

# PSpice Model

## DC Brush Motor Drivers

### ROHM

### BD62321HFP-TR

#### Model Information

**Model** A macro model  
**Call Name** MDC\_BD62321HFP-TR\_PS  
**Pin Assign** 1:VCC 2:OUT1 3:FIN 4:GND 5:RIN 6:OUT2 7:VCC 8(FIN):GND  
**File List** Model Library MDC\_BD62321HFP-TR\_PS.lib  
 Model Report MDC\_BD62321HFP-TR\_PS.pdf(this file)  
**Verified Simulator Version** PSpice 17.2  
**Note**

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2014.09.09 Rev.003
- Product name BD62321HFP-TR
- Company name ROHM

[Characteristics listed]

- Characteristics lcc, lctby  
VIH, VIL  
IH, RON  
fMAX

#### Simulation Condition

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

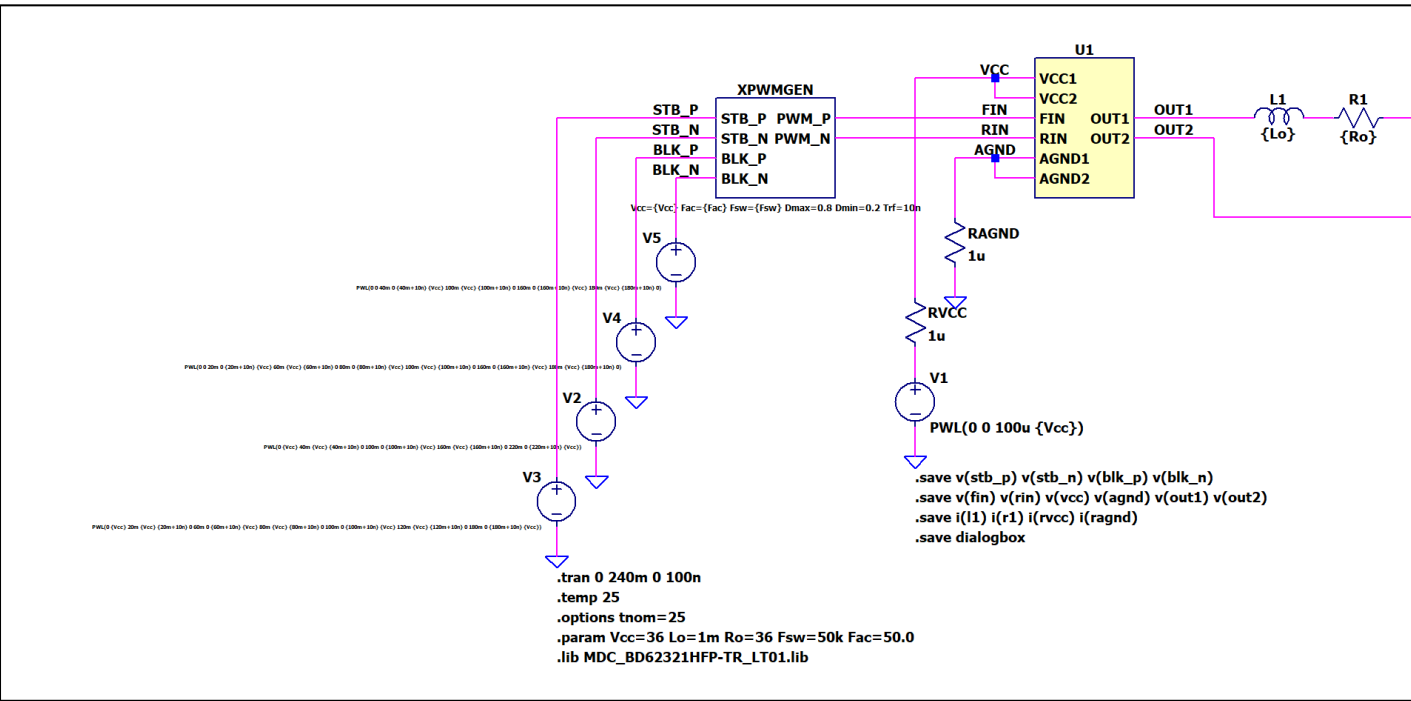
Item	Condition	Unit
Temperature	25	deg C

**Model Functions Table**

Functions	Implemented
Cross-Conduction Prevention Circuit	<input type="radio"/>
OCP	<input type="radio"/>
OVP	<input type="radio"/>
UVLO	<input type="radio"/>

