

# LTspice Model

## Simple Step-down Switching Regulators

### ROHM Co., Ltd.

### BD9G101GTR

#### Model Information

**Model** A macro model  
**Call Name** MDC\_BD9G101GTR\_LT  
**Pin Assign** 1:BST 2:GND 3:FB 4:EN 5:VCC 6:LX  
**File List** Model Library MDC\_BD9G101GTR\_LT01.lib  
 Model Report MDC\_BD9G101GTR\_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 BD9G101GTR
- Company name ROHM Co., Ltd.

[Characteristics listed]

- Characteristics Switching Frequency
- FB Pin Threshold Voltage
- Soft-start time
- High-side Nch-FET ON Resistance

#### Simulation Condition

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

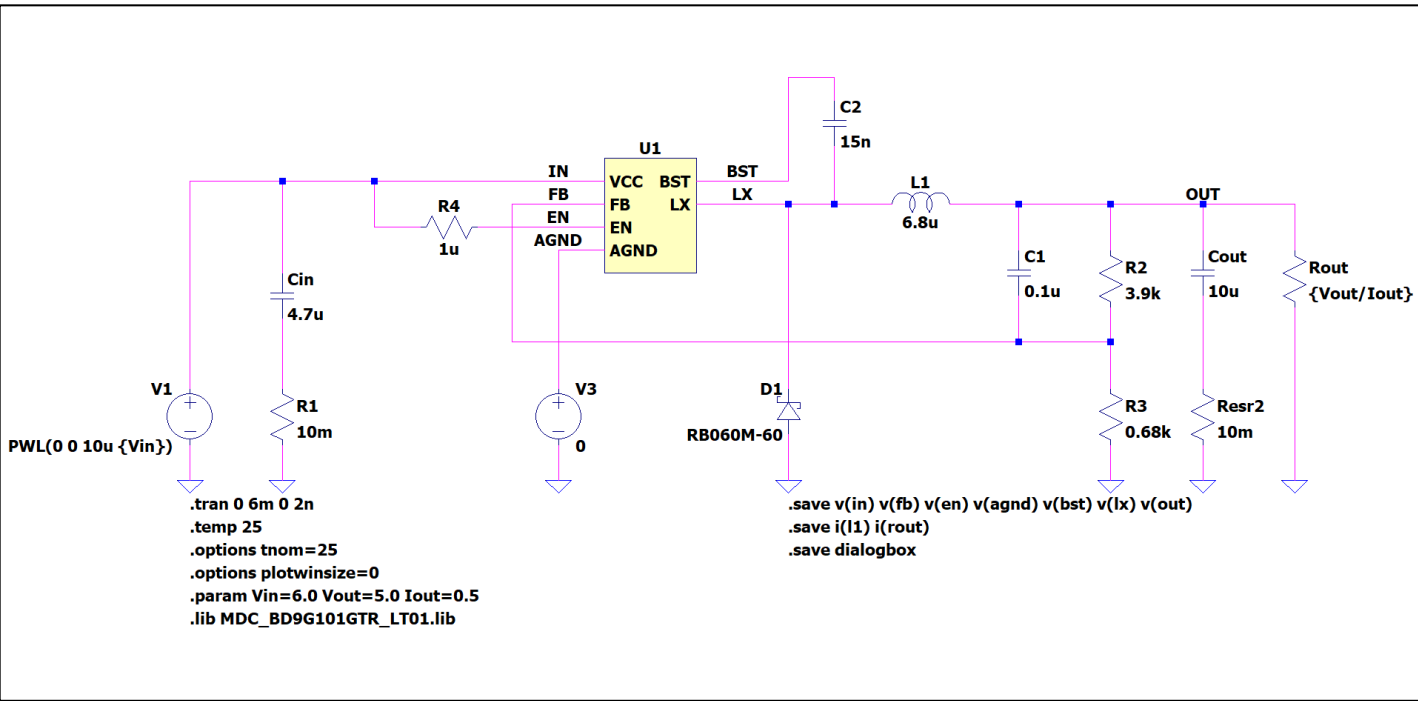
| Item        | Condition | Unit  |
|-------------|-----------|-------|
| Temperature | 25        | deg C |

