

# ADS Model

## Buck Converter

### Sanken Electric Co., Ltd.

## STR6A168HVD

### Model Information

**Model** A macro model  
**Call Name** MDC\_STR6A168HVD\_AD  
**Pin Assign** 1:S/OCF 2: BA 3:AGND 4:FB/OLP 5:VCC 6:NC 7:D/ST1 8:D/ST2  
**File List** Model Library MDC\_STR6A168HVD\_AD01.lib  
 Model Report MDC\_STR6A168HVD\_AD.pdf (this file)

**Verified Simulator Version** ADS 2024 Update 2  
**Note**

### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.3.0 2021.01.25
- Product name STR6A168HVD
- Company name SANKEN ELECTRIC

[Characteristics listed]

- Characteristics  $V_{CC}$ ,  $V_{FB/OLP}$ ,  $V_{D/ST}$ ,  $V_{S/OCF}$

### 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

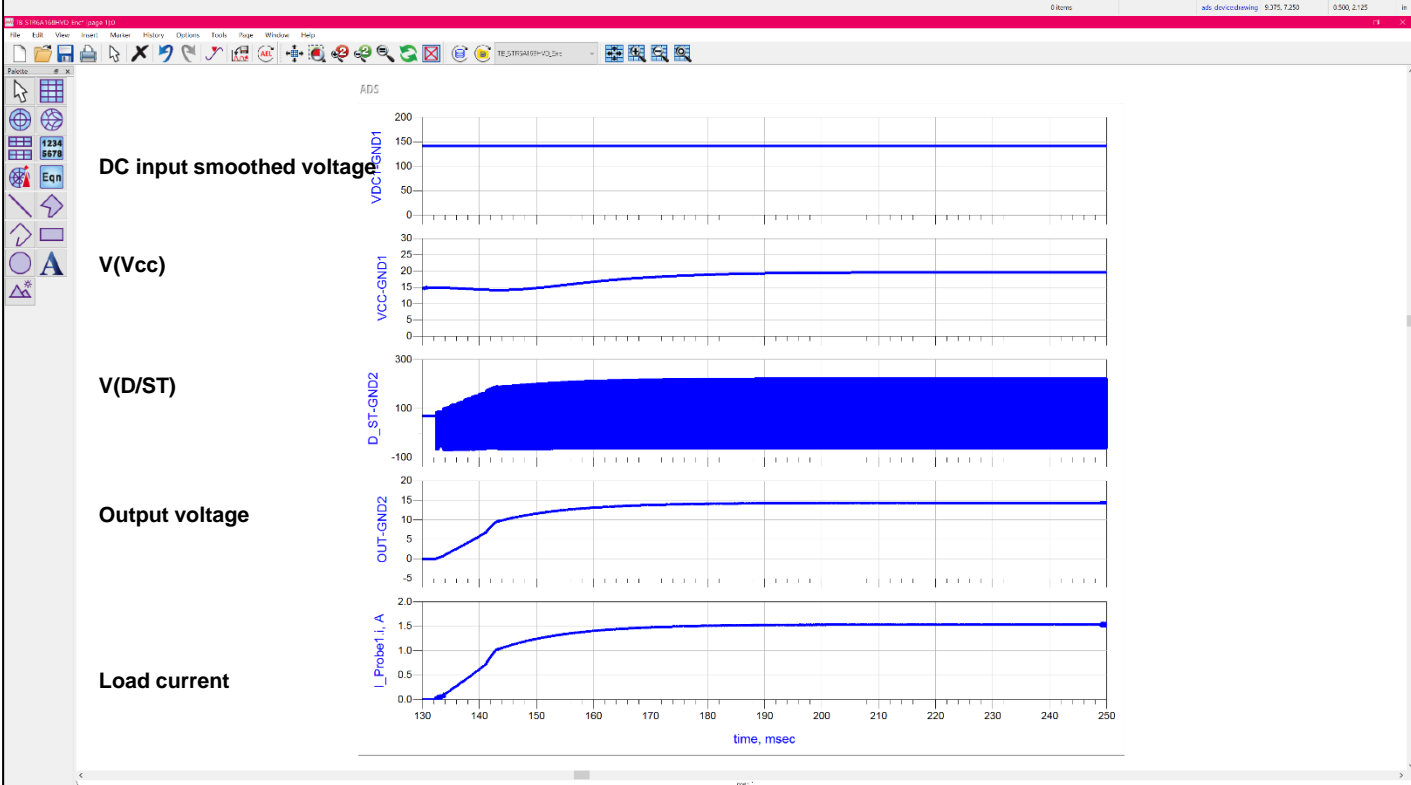
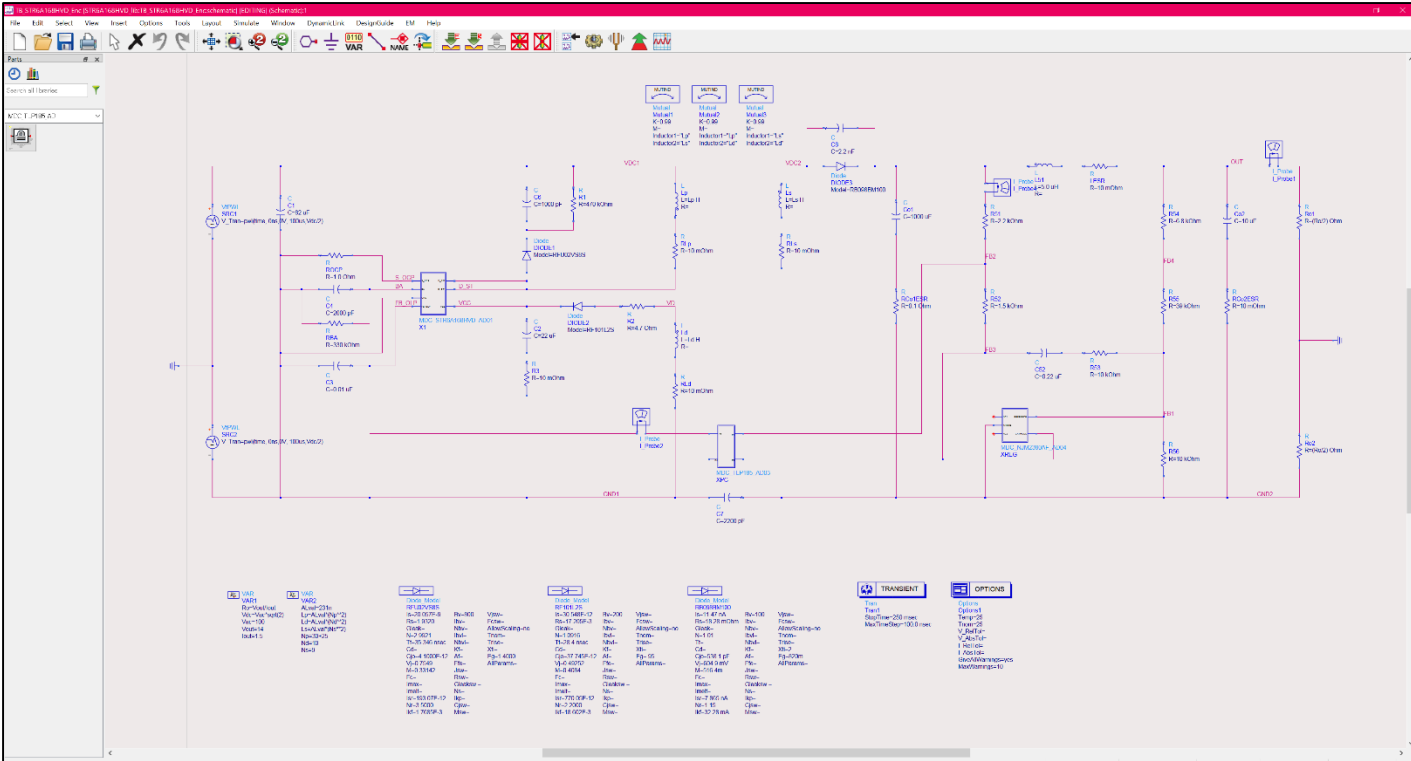
## Switching Regulator

