

# PSpice Model

## Logic Ic

### TOSHIBA

### TC7WZ125FK

#### Model Information

**Model** A macro model  
**Call Name** MDC\_TC7WZ125FK\_PS  
**Pin Assign** 1:G1 2:A1 3:Y2 4:GND 5:A2 6:Y1 7:G2 8:VCC  
**File List** Model Library MDC\_TC7WZ125FK\_PS.lib  
Model Report MDC\_TC7WZ125FK\_PS.pdf(this file)  
**Verified Simulator Version** PSpice 17.4

#### Note

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.4.0
- Product name TC7WZ125FK
- Company name TOSHIBA

[Characteristics listed]

- Characteristics

#### 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 |

**Logic IC**

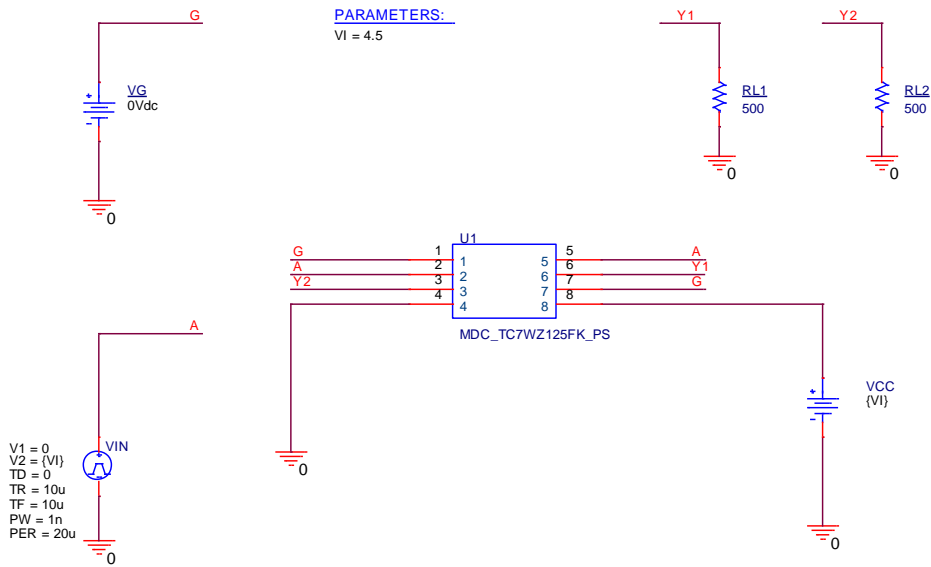
○ : Implemented  
 × : Not Implemented  
 — : Not applicable

**Model Functions Table**
**RANK=1**

| Functions        | RANK | Implemented |
|------------------|------|-------------|
| VIN-VOUT         | 1    | ○           |
| tpLH-HL(CL=15pF) | 1    | ○           |
| tpLH-HL(CL=50pF) | 1    | ○           |
| tpLZ-ZL          | 1    | ○           |
| tpHZ-ZH          | 1    | ○           |

