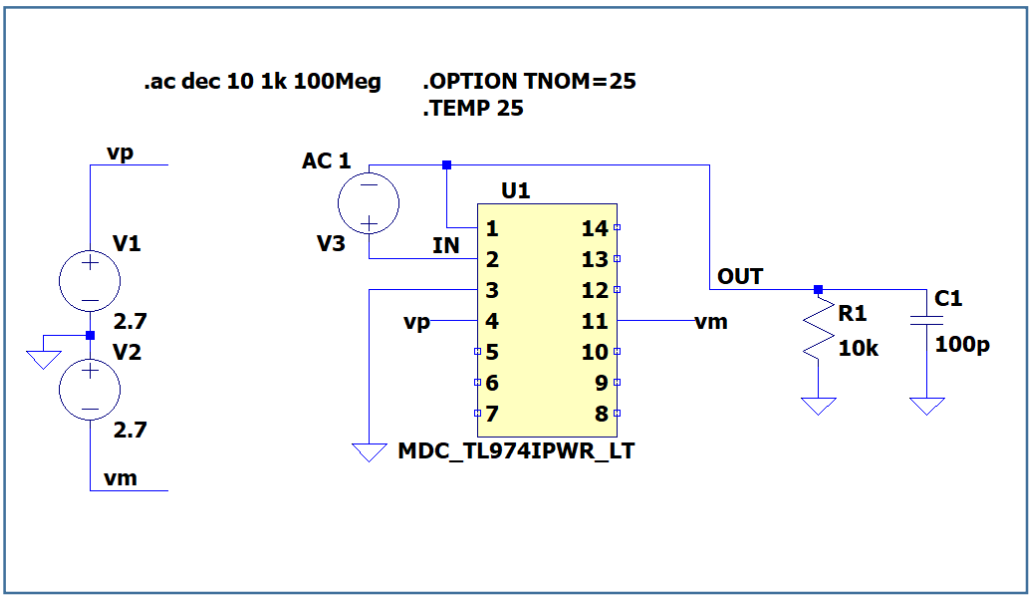
○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

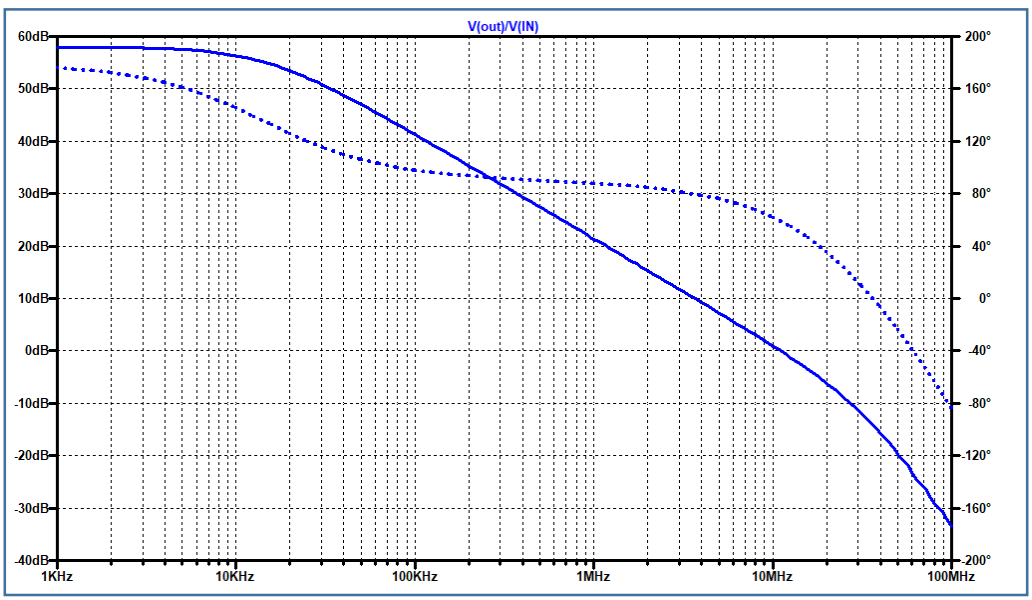
	RANK=1	
Functions	RANK	Implemented
Open Loop Gain	1	○
Unity Frequency	1	○
Phase Margin	1	○
Input Offset Voltage	1	○
Input Offset Current	1	—
Bias Current	1	—
Maximum output amplitude voltage	1	○
Slew Rate	1	○
Equivalent Input Noise Voltage	2	○
Equivalent Input Noise Current	2	—