**Model Functions Table**

| Functions   | Implemented |
|---|-------------|
| High and Wide Input Voltage Range (VCC=6V to 42V) | ○           |
| 1.5MHz Fixed Operating High Frequency             | ○           |
| Under Voltage Lock Out                            | ○           |
| Soft-Start  | ○           |

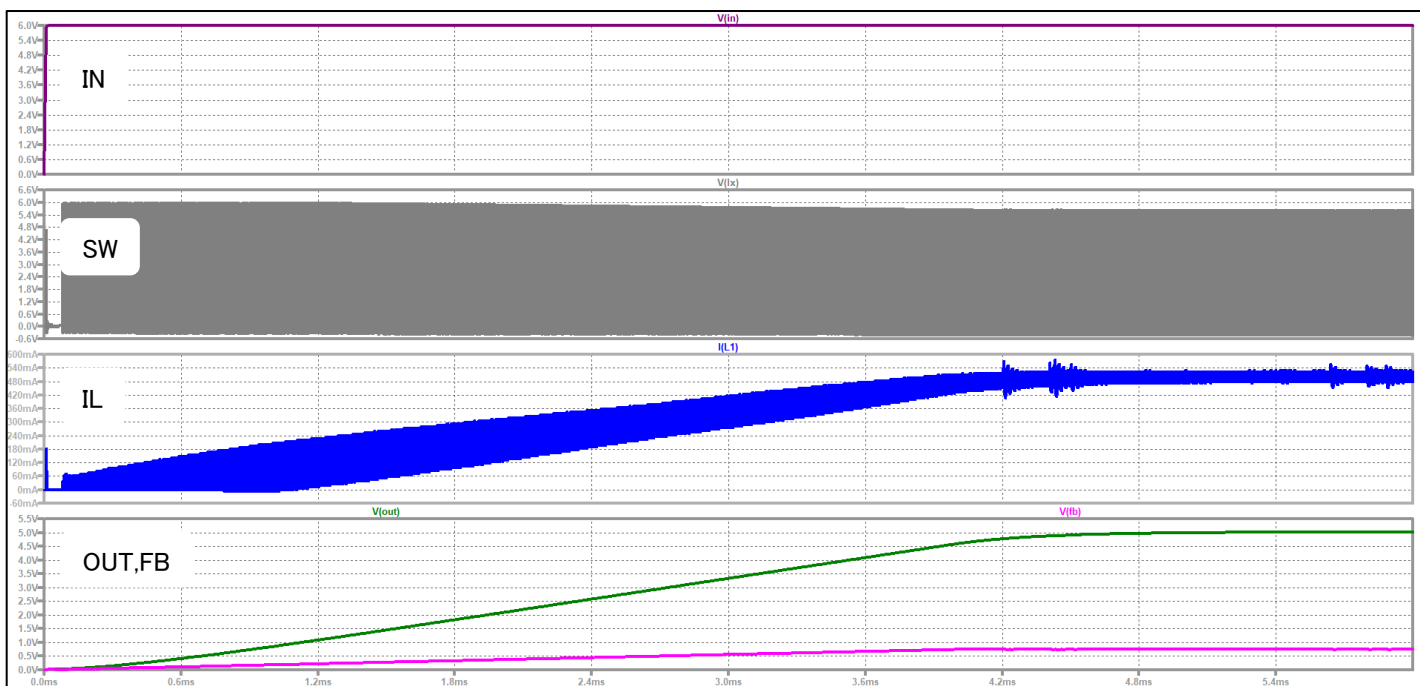
1.5MHz Fixed Operating High Frequency (VOUT = 5V, IOUT = 0.5A ) Testbench

Referred to Data Sheet



Simulation results are following.  
Explanatory notes — : simulated

**1.5MHz Fixed Operating High Frequency (VOUT = 5V, IOUT = 0.5A ) Testbench**



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