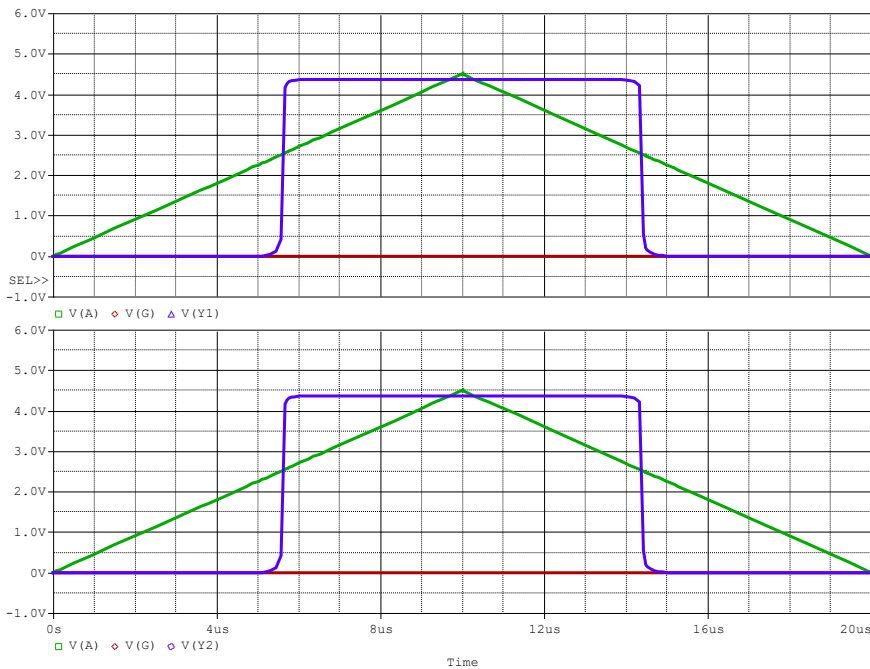
VIN-VOUT Testbench

Referred to Data Sheet



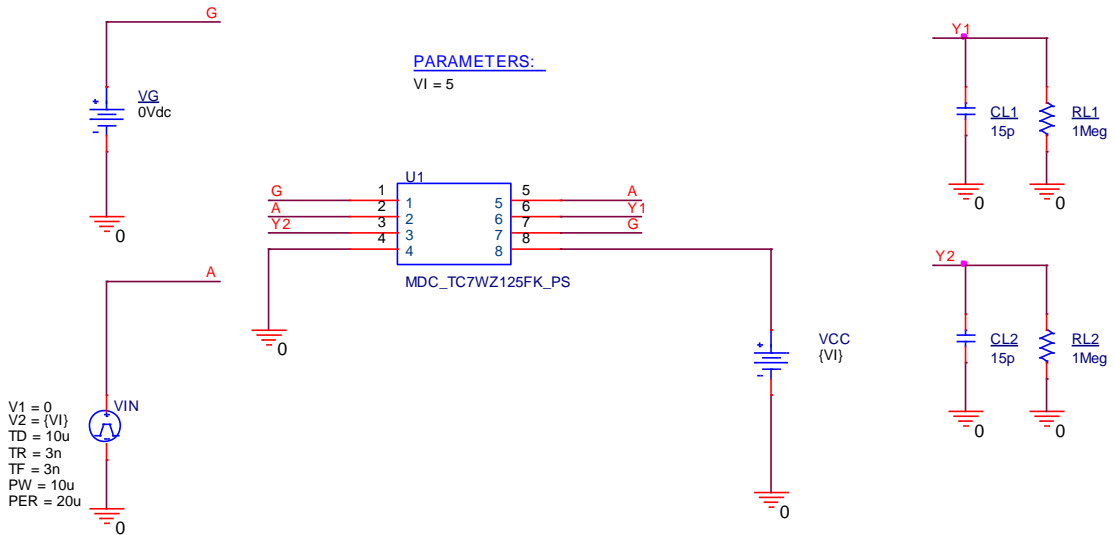
Simulation results are following.  
Explanatory notes — : simulated