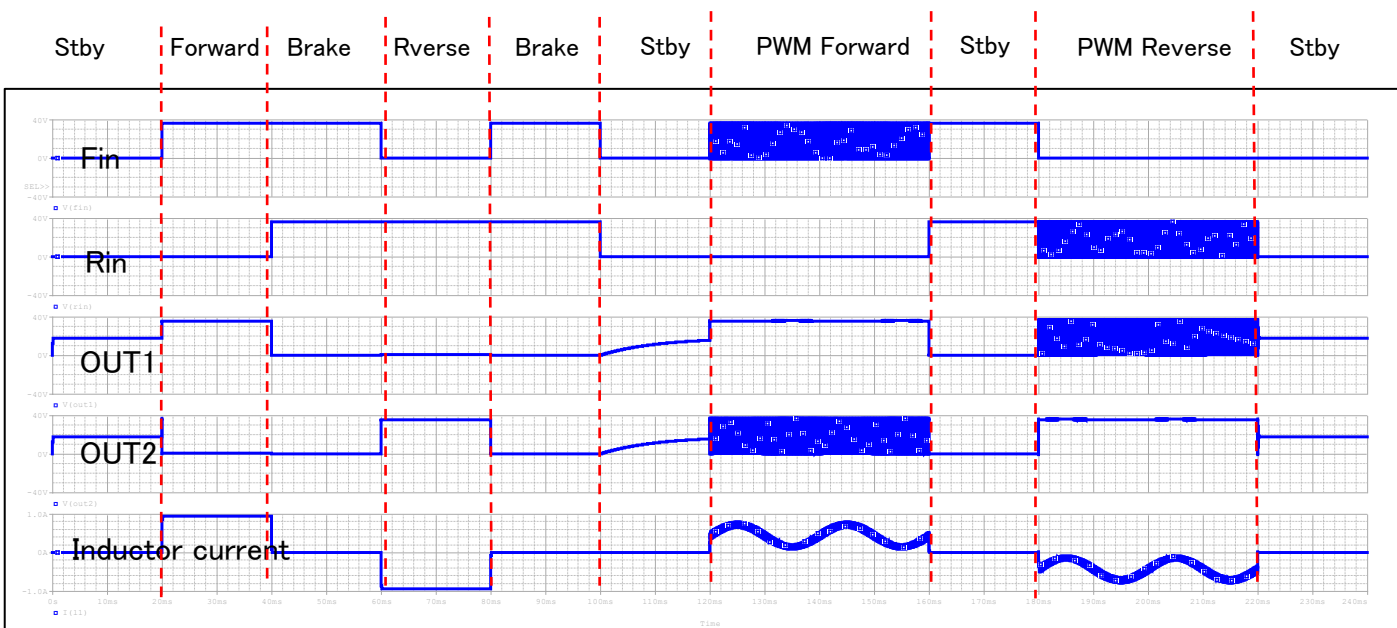
Stand-by mode, Forward, Reverse, Brake, PWM control Testbench  
(PWM:Fin=50[Hz] Fc=50[kHz], Lout=1[mH], Rout=1[A])

Referred to Data Sheet

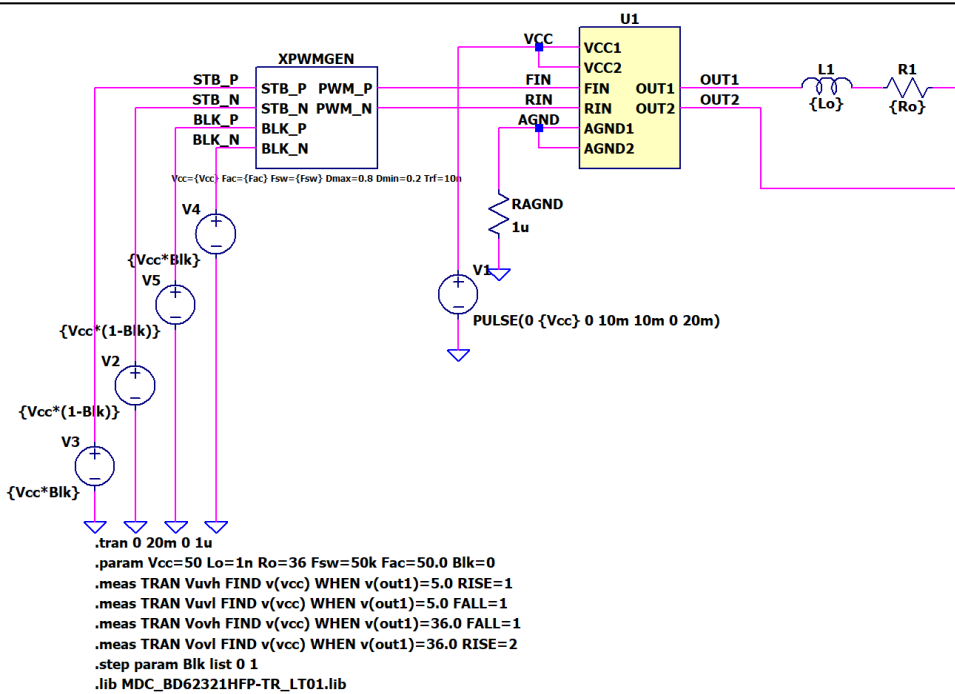


Simulation results are following.  
 Explanatory notes — : simulated

**Stand-by mode, Forward, Reverse, Brake, PWM control Testbench  
 (PWM:Fin=50[Hz] Fc=50[kHz], Lout=1[mH], Rout=36[ohm])**

