

# PSpice Model

## Operational Amplifier

### RENESAS

### UPC458

#### Model Information

**Model** An original macro model  
**Call Name** MDC\_UPC458\_PS  
**Pin Assign** 1:Out 2:In- 3:In+ 4:V- 5:V+  
**File List** Model Library MDC\_UPC458\_PS01.lib  
 Model Report MDC\_UPC458\_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 March 2004
- Product name UPC458
- Company name Renesas Electronics Corporation
- Characteristics GainFreq,[Temp],Slew rate,Voltage output swing,Input offset voltage,Input bias current,Input referred voltage noise

#### Simulation Condition

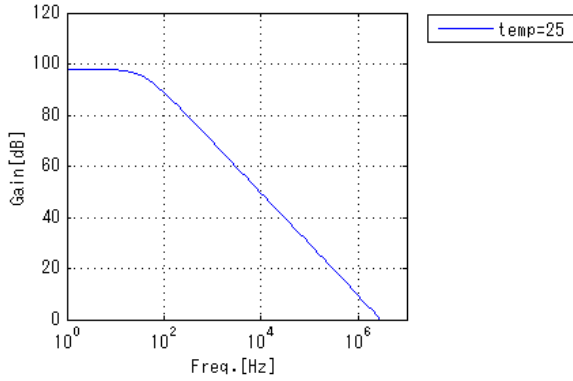
This table shows the value of evaluated simulation condition that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

Simulation results are following.  
 Explanatory notes — : simulated

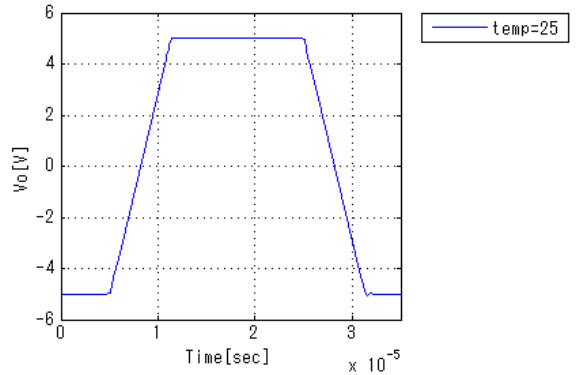
**GainFreq.[Temp]**

Vs+ = 15V, Vs- = -15V



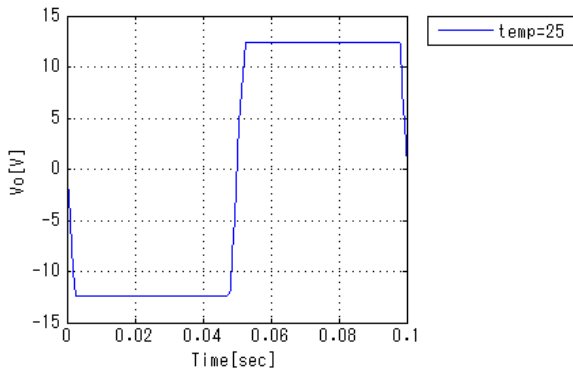
**Slew rate**

Vs+ = 15V, Vs- = -15V, Gain = 1



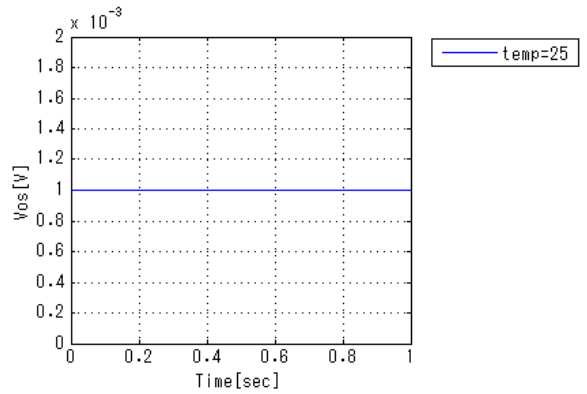
**Voltage output swing**

Vs+ = 15V, Vs- = -15V, RI = 2000ohm



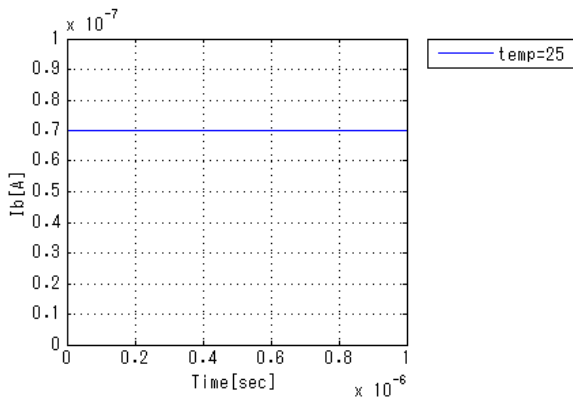
**Input offset voltage**

Vs+ = 15V, Vs- = -15V



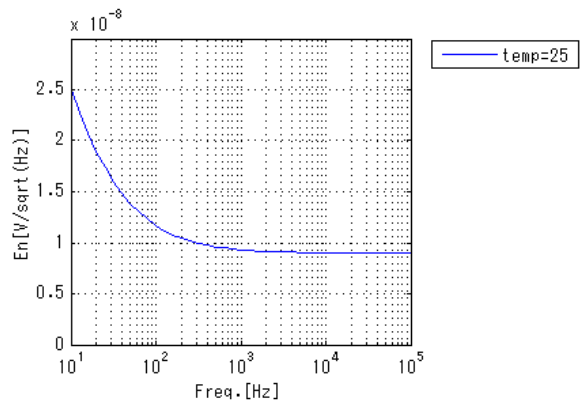
**Input bias current**

Vs+ = 15V, Vs- = -15V



**Input referred voltage noise**

Vs+ = 15V, Vs- = -15V



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