VIN-VOUT



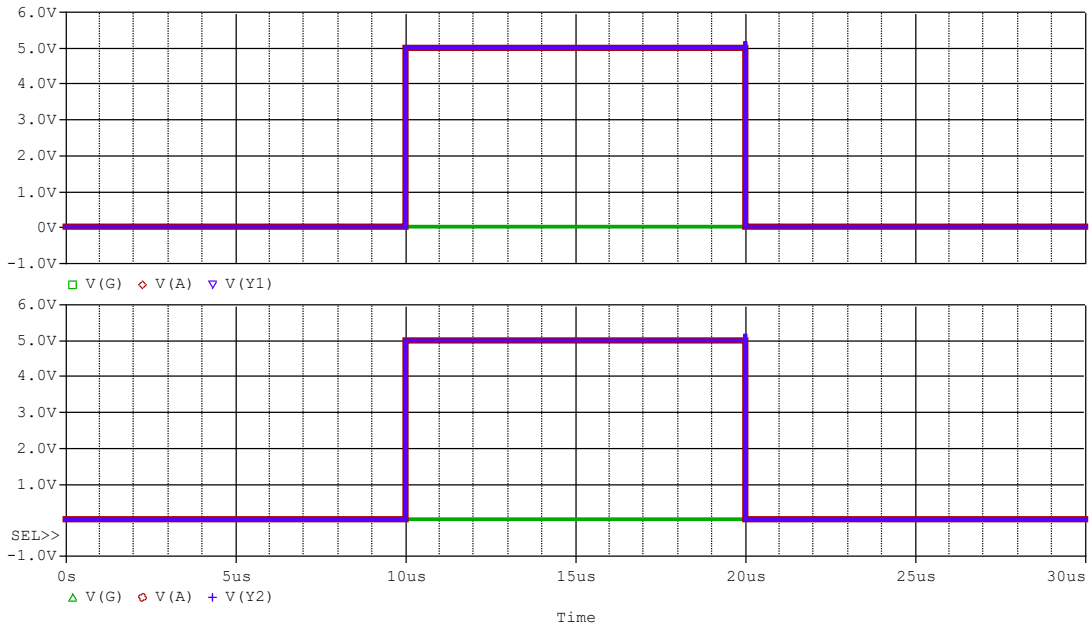
**tpLH-HL(CL=15pF) Testbench**

Referred to Data Sheet



Simulation results are following.  
Explanatory notes — : simulated

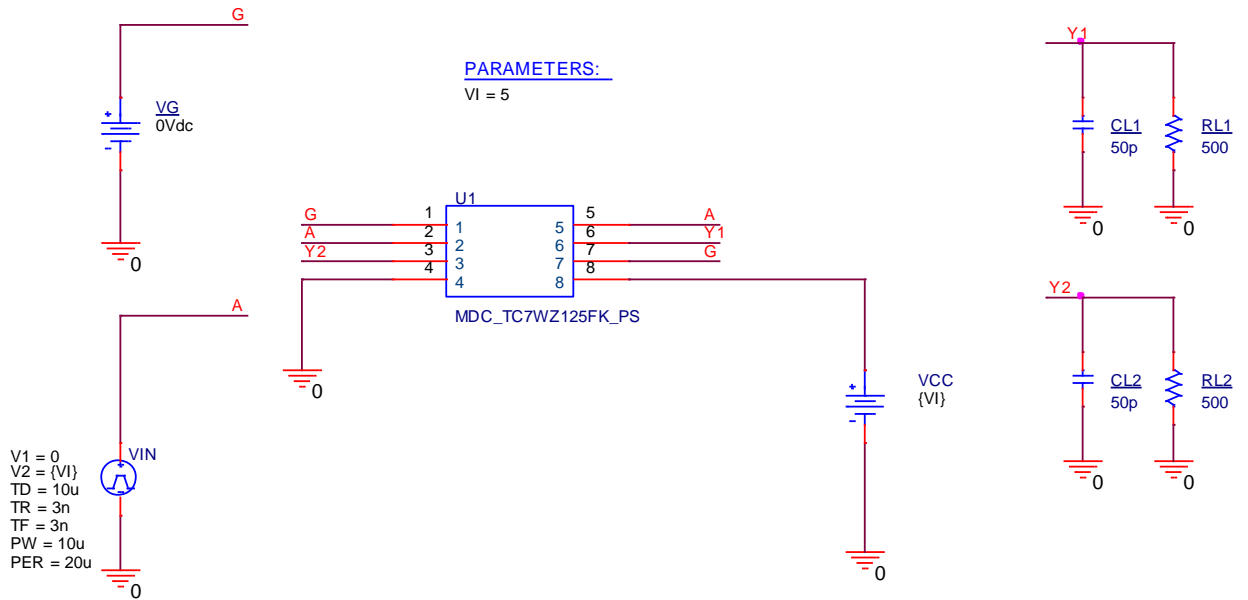
**tpLH-HL(CL=15pF)**



| Measurement                                | Value      |
|--|------------|
| XatNth Y(V(Y1)2,3,1) - XatNth Y(V(A)2,3,1) | 1.63173n   |
| XatNth Y(V(Y1)2,3,2) - XatNth Y(V(A)2,3,2) | 987.34252p |

