

# PSpice Model

## IPM

### Mitsubishi

### PSS30S93F6

#### Model Information

**Model** A macro model  
**Call Name** MDC\_PSS30S93F6\_PS  
**Pin Assign** 1:NC 2:VUFB 3:VVFB 4:VWFB 5:UP 6:VP 7:WP 8:VP1 9:VNC 10:UN 11:VN 12:WN  
 13:VN1 14:FO 15:CIN 16:VNC 17:VOT 18:NW 19:NV 20:VU 21:W 22:V 23:U 24:P 25:NC  
**File List** Model Library MDC\_PSS30S93F6\_PS.lib  
 Model Report MDC\_PSS30S93F6\_PS.pdf(this file)  
**Verified Simulator Version** PSpice v17.4  
**Note** Requires "Auto Converge" option

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2024.1
- Product name PSS30S93F6
- Company name Mitsubishi Electric Corporation

[Characteristics listed]

- Characteristics
  - UVLO\_N
  - UVLO\_P
  - VINTH\_N
  - VINTH\_P
  - Switching
  - FWDi\_Vdrop
  - VCE(sat)
  - 3 phase drive

#### 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

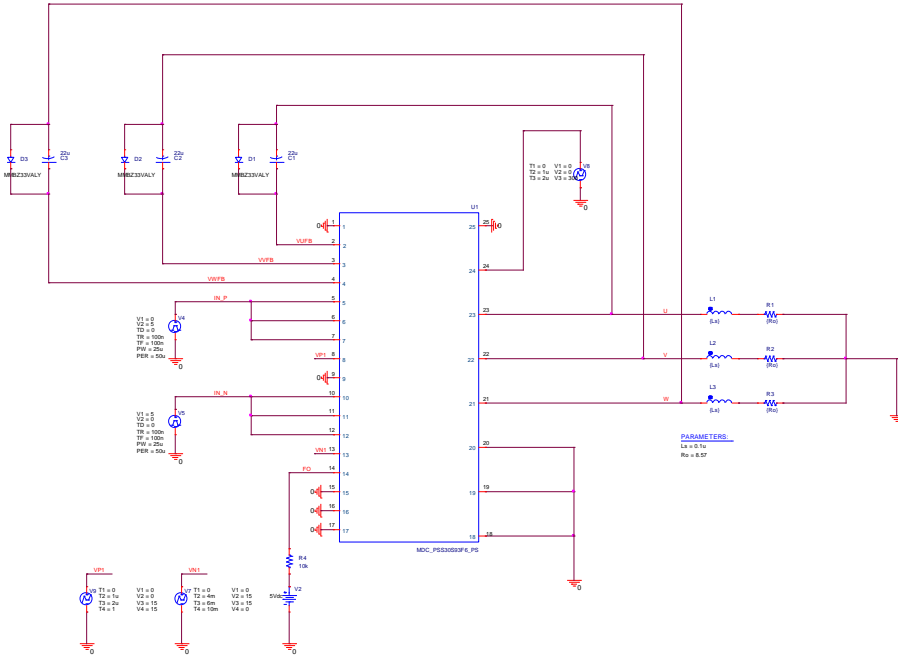
○ : Implemented  
 × : Not Implemented  
 — : Not applicable

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

Functions	RANK	Implemented
UVLO_N	1	○
UVLO_P	1	○
VINTH_N	1	○
VINTH_P	1	○
Switching	1	○
FWDi_Vdrop	1	○
VCE(sat)	1	○

