

# LTspice Model

## Step-Down Voltage Regulator

### Texas Instruments Inc.

## LM2672MX-ADJ

### Model Information

**Model** A macro model  
**Call Name** MDC\_LM2672MX-ADJ\_LT  
**Pin Assign** 1:CB 2:SS 3:SYNC 4:FB 5:ON/OFF 6:GND 7:VIN 8:VSW  
**File List** Model Library MDC\_LM2672MX-ADJ\_LT02.lib  
 Model Report MDC\_LM2672MX-ADJ\_LT.pdf(this file)

**Verified Simulator Version** LTspice XVII

#### Note

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 29-Sep-2019
- Product name LM2672MX-ADJ
- Company name Texas Instruments Inc.

[Characteristics listed]

- Characteristics VFB, ICL, RDS(ON), fo VS/D, IS/D FSYNC, VSYNC VSS, ISS

#### Simulation Condition

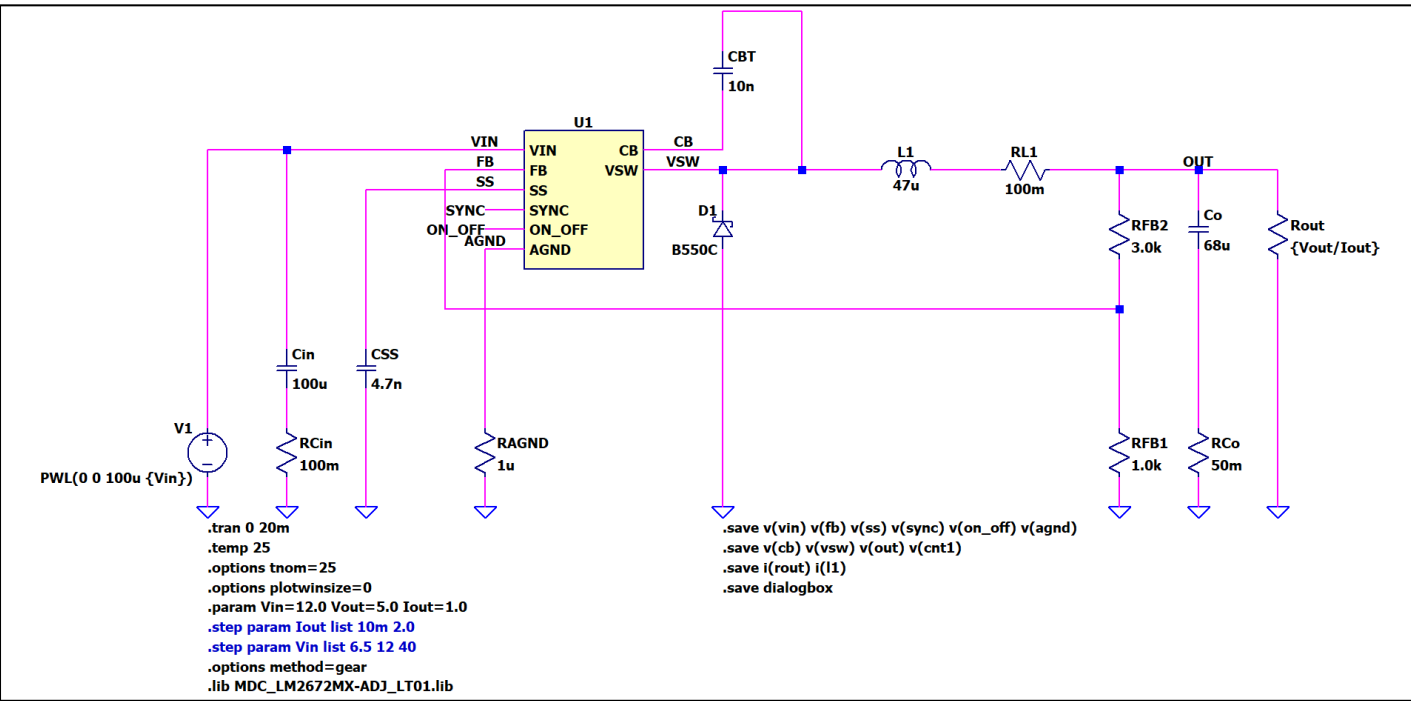
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition			Unit
	Min	Typ	Max	
Vin	6.5		40.0	V
Temperature		25.0		deg C