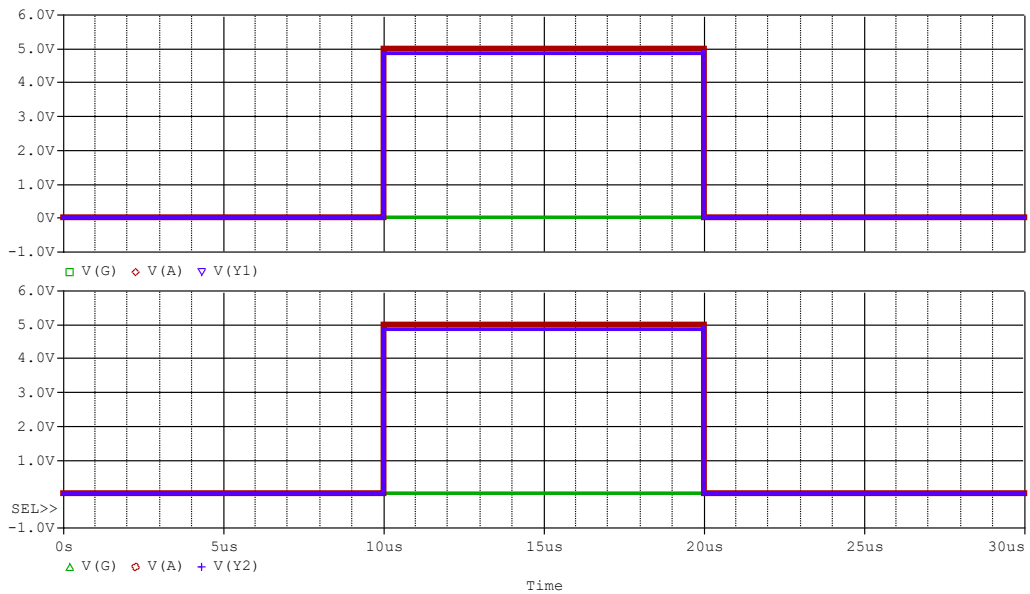
tpLH-HL(CL=50pF) Testbench

Referred to Data Sheet



Simulation results are following.  
 Explanatory notes — : simulated

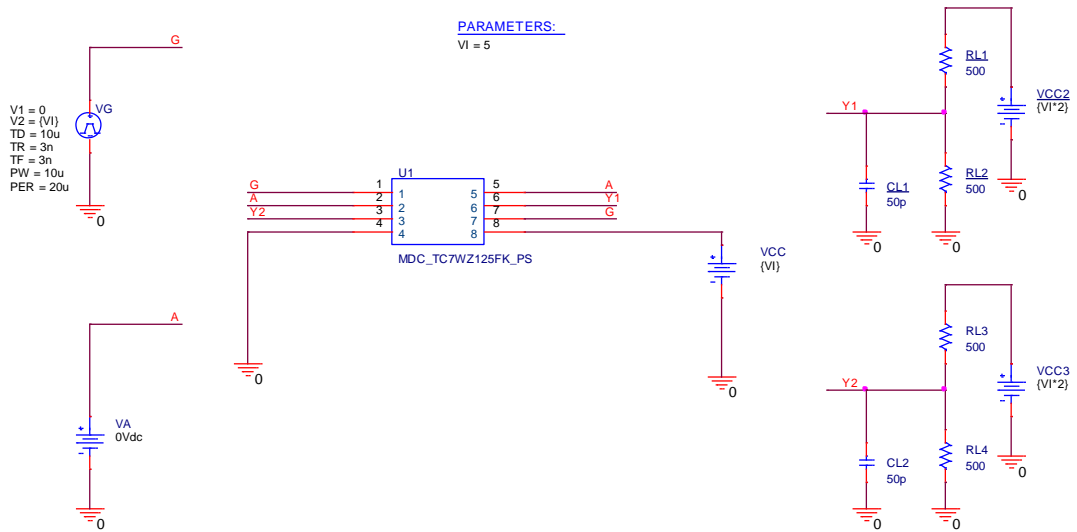
tpLH-HL(CL=50pF)