○ : Implemented  
 × : Not Implemented  
 — : Not applicable

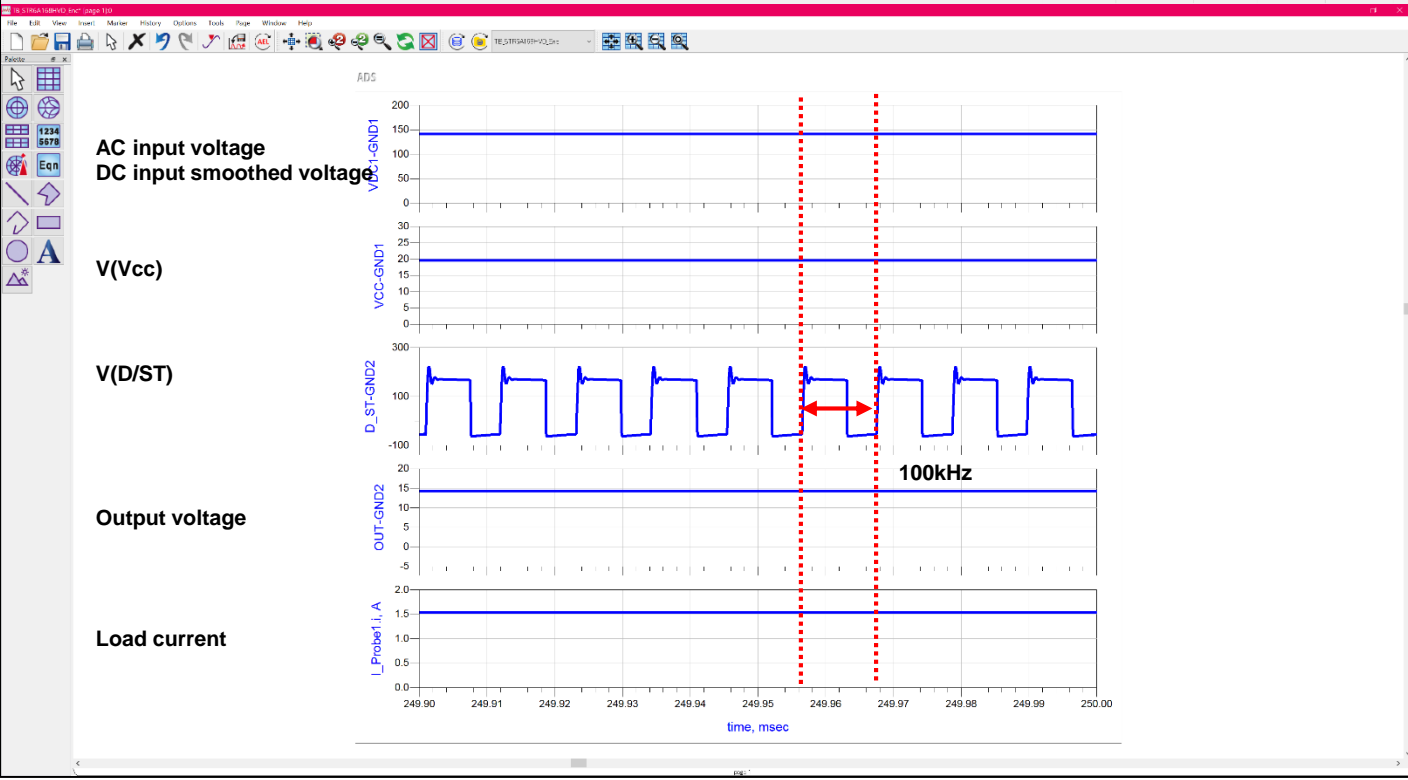
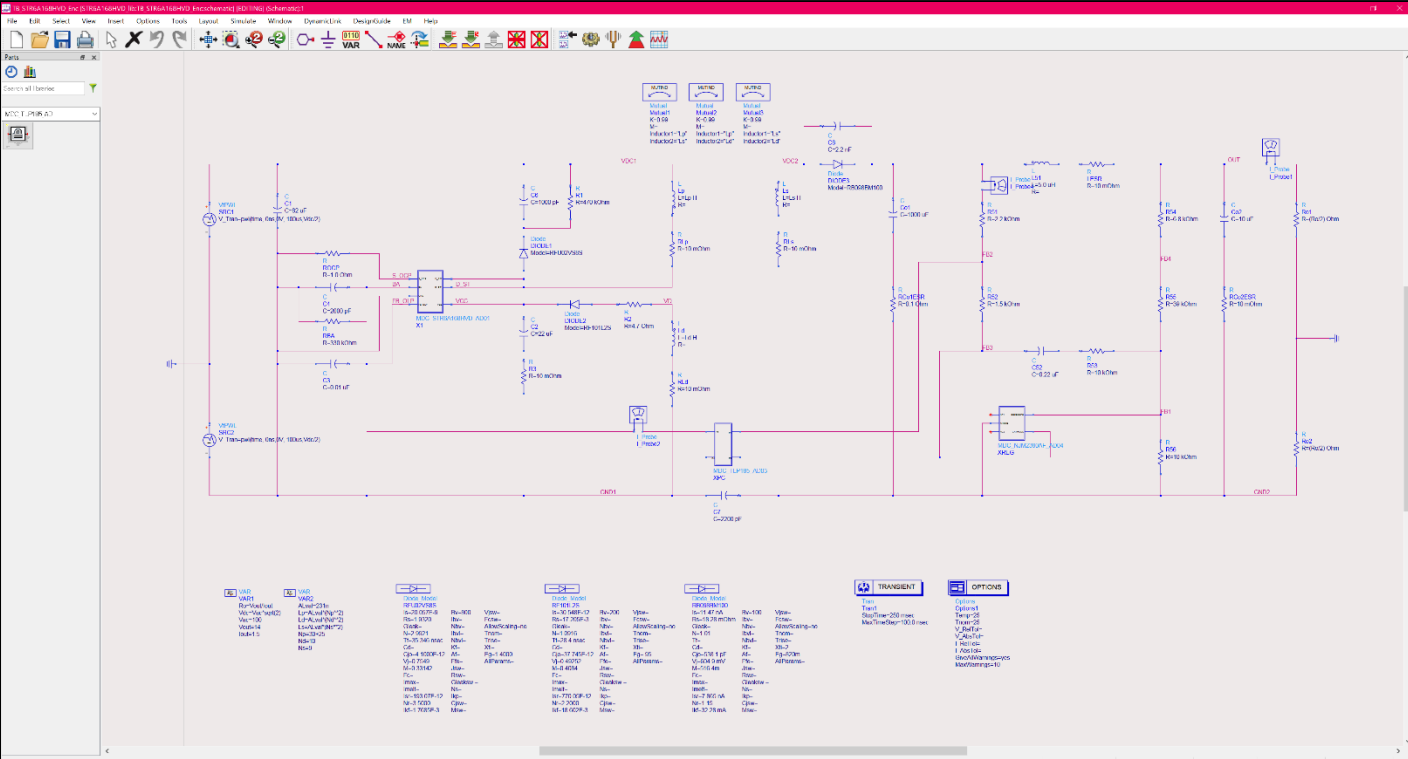
**Model Functions Table**
**RANK=2**