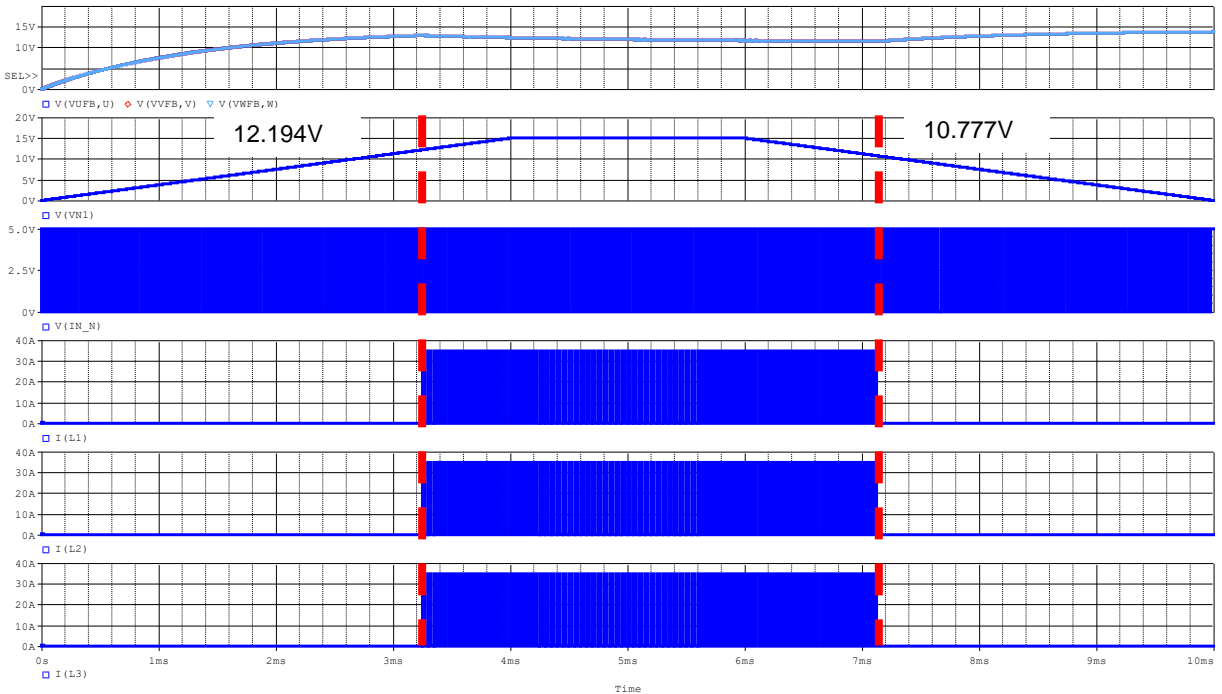
UVLO\_N Testbench

Referred to Data Sheet



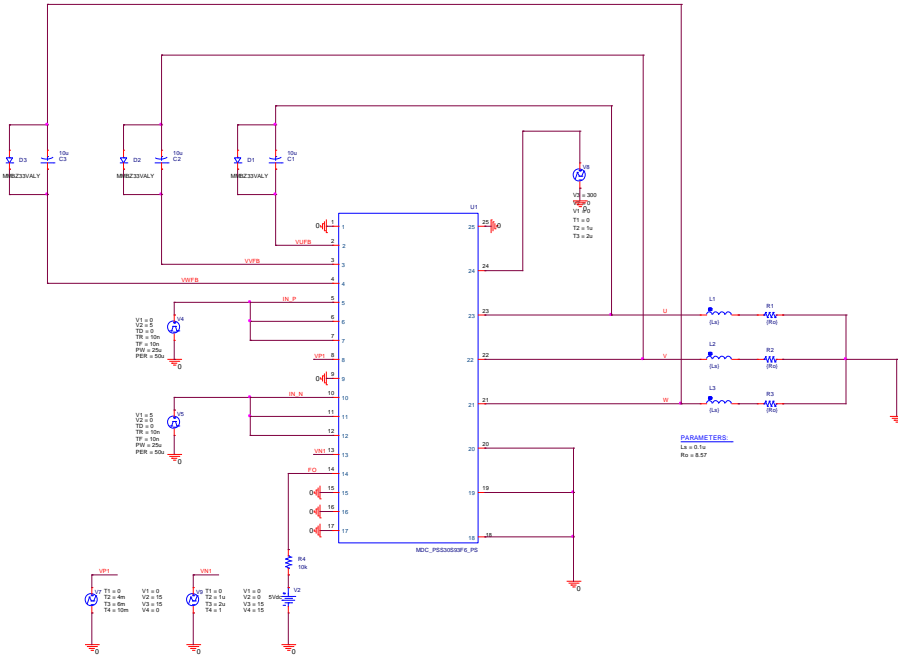
Simulation results are following.  
 Explanatory notes — : simulated

