

PSpice Model PWM Controller TEXAS INSTRUMENTS LM5021-1

Model Information

Model A macro model
Call Name MDC_LM5021-1_PS
Pin Assign 1:COMP 2]VIN 3:VCC 4:OUT 5:GND 6: CS 7:RT 8:SS
File List Model Library MDC_LM5021-1_PS.lib
 Model Report MDC_LM5021-1.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 SNVS359E –MAY 2005–REVISED DECEMBER 2014
- Product name LM5021
- Company name TEXAS INSTRUMENTS

[Characteristics listed]

- Characteristics
 - Transient
 - Soft Start
 - Frequency-RT
 - External Clock

Simulation Condition

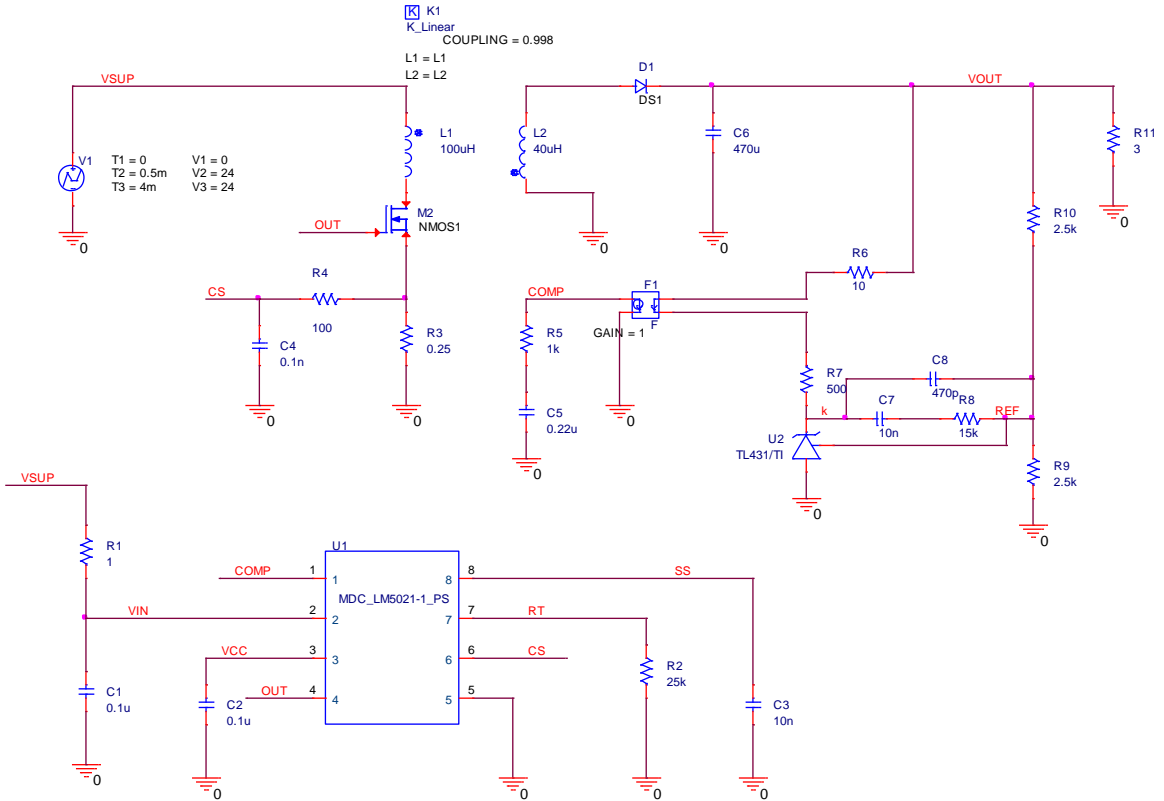
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