**Model Functions Table**

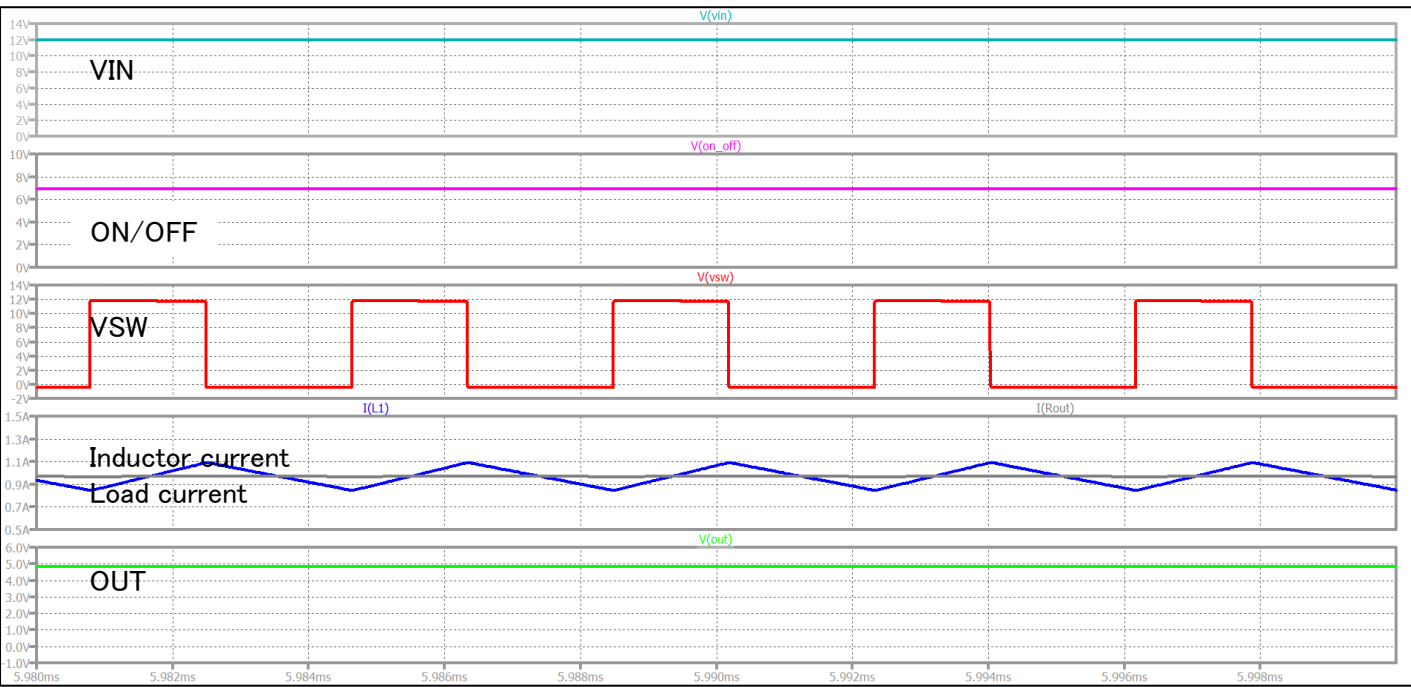
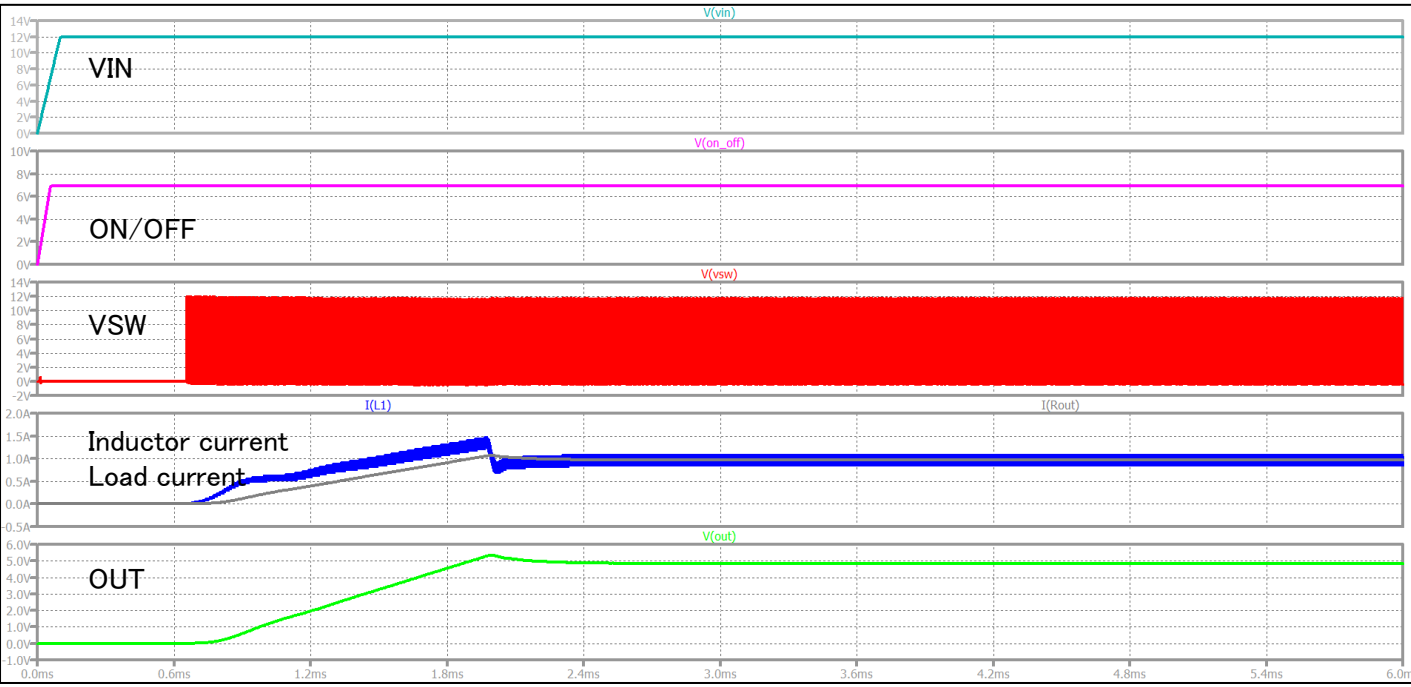
Functions	Implemented
Adjustable Output Versions	○
Adjustable Version Output Voltage Range: 1.21 V to 37 V	○
± 1.5% Maximum Output Voltage Tolerance Over Line and Load Conditions	○
Specified 1-A Output Load Current	○
260-kHz Fixed Frequency Internal Oscillator	○
TTL Shutdown Capability, Low Power Standby Mode	○
Soft-Start and Frequency Synchronization	○