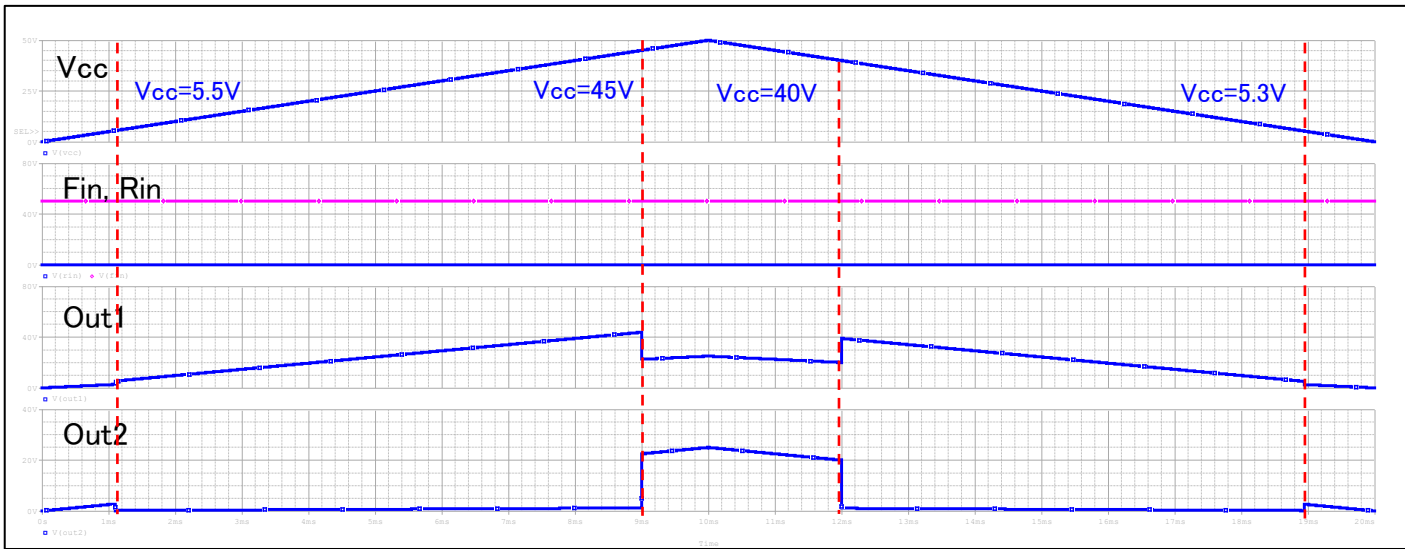


UVLO and OVP Testbench (Forward mode, Lout=1[nH] Rout=36[ohm])  
 Referred to Data Sheet