Model Functions Table

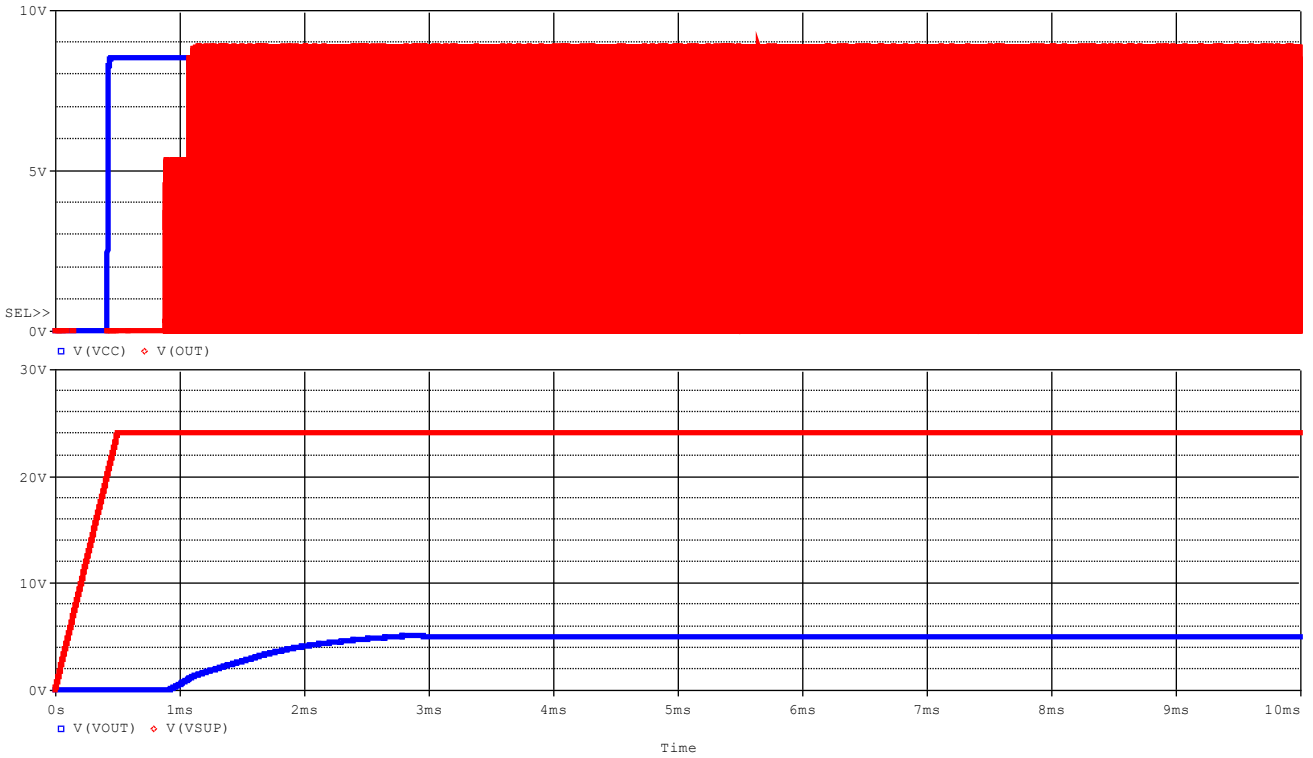
Functions	Implemented
Single Resistor Programmable Oscillator	○
Synchronizable Oscillator	○
Adjustable Soft-Start	○
Undervoltage Lockout (UVLO) with Hysteresis	○
Cycle-by-Cycle Overcurrent Protection	○
Skip Cycle Mode for Low Standby Power	○
Hiccup Mode for Continuous Overload Protection	×