Open Loop Gain

TestBench

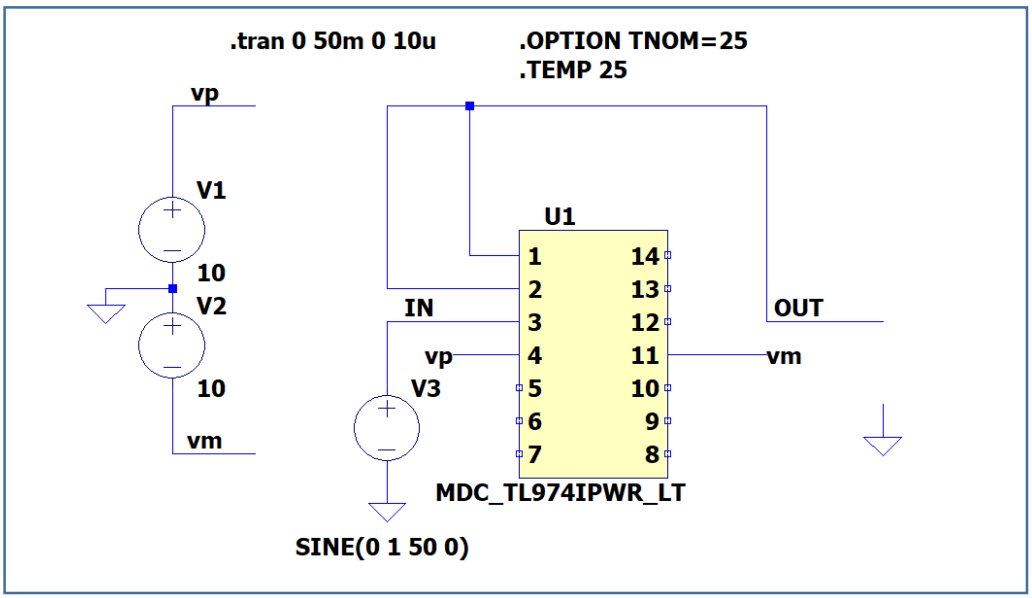


Simulation results are following.
Explanatory notes — : simulated

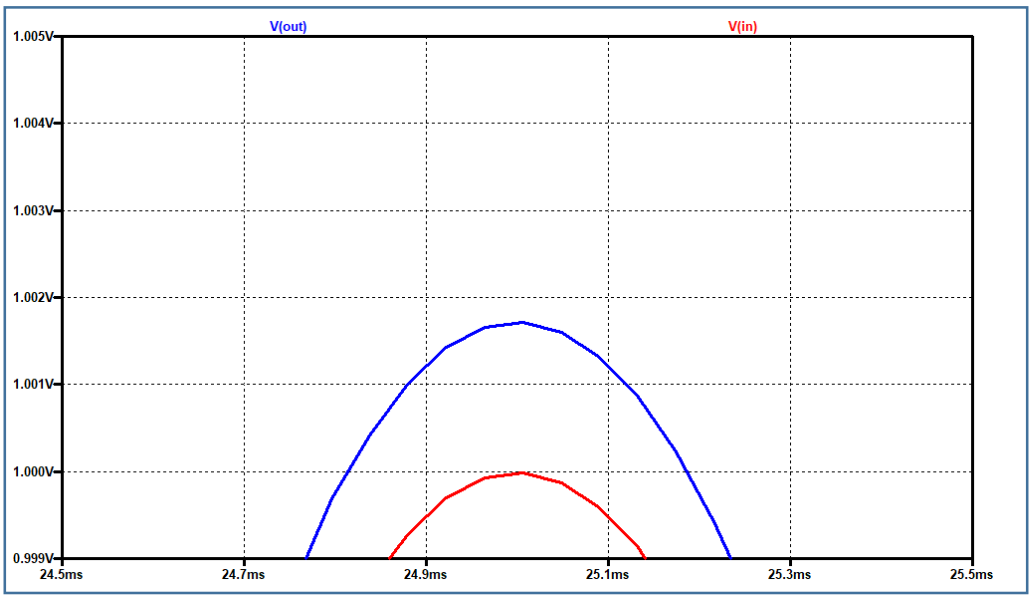


Input offset voltage

TestBench

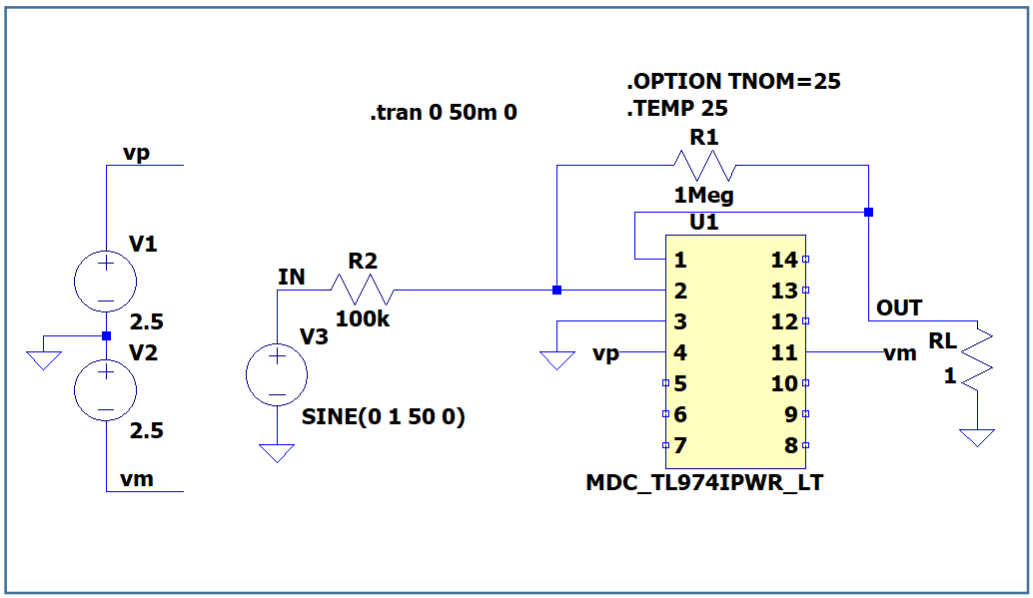


Simulation results are following.
Explanatory notes — : simulated

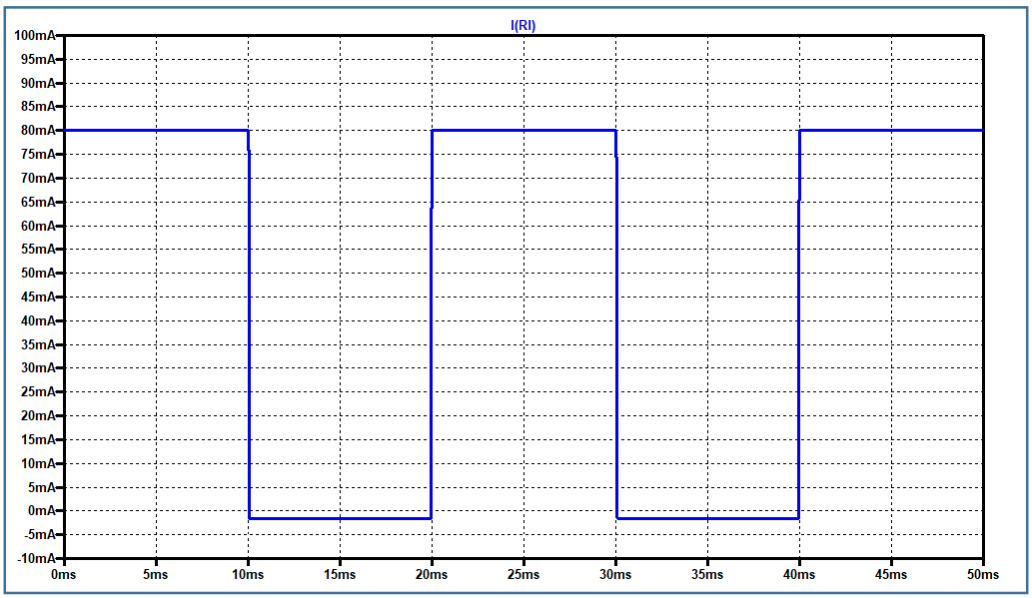


Output current limit

TestBench

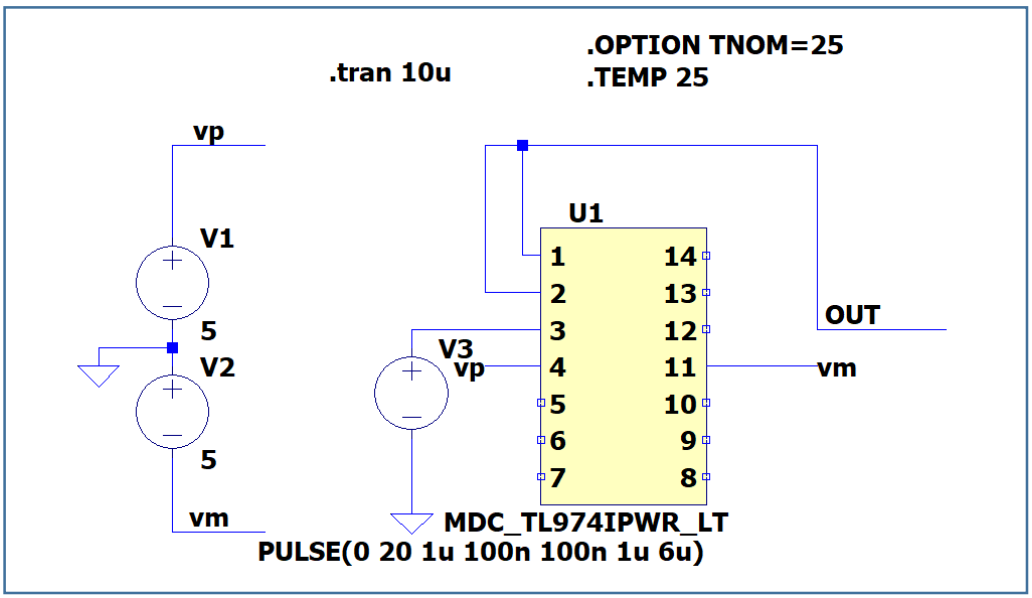


Simulation results are following.
Explanatory notes — : simulated

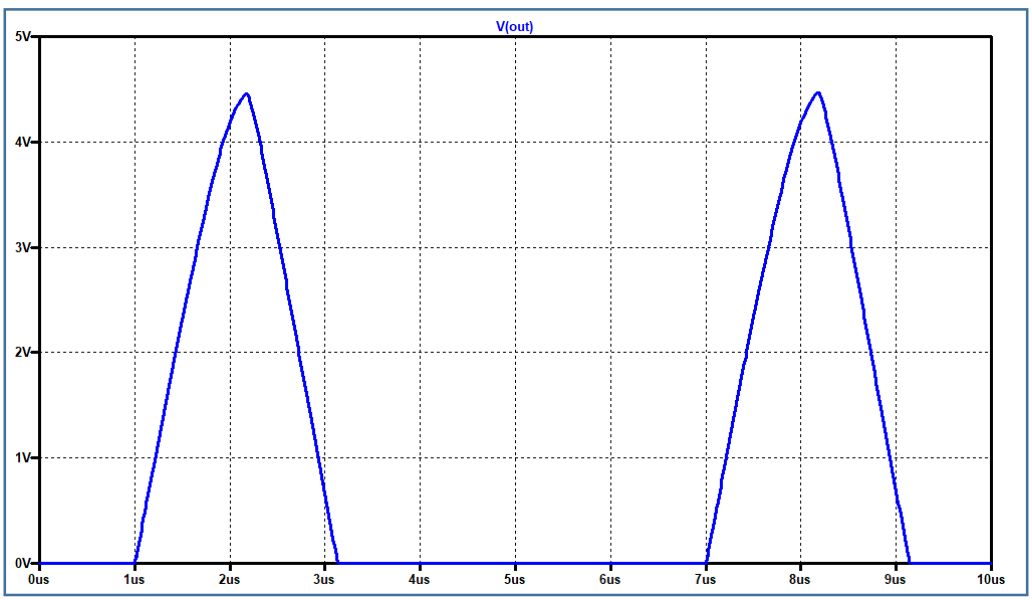


Slew rate

TestBench

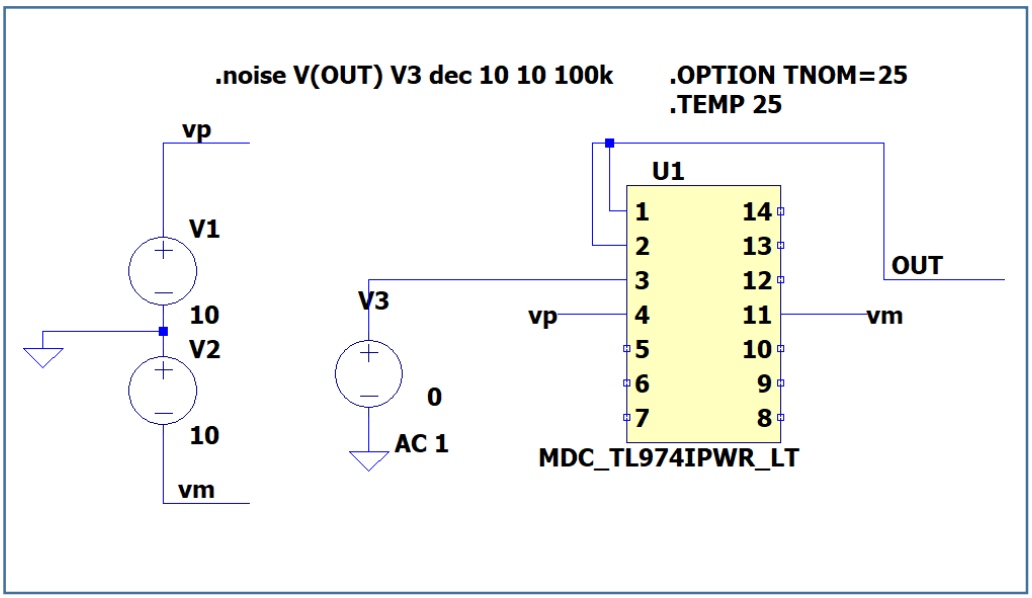


Simulation results are following.