Functions	RANK	Implemented
Control Method (PWM,PFM)	1	○
Enable Function	1	—
Soft Start	1	○
Line Regulation	1	—
Load Regulation	1	—
Synchronous External Oscillation	1	—
UVLO	1	○
Line Transient	2	—
Load Transient	2	—
Light Load Current Mode	2	○
Spread Spectrum	2	—
Over Current Protection	2	○
Over Voltage Protection	2	○
Forward/Flyback Other Device in Circuit	3	—
Brown IN/OUT Function	—	—
ZT Pin OVP Function	—	—

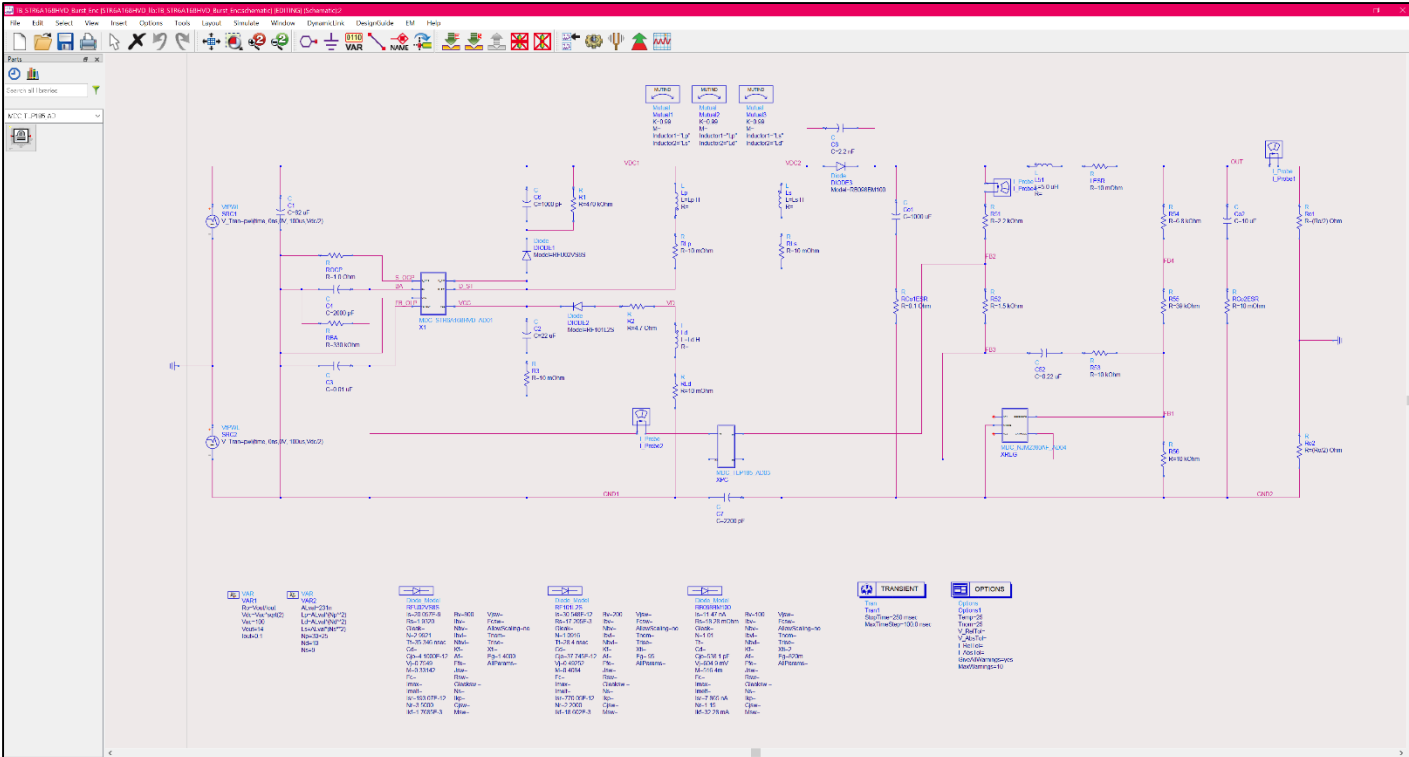
Test bench for power supply circuit (Vac = 100V, Vout = 14V, Iout = 1.5A)