Testbench for step-down converted function ( $V_{in}=12[V]$ ,  $V_{out}=5.0[V]$ ,  $I_{out}=1.0[A]$ ,  $F_{sw}=260[kHz]$ )  
 Referred to Data Sheet

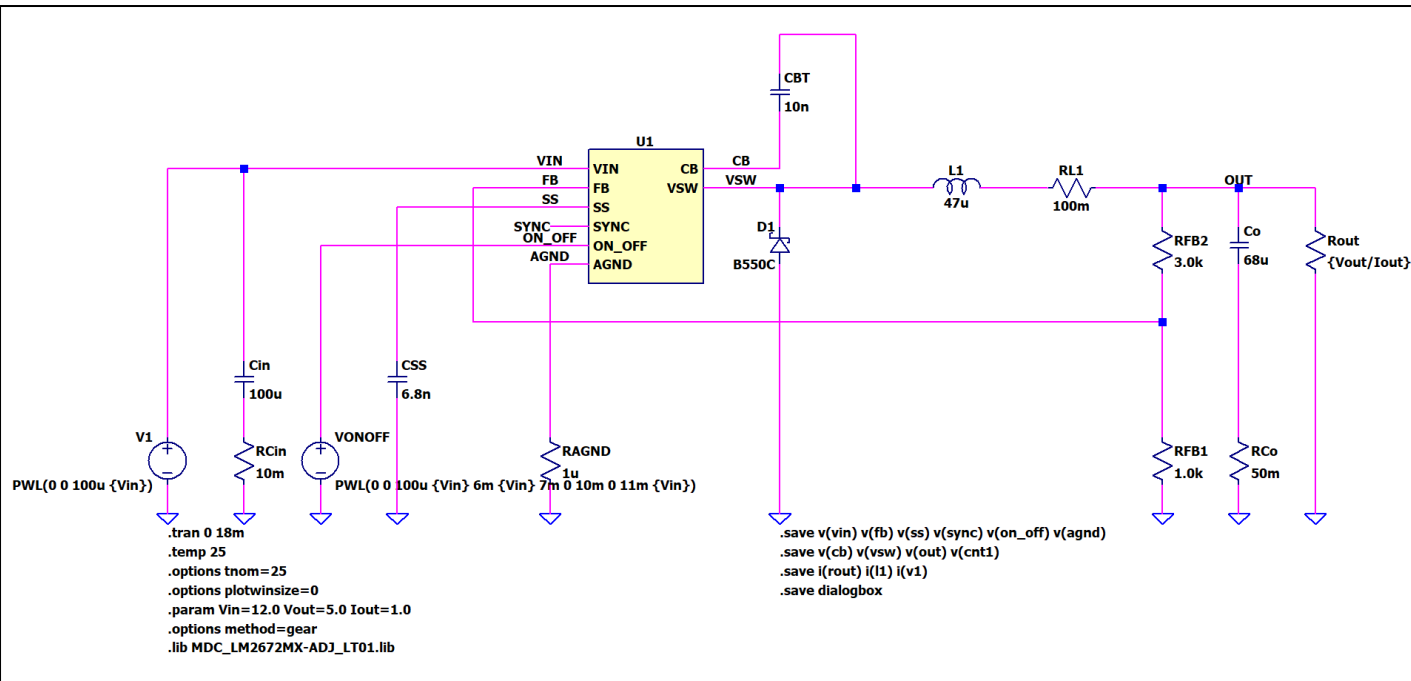


Simulation results are following.  
 Explanatory notes — : simulated

**Step-down converted function (Vin=12[V], Vout=5.0[V], Iout=1.0[A], Fsw=260[kHz])**