UVLO\_N



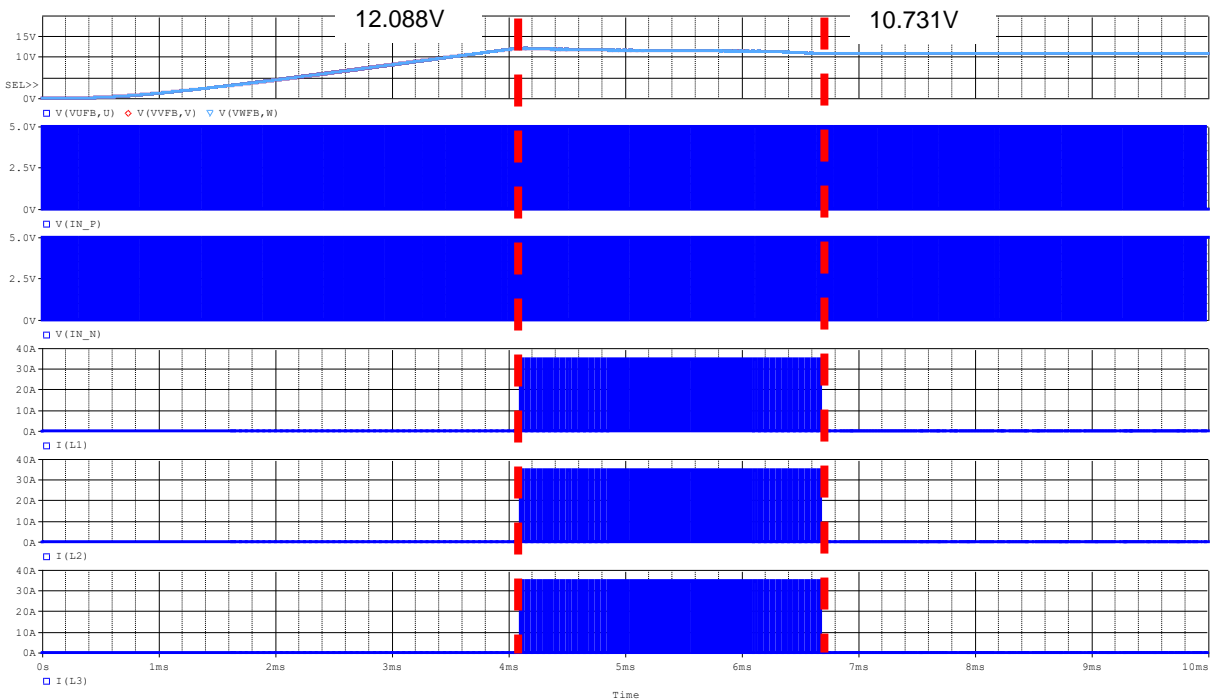
UVLO\_P Testbench

Referred to Data Sheet



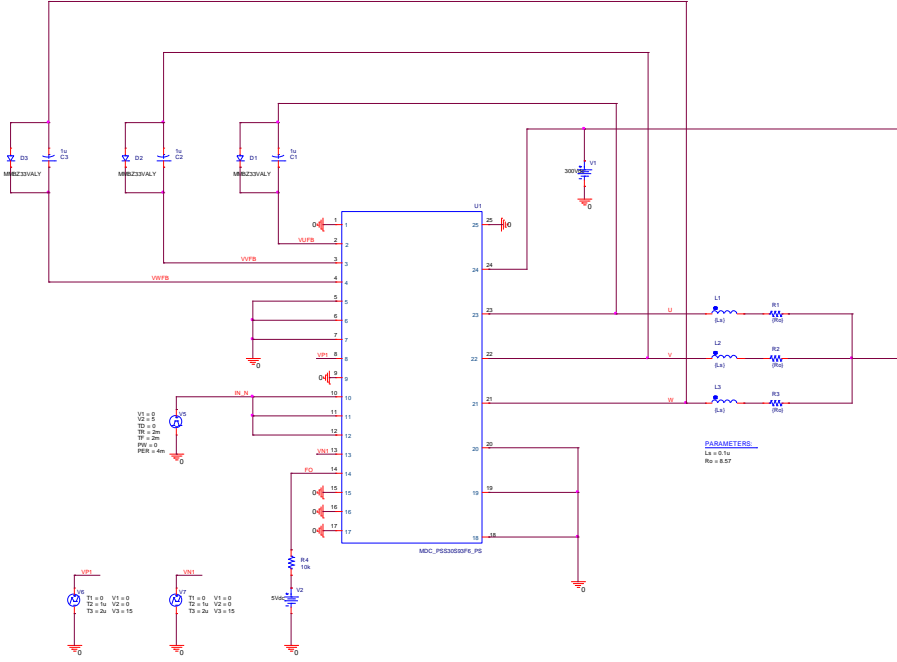
Simulation results are following.  
 Explanatory notes — : simulated

