

# PSpice Model

## Operational Amplifier

### TOSHIBA

### TC75S51FU

#### Model Information

**Model** An original macro model  
**Call Name** MDC\_TC75S51FU\_PS  
**Pin Assign** 1:Out 2:In- 3:In+ 4:V- 5:V+  
**File List** Model Library MDC\_TC75S51FU\_PS01.lib  
 Model Report MDC\_TC75S51FU\_PS.pdf (this file)  
**Verified Simulator Version** PSpice version 16.6  
**Note**

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2014-03-01
- Product name TC75S51FU
- Company name Toshiba Corporation
- Characteristics GainFreq.[Temp],Slew rate,Voltage output swing,Input offset voltage,Input bias current

#### Simulation Condition

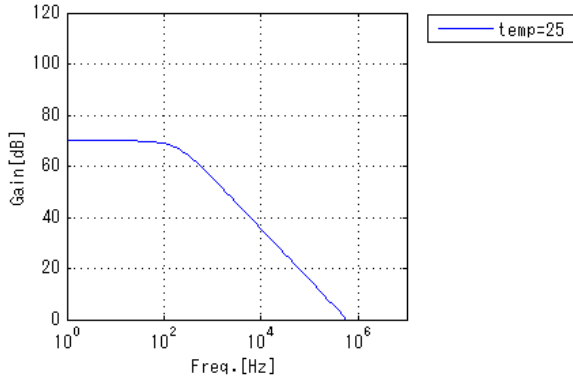
This table shows the value of evaluated simulation condition that was not occurs any convergence problems in this area.

| Item        | Condition | Unit  |
|-------------|-----------|-------|
| Temperature | 25        | deg C |

Simulation results are following.  
 Explanatory notes — : simulated

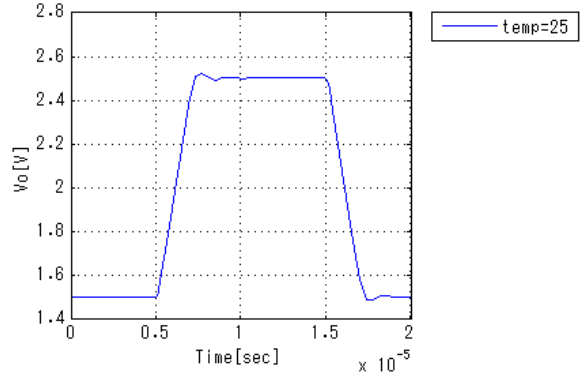
**GainFreq.[Temp]**

Vs+ = 3V, Vs- = 0V



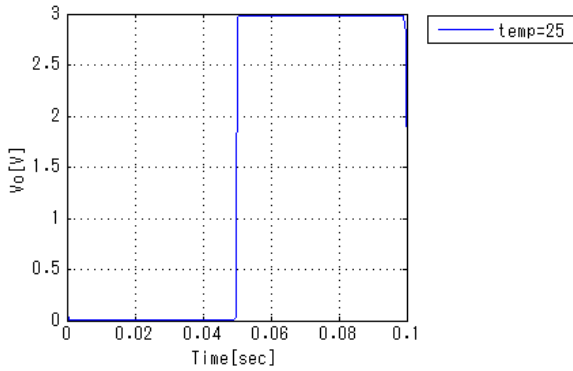
**Slew rate**

Vs+ = 3V, Vs- = 0V, Gain = 1



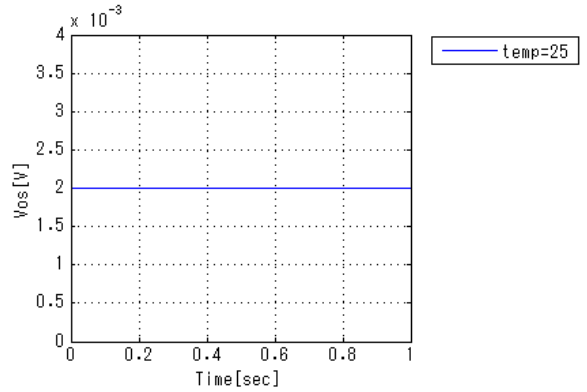
**Voltage output swing**

Vs+ = 3V, Vs- = 0V, RI = 2000ohm



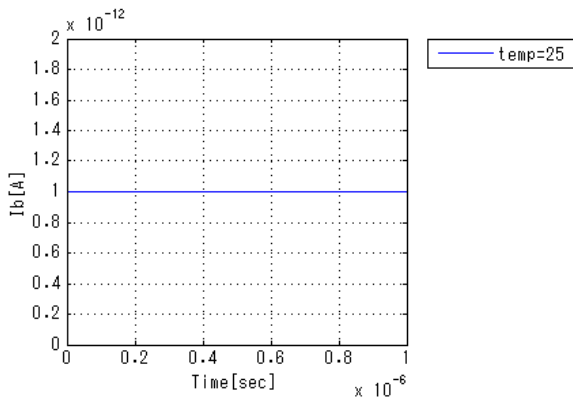
**Input offset voltage**

Vs+ = 3V, Vs- = -3V



**Input bias current**

Vs+ = 3V, Vs- = 0V



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MoDeCH Inc.

Head Office

Location: Mitsuseimei Hachioji Bldg., 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail: [model-on-support@modech.co.jp](mailto:model-on-support@modech.co.jp)

URL: <http://www.modech.com/en/>