| Measurement                                | Value    |
|--|----------|
| XatNth Y(V(Y1)2,3,1) - XatNth Y(V(A)2,3,1) | 2.18600n |
| XatNth Y(V(Y1)2,3,2) - XatNth Y(V(A)2,3,2) | 1.44621n |

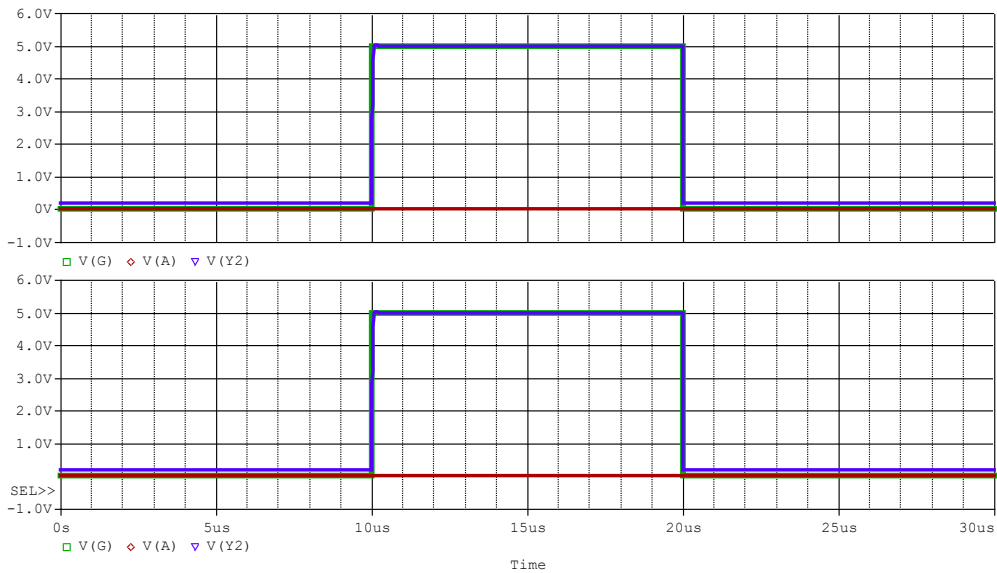
tpLZ-ZL Testbench

Referred to Data Sheet



Simulation results are following.  
 Explanatory notes — : simulated

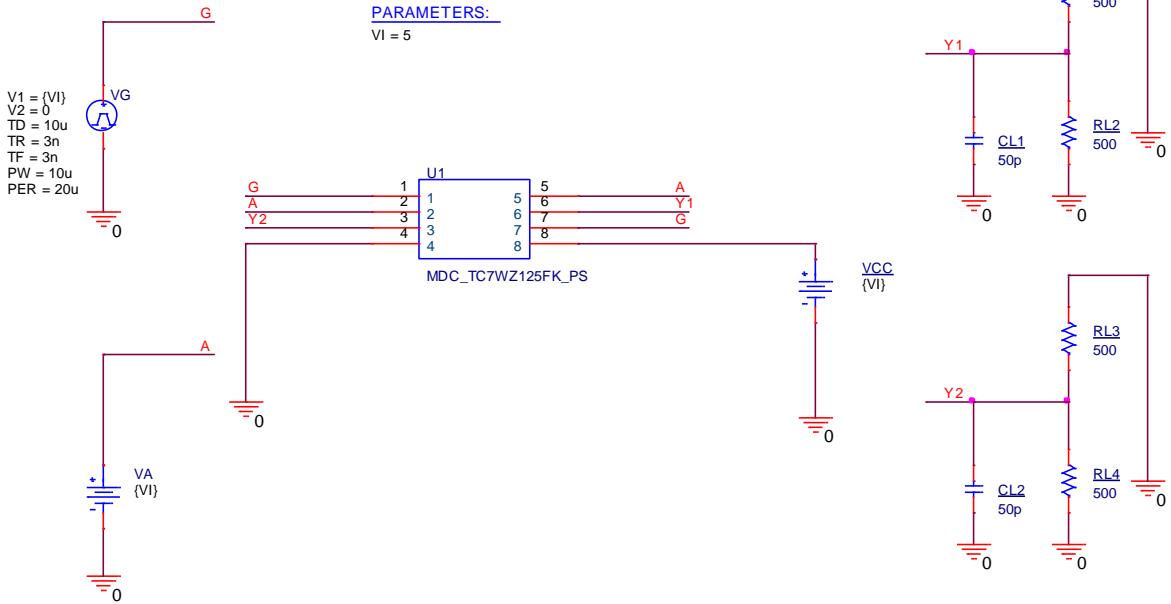
tpLZ-ZL



| Measurement                                  | Value    |
|--|----------|
| XatNthY(V(Y1),2,3,2)-XatNthY(V(G),2,3,2)     | 2.85085n |