UVLO\_P



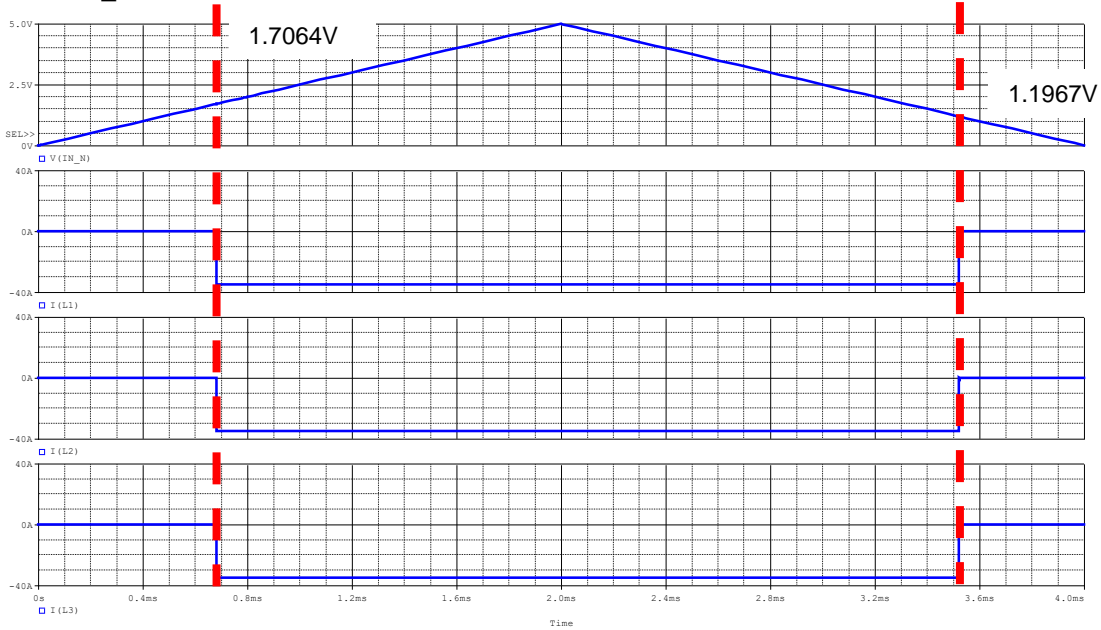
VINTH\_N Testbench

Referred to Data Sheet



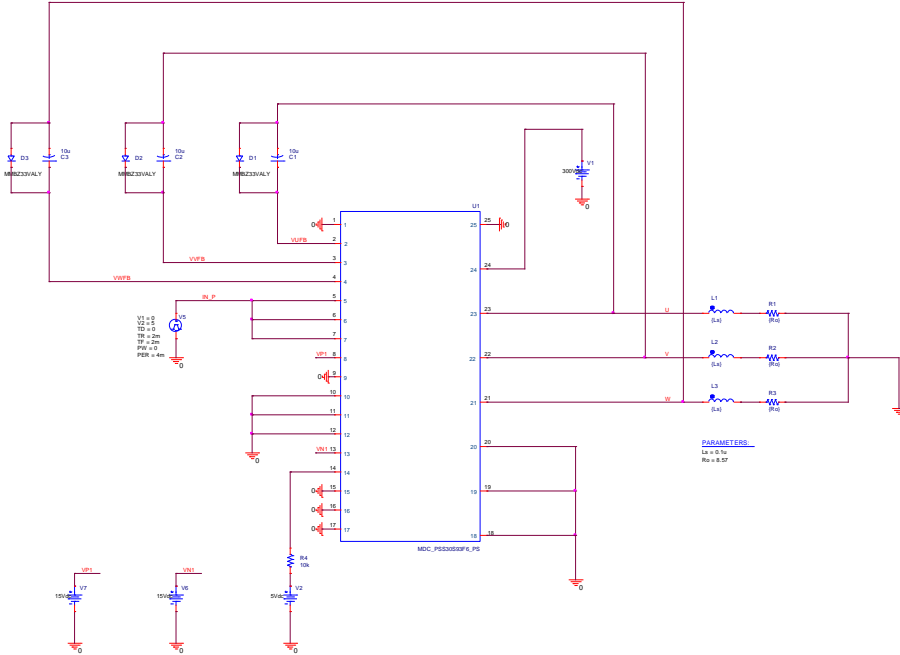
Simulation results are following.  
 Explanatory notes — : simulated