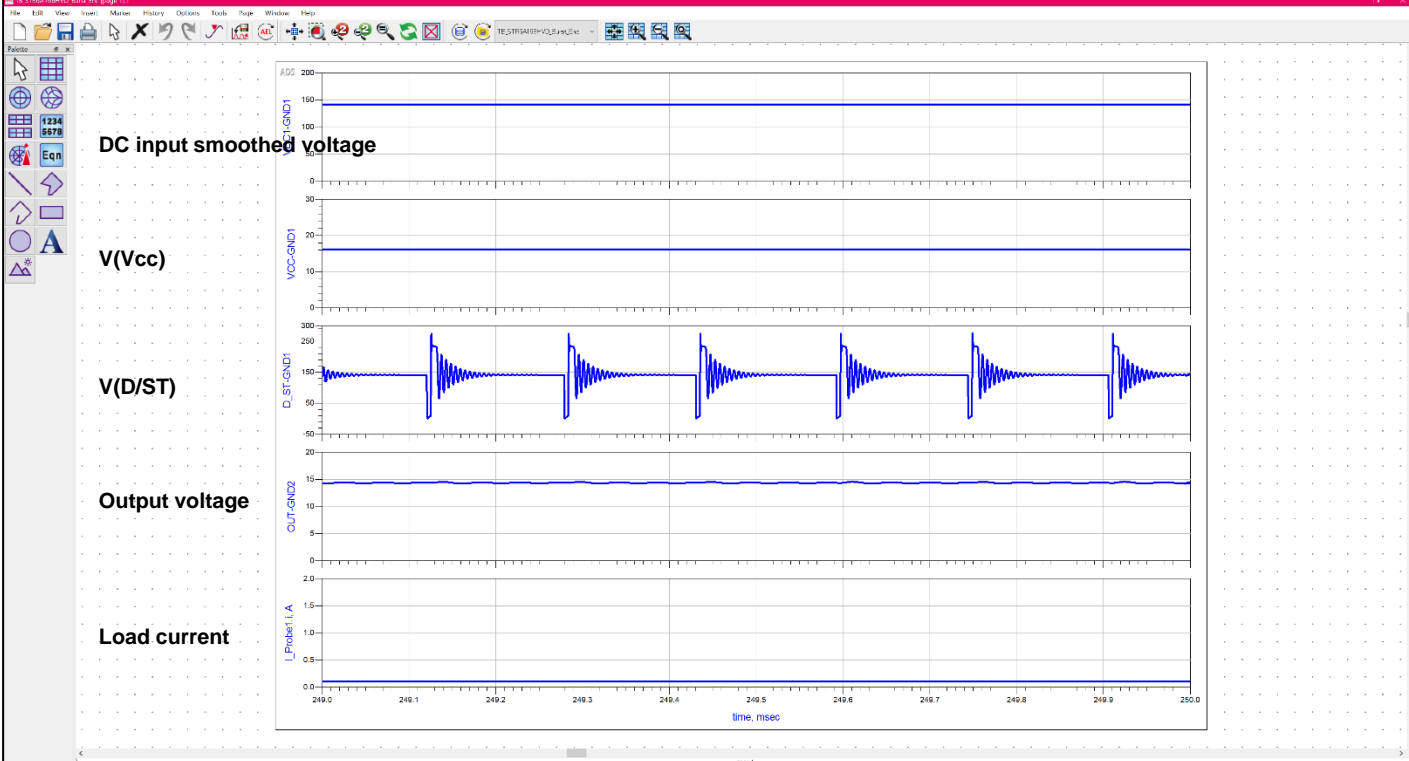
Test bench for power supply circuit (Vac = 100V, Vout = 14V, Iout = 1.5A)