Explanatory notes — : simulated

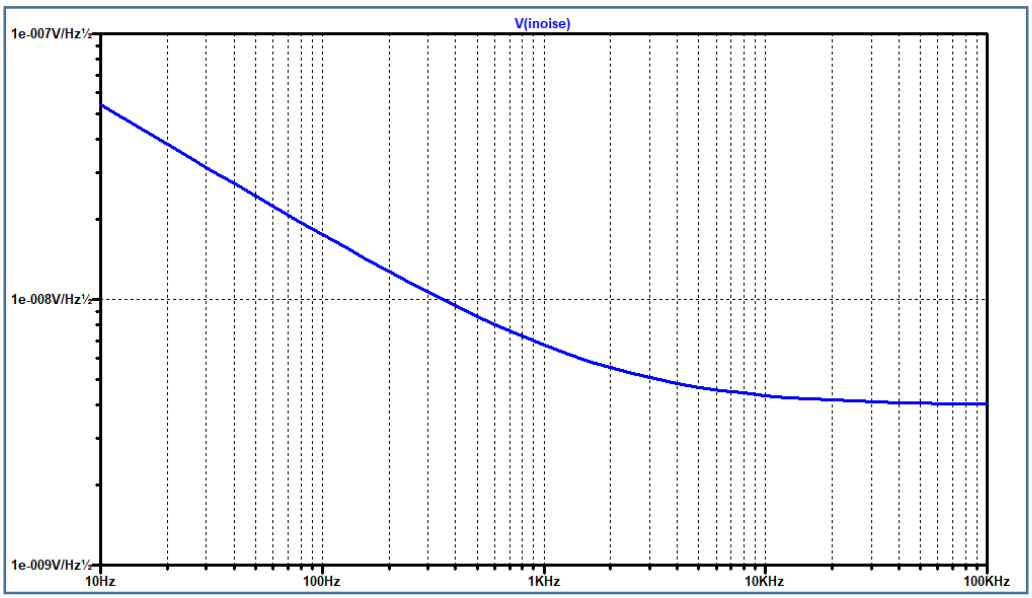


Equivalent Input Noise Voltage

TestBench



Simulation results are following.
Explanatory notes — : simulated



DISCLAIMER

1. This SPICE (Simulation Program with Integrated Circuit Emphasis) model and its content (the “Contents”) are copyright of MoDeCH Inc. All rights reserved. Any redistribution or reproduction of any or all part of the Contents in any form is prohibited without express written permission made by MoDeCH Inc.
2. MoDeCH Inc. as licensor (the” Licensor”) hereby grants to you, as licensee (the “Licensee”), a non-exclusive, non-transferable license to use the Contents as long as you abide by the terms and conditions of this DISCLAIMER.
3. The Licensee is not authorized to sell, loan, rent and redistribute or license the Contents in whole or in part, or in modified form, to anyone.
4. The Licensor shall in no way be liable to the Licensee or any third party for any loss or damage (including ,but not limited to, lost profits, or other incidental, consequential, or punitive damages), however caused (including through negligence) which may be directly or indirectly suffered from, arising out of, or in connection with, any use of the Contents .
5. Notwithstanding anything contained in this DISCLAIMER, in no event shall Licensor be liable for any claims, damages or loss which may arise from the modification, combination, operation or use of the Contents with the Licensee’s computer programs.
6. The Licensor does not warrant that the Contents will function in any environment.
7. The Contents may be changed or updated without notice. MoDeCH Inc. may also make improvements and/or changes in the products, pricing and/or the programs related to the Contents at any time without notice.

Modeling Design Technology

MoDeCH Inc.

Head Office
Location: 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan
Tel:+81-42-656-3360
E-Mail:model-on-support@modech.co.jp
URL:http://www.modech.com/en/