VINTH\_N



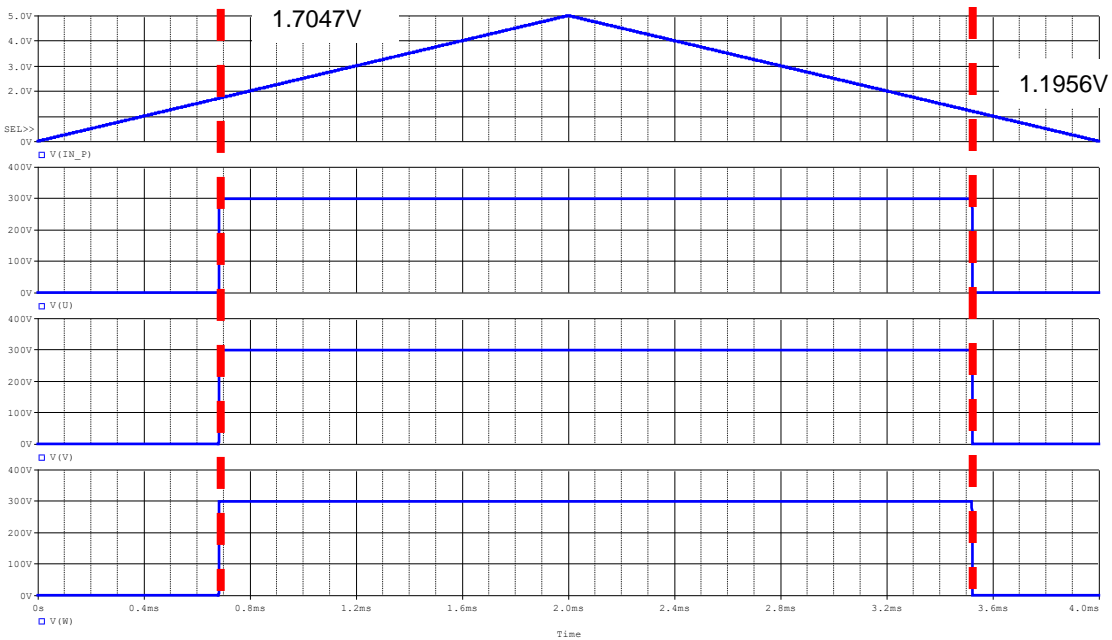
VINTH\_P Testbench

Referred to Data Sheet

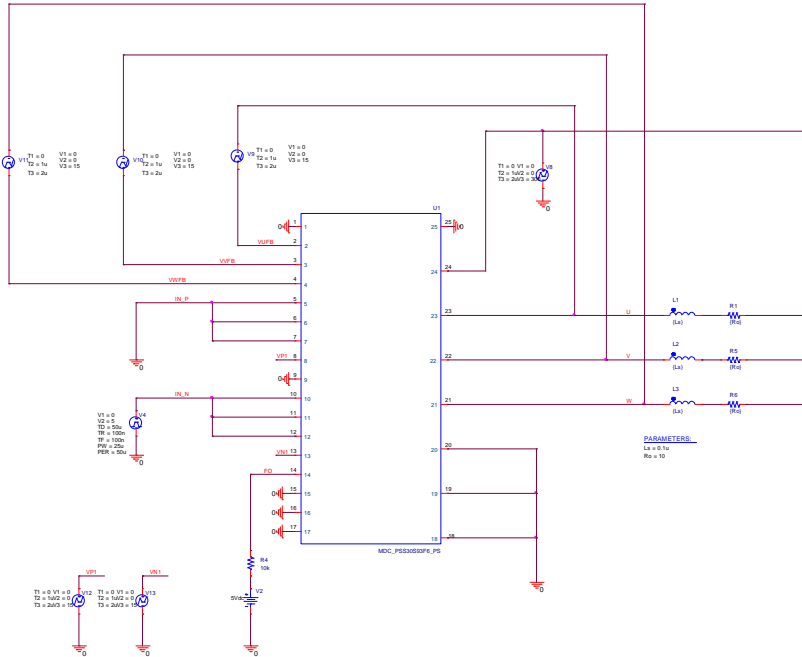


Simulation results are following.  
 Explanatory notes — : simulated

VINTH\_P

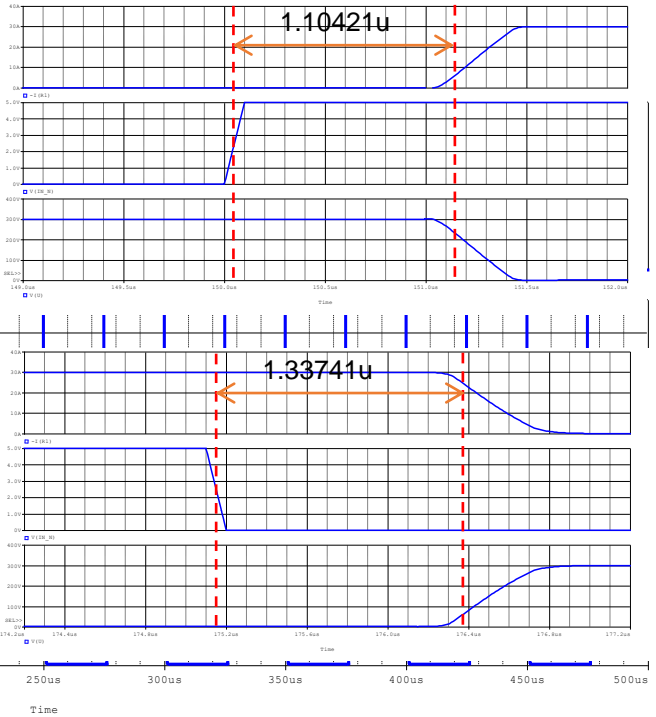
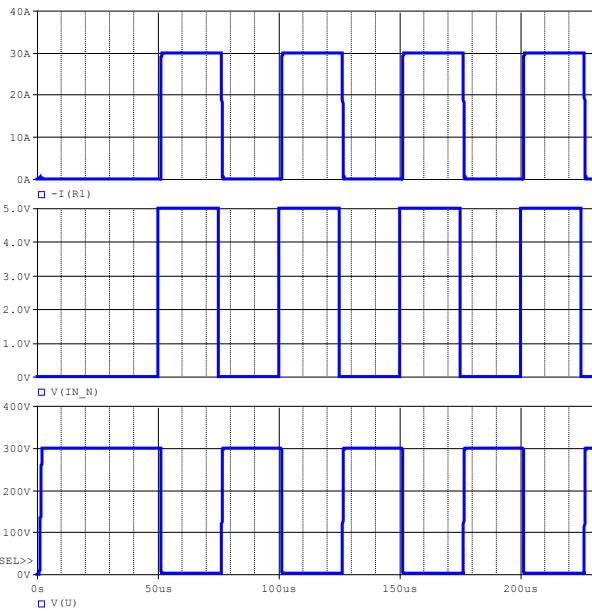