Transient Testbench
Referred to Data Sheet

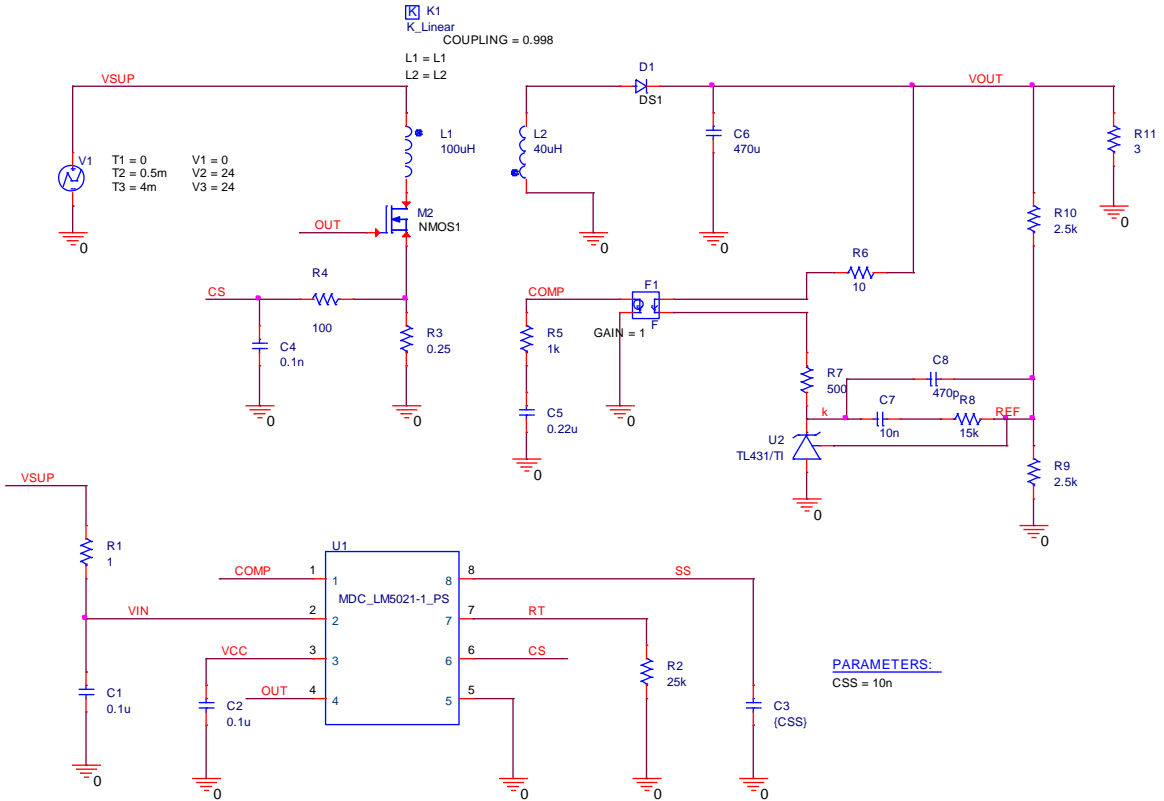


Simulation results are following.
Explanatory notes — : simulated

Transient

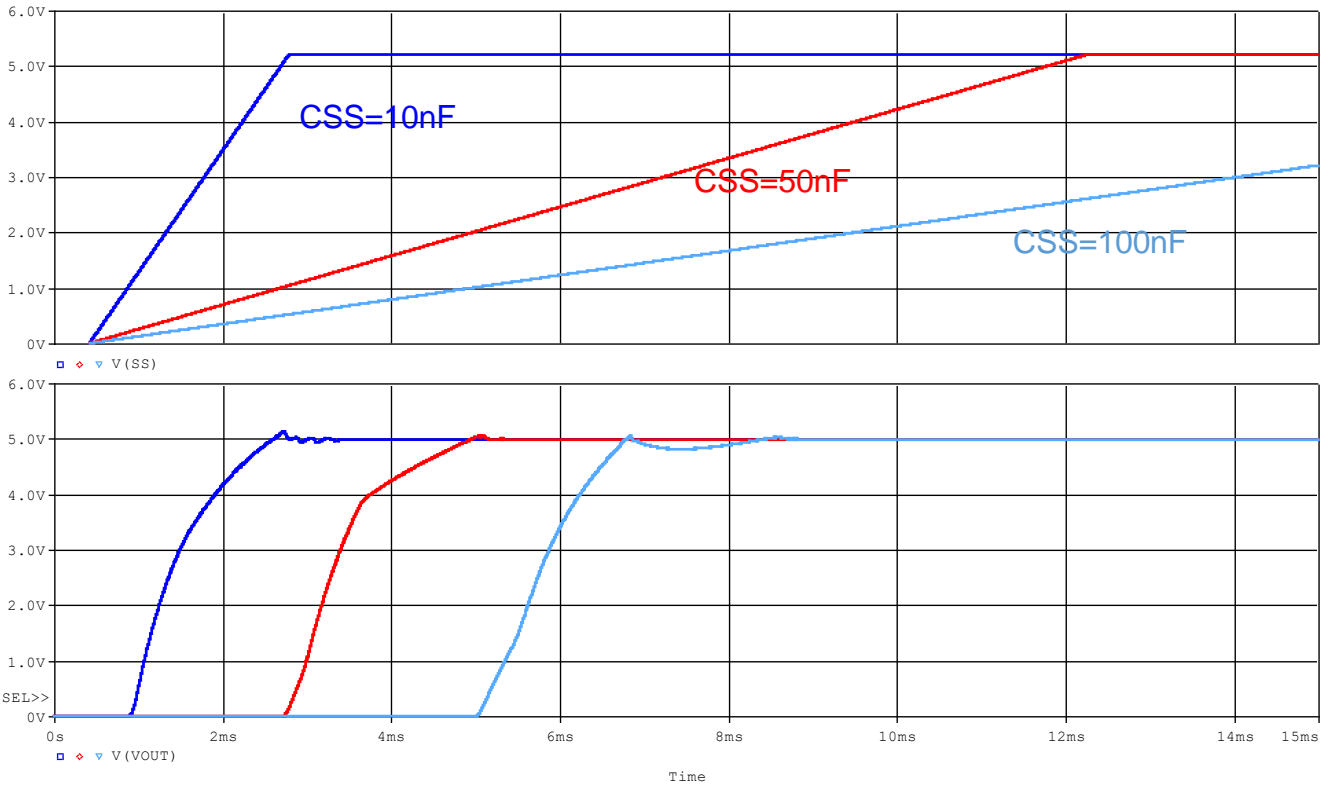