Simulation results are following.  
Explanatory notes — : simulated

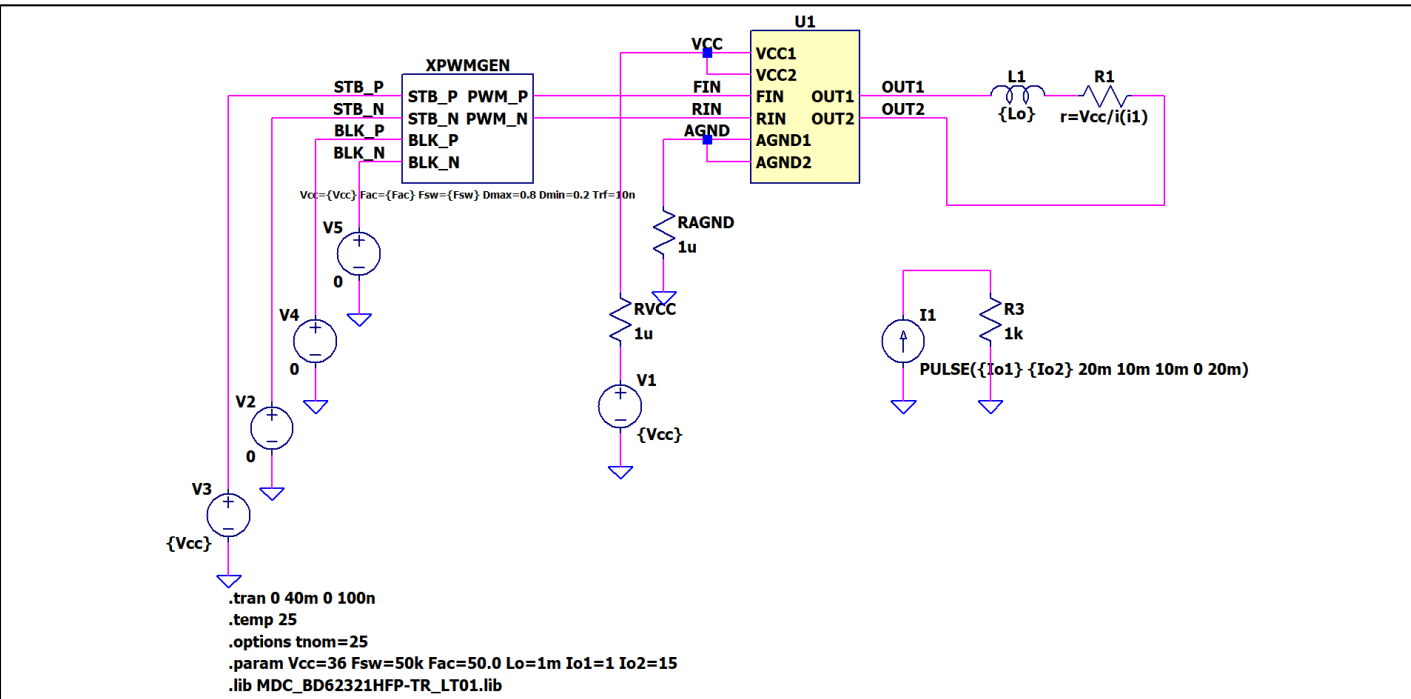
**UVLO and OVP Testbench (Forward mode, Lout=1[nH] Rout=36[ohm])**



OCP Testbench

(PWM forward mode, PWM:Fin=50[Hz] Fc=50[kHz], Lout=1[mH], Rout=36[ohm] -> 2.4[ohm])

Referred to Data Sheet

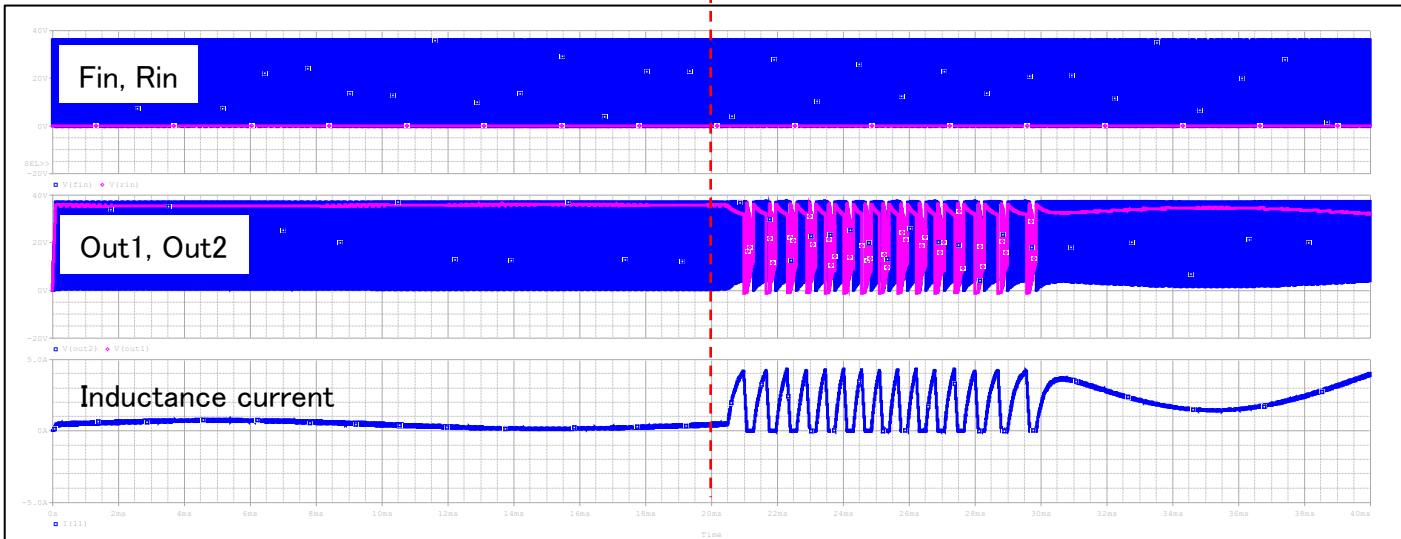


Simulation results are following.  
Explanatory notes — : simulated

**OCP Testbench**

**(PWM forward mode, PWM:Fin=50[Hz] Fc=50[kHz], Lout=1[mH], Rout=36[ohm] -> 2.4[ohm])**

Rout = 36[ohm] ← → Rout = 2.4[ohm]





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