Switching\_N Testbench  
 Referred to Data Sheet

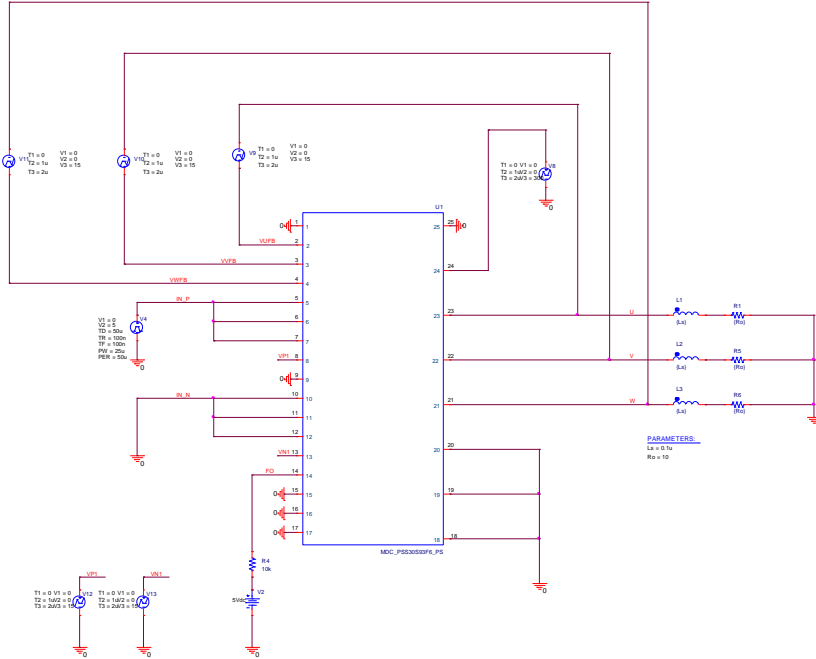


Simulation results are following.  
 Explanatory notes — : simulated

Switching\_N

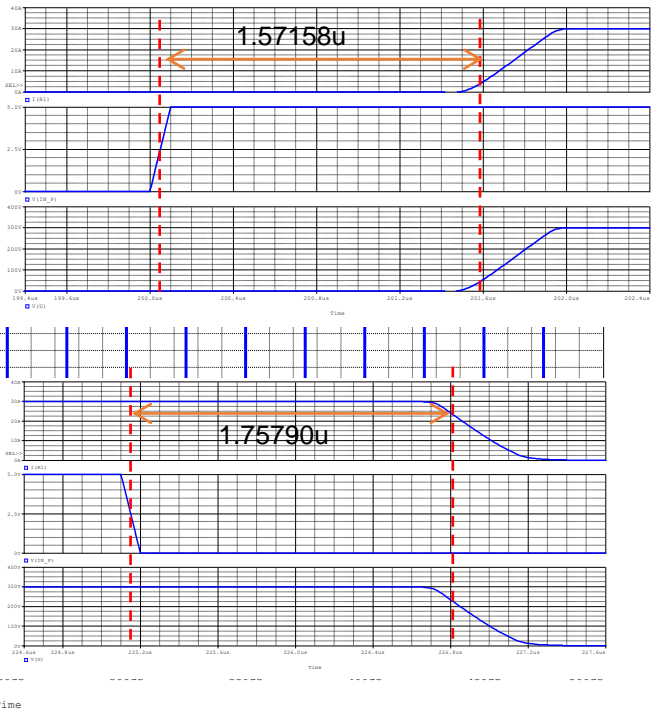
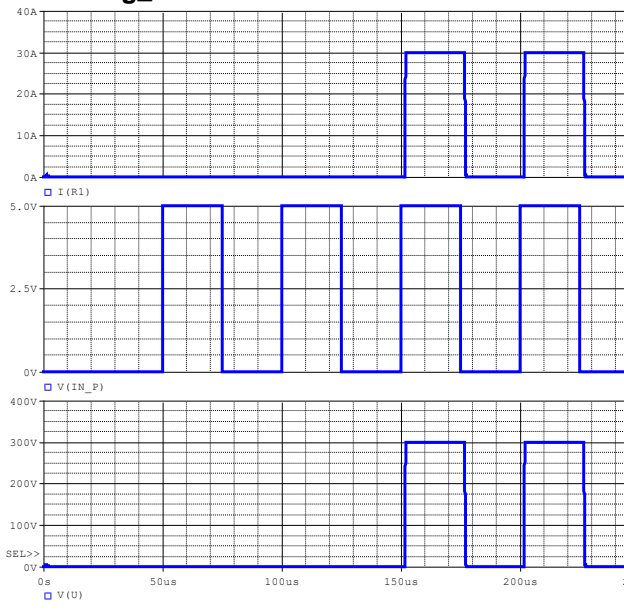