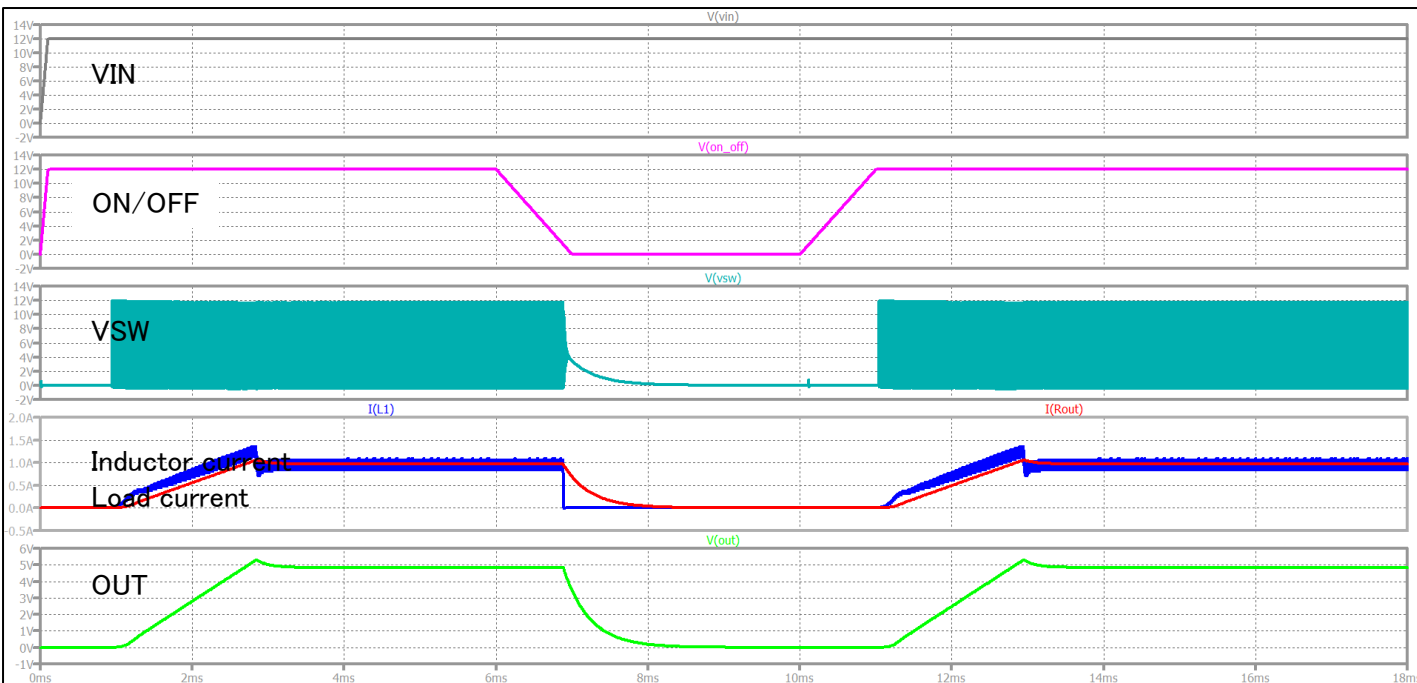


Testbench for ON/OFF function (ON/OFF=12->0->12[V],  $V_{out}=5.0[V]$ ,  $I_{out}=1.0[A]$ ,  $F_{sw}=260[kHz]$ )  
 Referred to Data Sheet



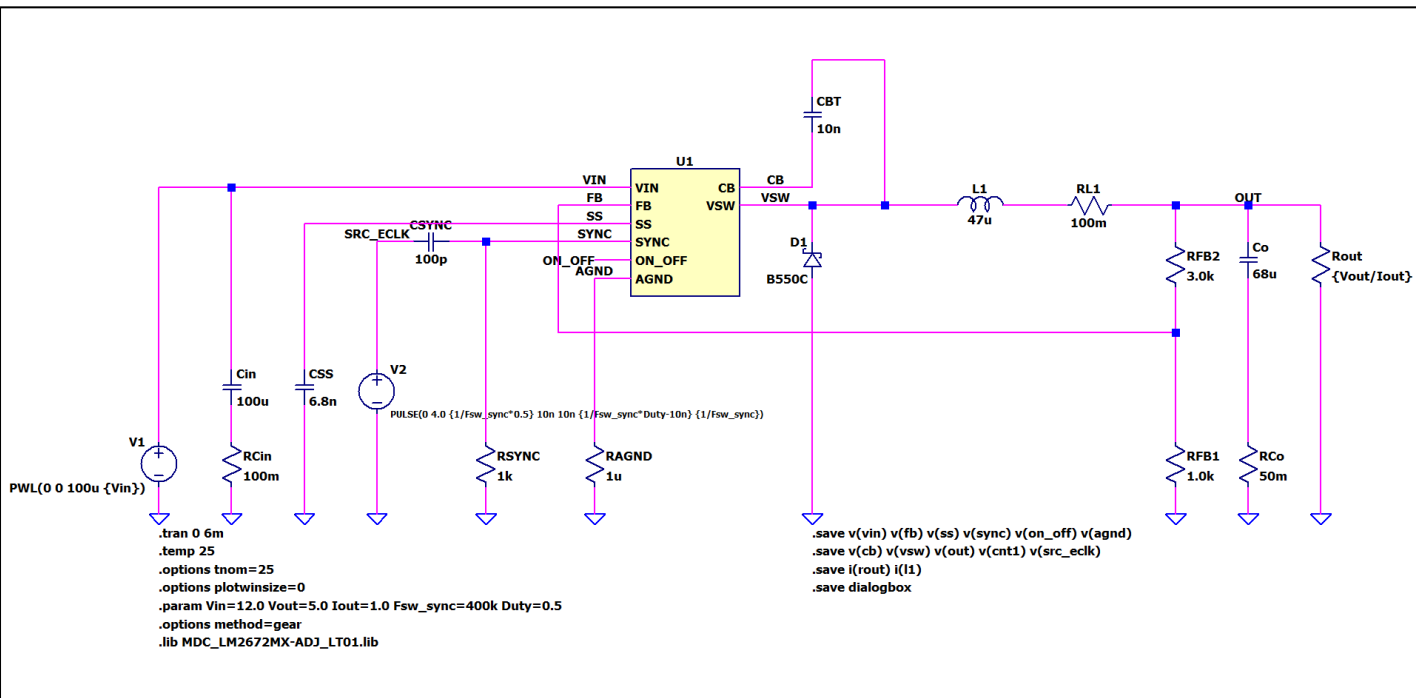
Simulation results are following.  
 Explanatory notes — : simulated

