

# LTspice Model

## Operational Amplifier

### RENESAS

### HA3-2525-5Z

#### Model Information

**Model** An original macro model  
**Call Name** MDC\_HA3-2525-5Z\_LT  
**Pin Assign** 1: BAL 2: -IN 3: +IN 4: V- 5: BAL 6: OUT 7: V+ 8: COMP  
**File List** Model Library MDC\_HA3-2525-5Z\_LT02.lib  
 Model Report MDC\_HA3-2525-5Z\_LT.pdf (this file)

**Verified Simulator Version** LTspice version XVII  
**Note**

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Unknown
- Product name HA3-2525-5Z
- Company name Renesas Electronics Corporation
- Characteristics Input offset voltage, Input bias current, Slew rate, GainFreq.[Temp]

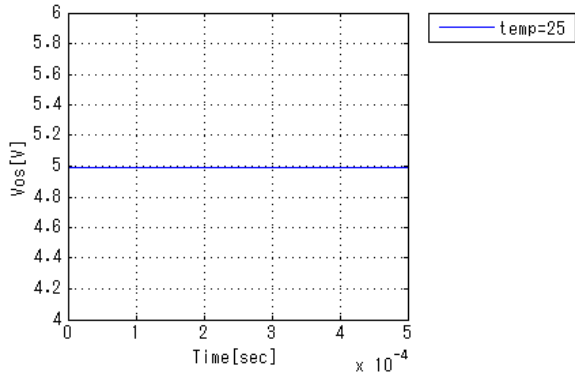
#### Simulation Condition

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

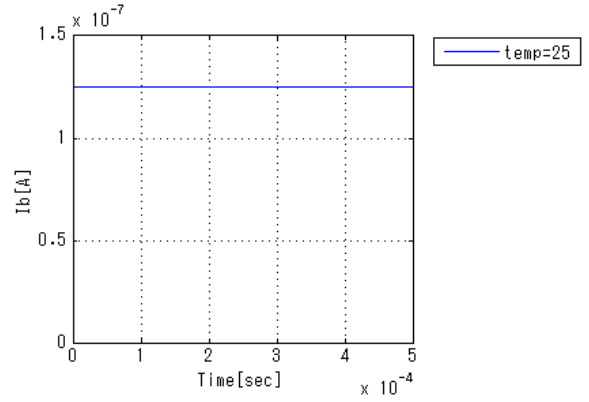
| Item        | Condition | Unit  |
|-------------|-----------|-------|
| Temperature | 25        | deg C |

Simulation results are following.  
 Explanatory notes — : simulated

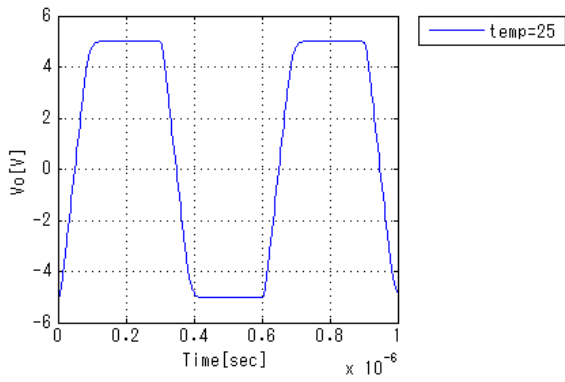
**Input offset voltage**



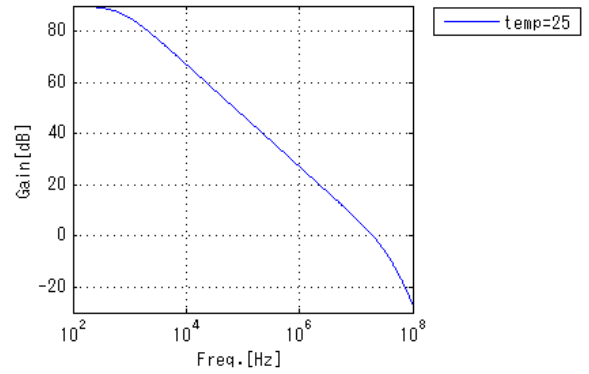
**Input bias current**



**Slew rate**



**GainFreq.[Temp]**



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