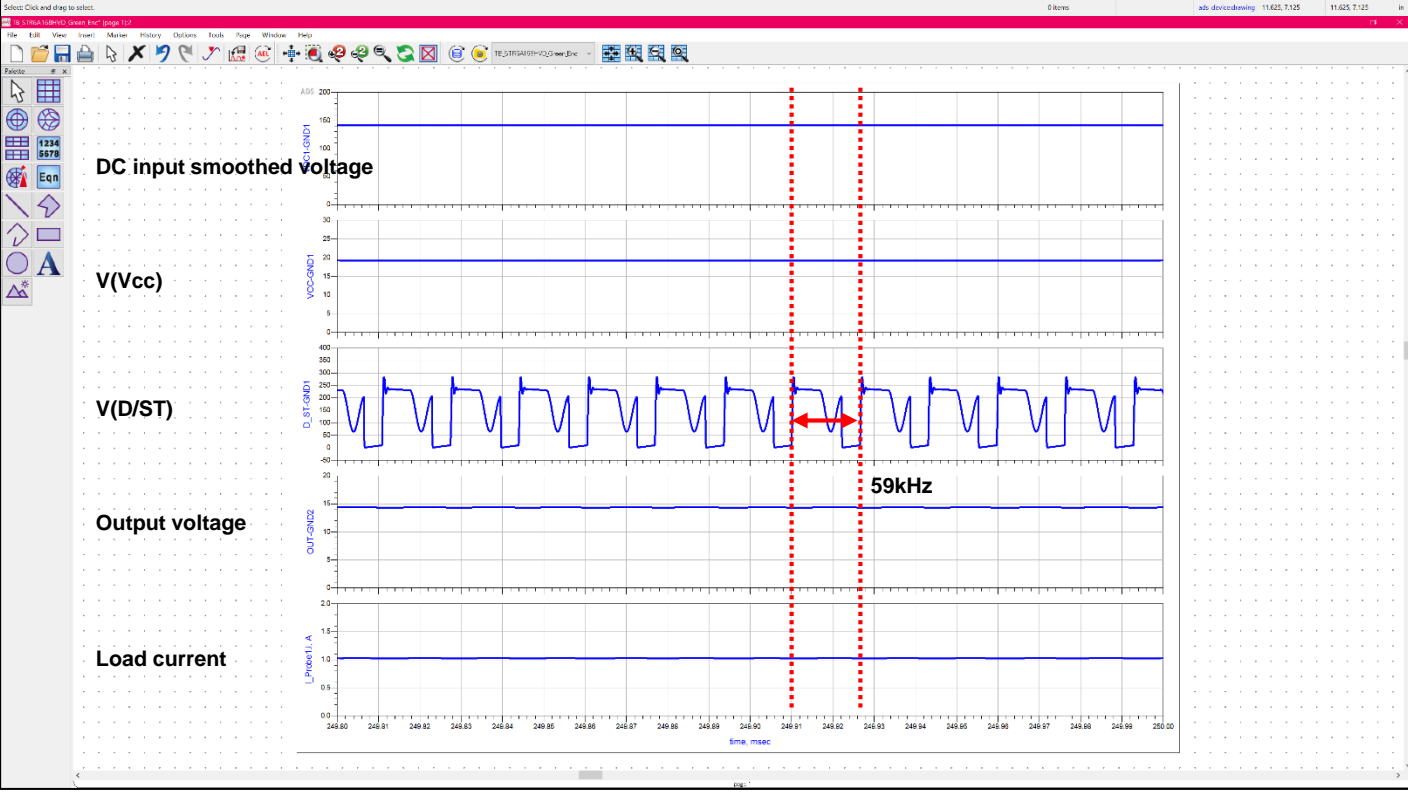
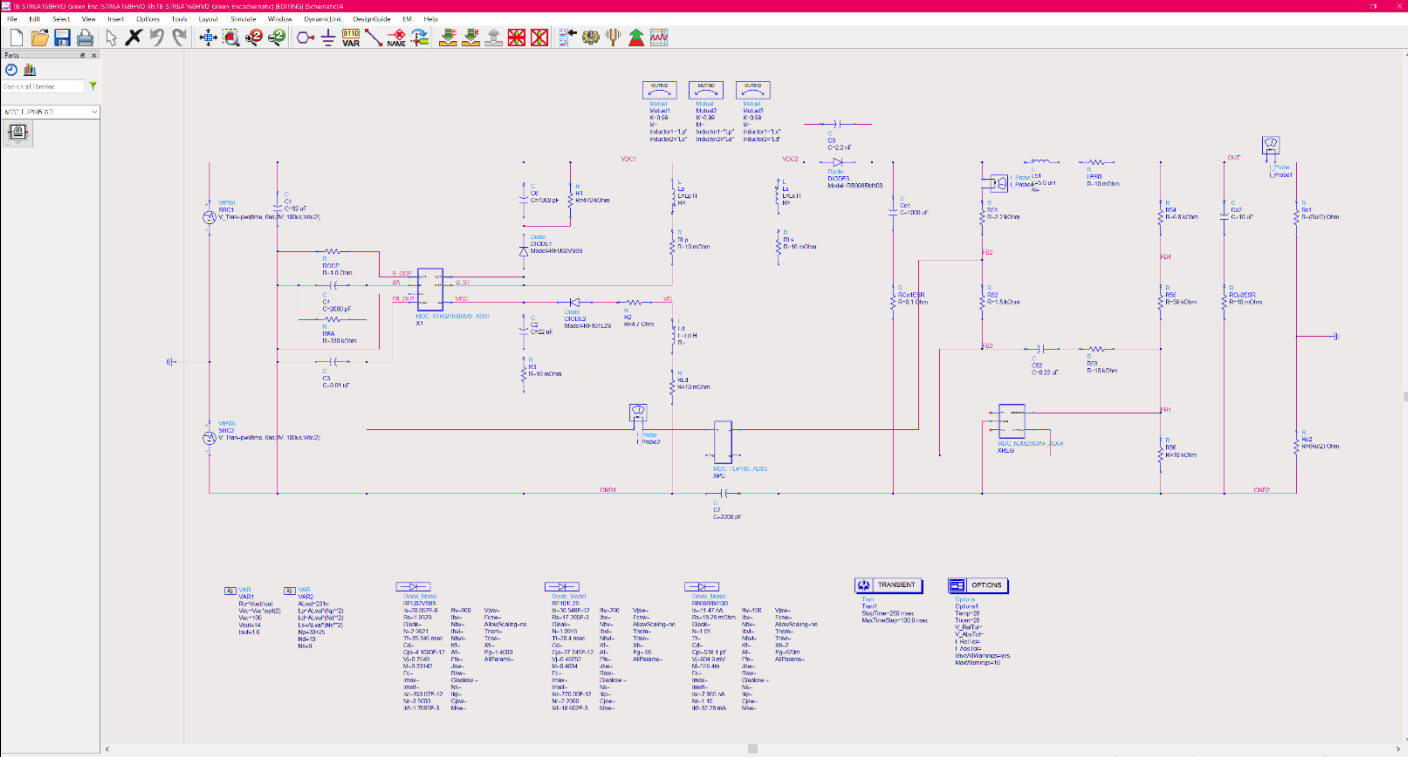
Test bench for Burst-mode function (Vac = 100V, Vout = 14V, Iout = 0.1A)