**ON/OFF function (Vin=12->0->12[V], Vout=5.0[V], Iout=1.0[A], Fsw=260[kHz])**



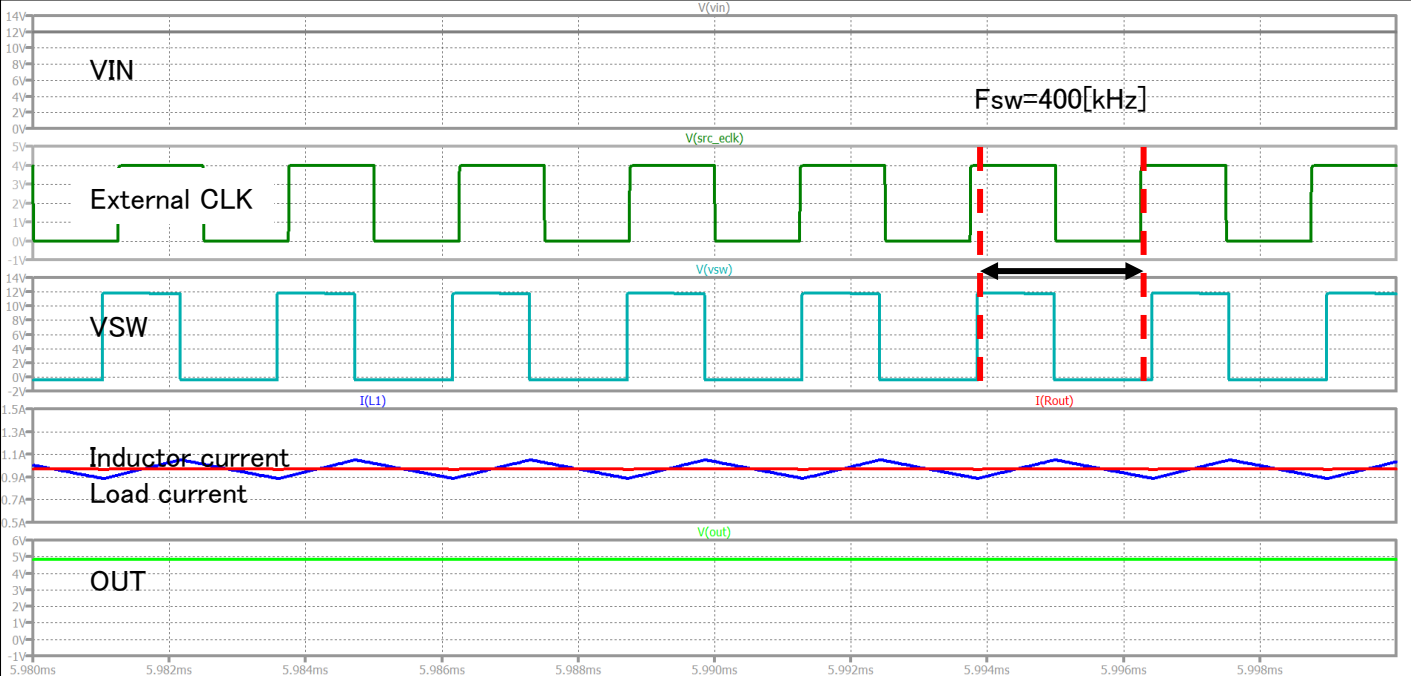
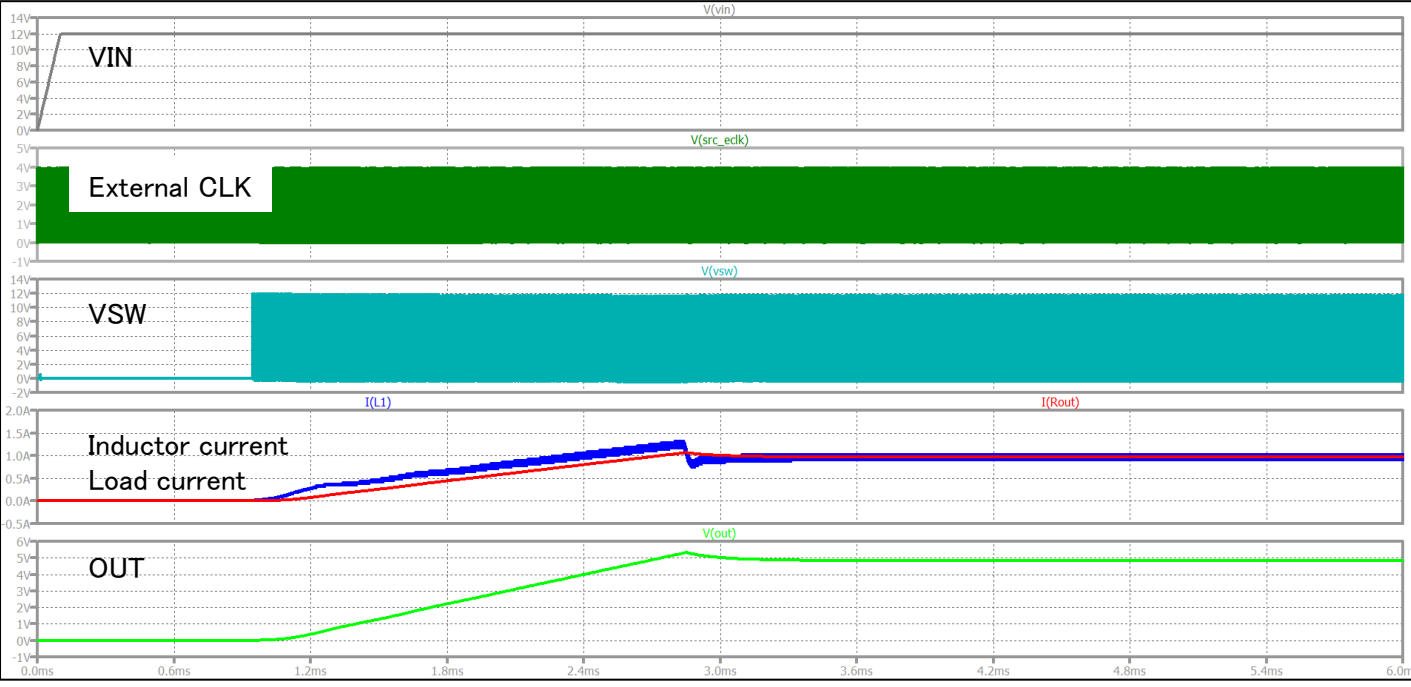
Testbench for step-down converted function (Frequency Synchronization)  
 (Vin=12[V], Vout=5.0[V], Iout=1.0[A], Fsw=400[kHz])

Referred to Data Sheet



Simulation results are following.  
 Explanatory notes — : simulated

**Step-down converted function (Frequency Synchronization)**  
**(Vin=12[V], Vout=5.0[V], Iout=1.0[A], Fsw=400[kHz])**





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