Switching\_P Testbench  
 Referred to Data Sheet



Simulation results are following.  
 Explanatory notes — : simulated

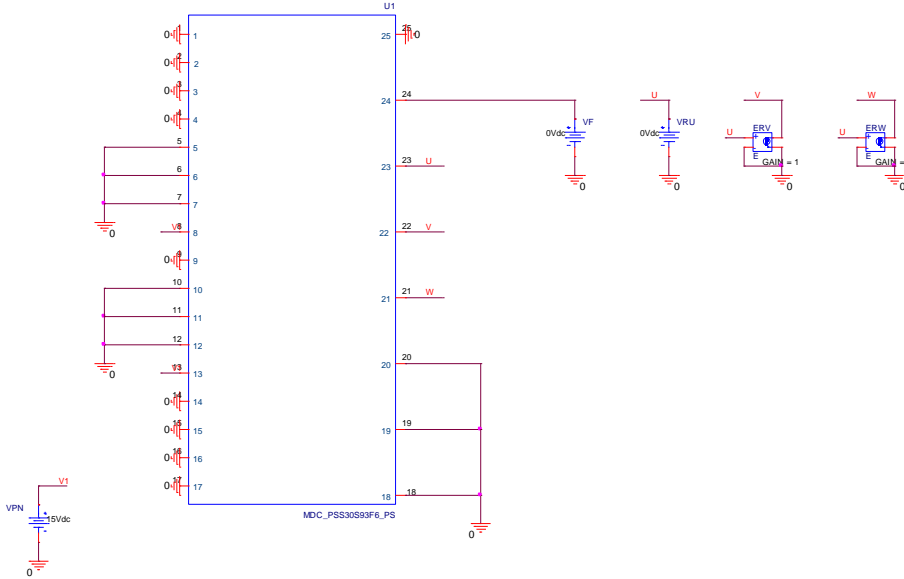
Switching\_P





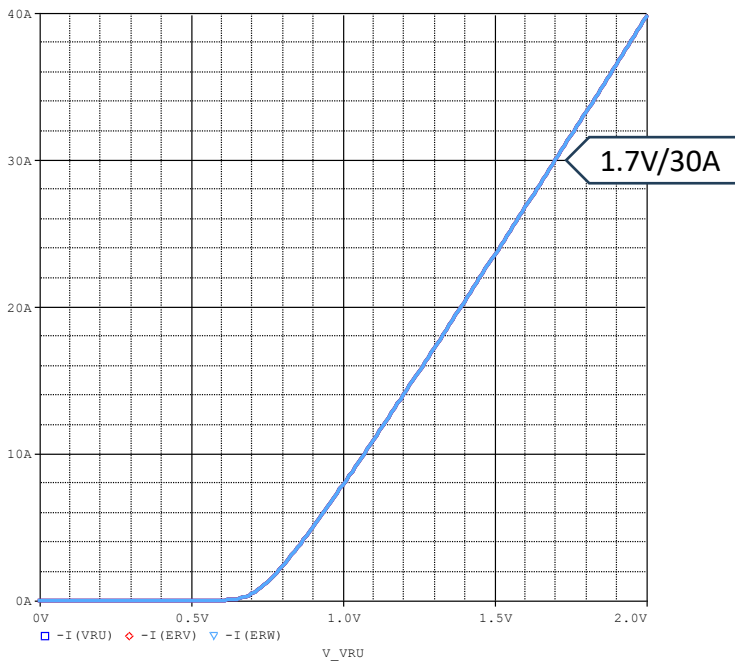
FWDi\_Vdrop Testbench

Referred to Data Sheet



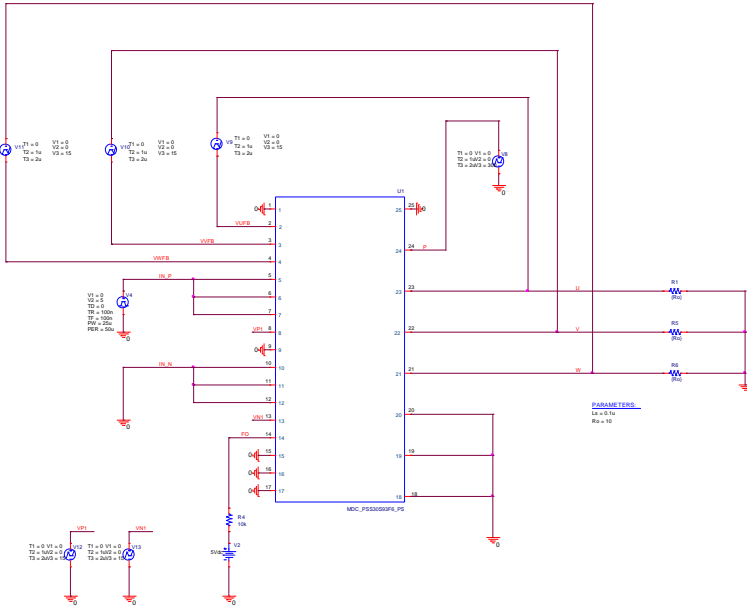
Simulation results are following.  
 Explanatory notes — : simulated