| XatNthY(V(Y1),0.61133,1)-XatNthY(V(G),2,3,1) | 3.97433n |

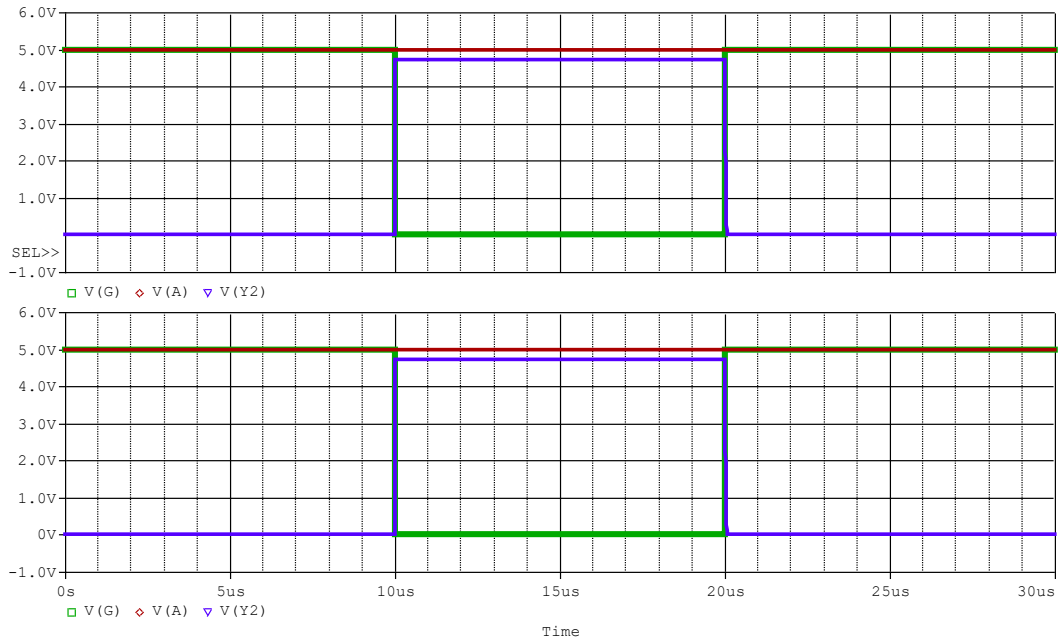
tpHZ-ZH Testbench

Referred to Data Sheet



Simulation results are following.  
Explanatory notes — : simulated

tpHZ-ZH



| Measurement                                  | Value    |
|--|----------|
| XatNth Y(V(Y1)2,3,1)-XatNth Y(V(G)2,3,1)     | 3.25099n |
| XatNth Y(V(Y1)4,29471,2)-XatNth Y(V(G)2,3,2) | 3.97249n |

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