Select click and drag to select. 0 items 46: dovcddrawing 10,125,7,250 10,125,7,250



Test bench for Green-mode function (Vac = 100V, Vout = 14V, Iout = 1.0A)



## DISCLAIMER

1. This SPICE (Simulation Program with Integrated Circuit Emphasis) model and its content (the "Contents") are copyright of MoDeCH Inc. All rights reserved. Any redistribution or reproduction of any or all part of the Contents in any form is prohibited without express written permission made by MoDeCH Inc.
2. MoDeCH Inc. as licensor (the "Licensor") hereby grants to you, as licensee (the "Licensee"), a non-exclusive, non-transferable license to use the Contents as long as you abide by the terms and conditions of this DISCLAIMER.
3. The Licensee is not authorized to sell, loan, rent and redistribute or license the Contents in whole or in part, or in modified form, to anyone.
4. The Licensor shall in no way be liable to the Licensee or any third party for any loss or damage (including ,but not limited to, lost profits, or other incidental, consequential, or punitive damages), however caused (including through negligence) which may be directly or indirectly suffered from, arising out of, or in connection with, any use of the Contents .
5. Notwithstanding anything contained in this DISCLAIMER, in no event shall Licensor be liable for any claims, damages or loss which may arise from the modification, combination, operation or use of the Contents with the Licensee's computer programs.
6. The Licensor does not warrant that the Contents will function in any environment.
7. The Contents may be changed or updated without notice. MoDeCH Inc. may also make improvements and/or changes in the products, pricing and/or the programs related to the Contents at any time without notice.



MoDeCH Inc.

Head Office

Location: 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail:[model-on-support@modech.co.jp](mailto:model-on-support@modech.co.jp)

URL:<http://www.modech.com/en/>