FWDi\_Vdrop



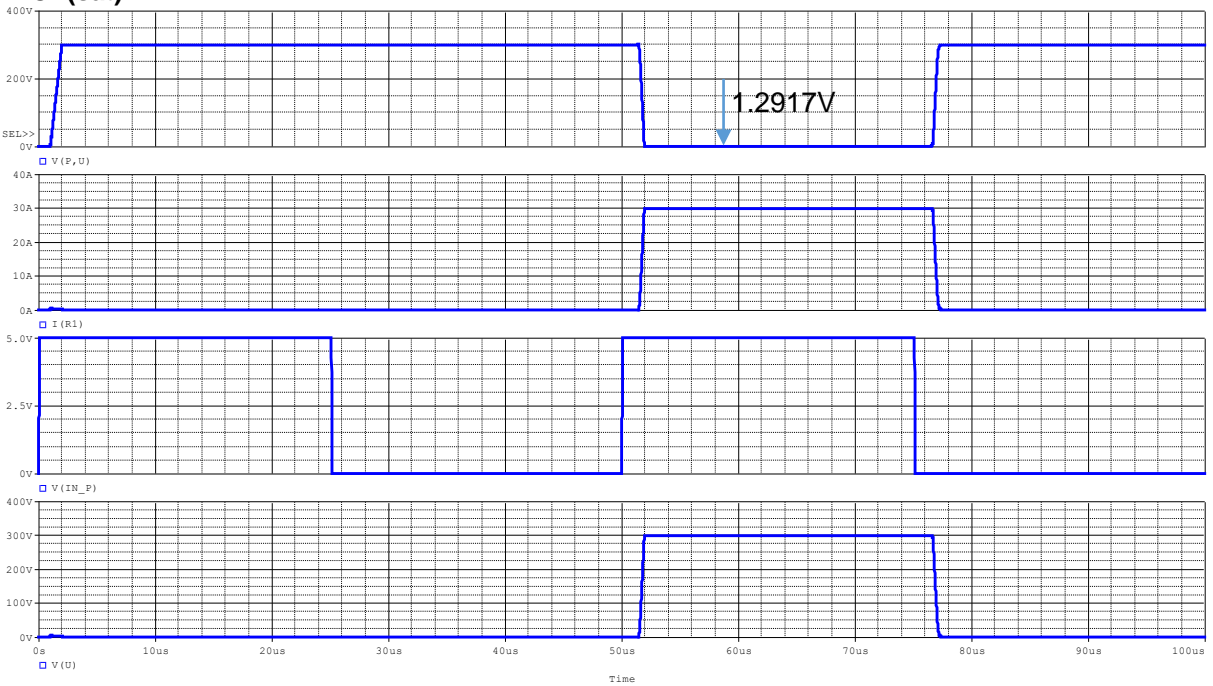
VCE(sat) Testbench

Referred to Data Sheet



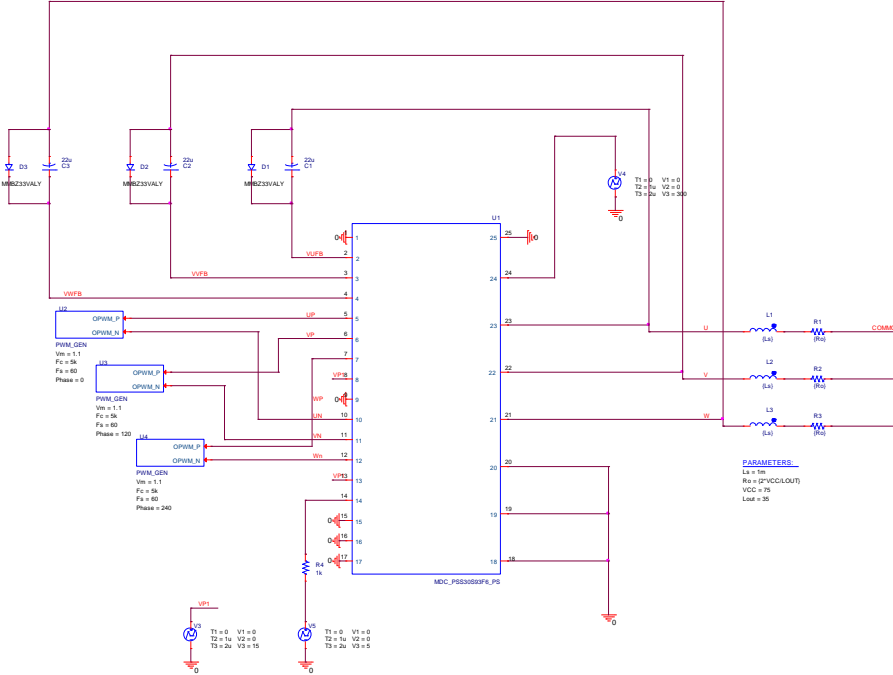
Simulation results are following.  
 Explanatory notes — : simulated

VCE(sat)



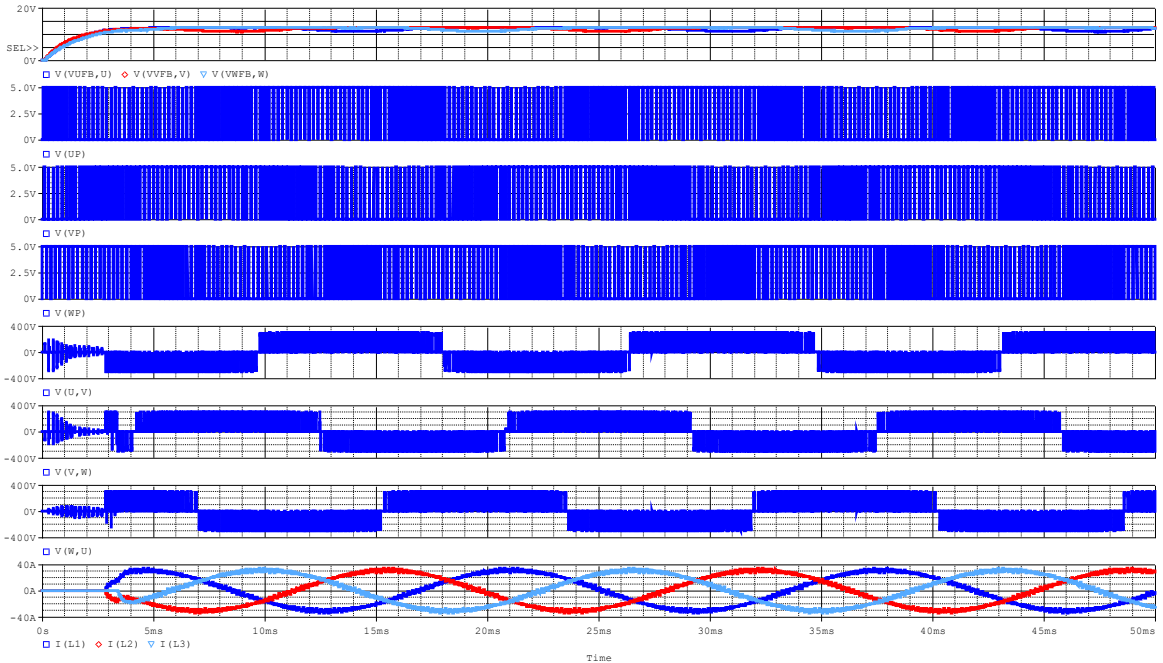
### 3 phase drive Testbench

## Referred to Data Sheet



Simulation results are following.  
 Explanatory notes — : simulated

### 3 phase drive



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