Soft Start Testbench
Referred to Data Sheet

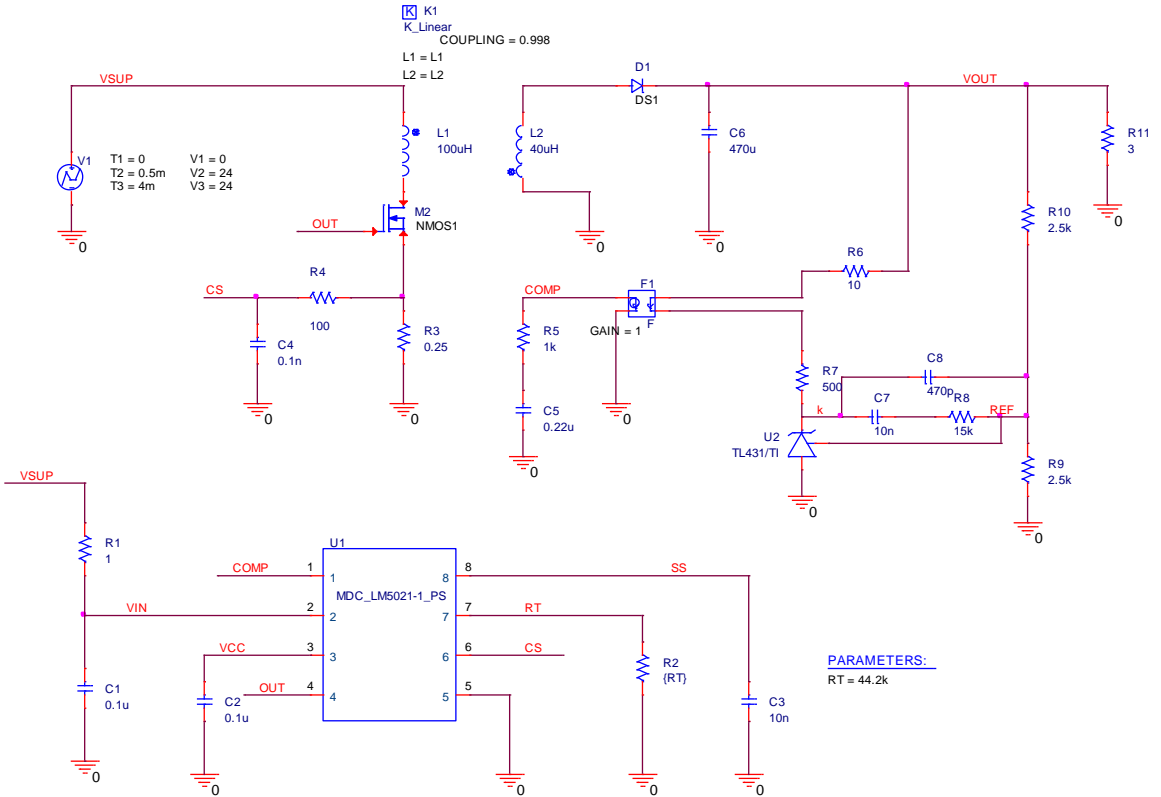


Simulation results are following.
Explanatory notes — : simulated

Soft Start

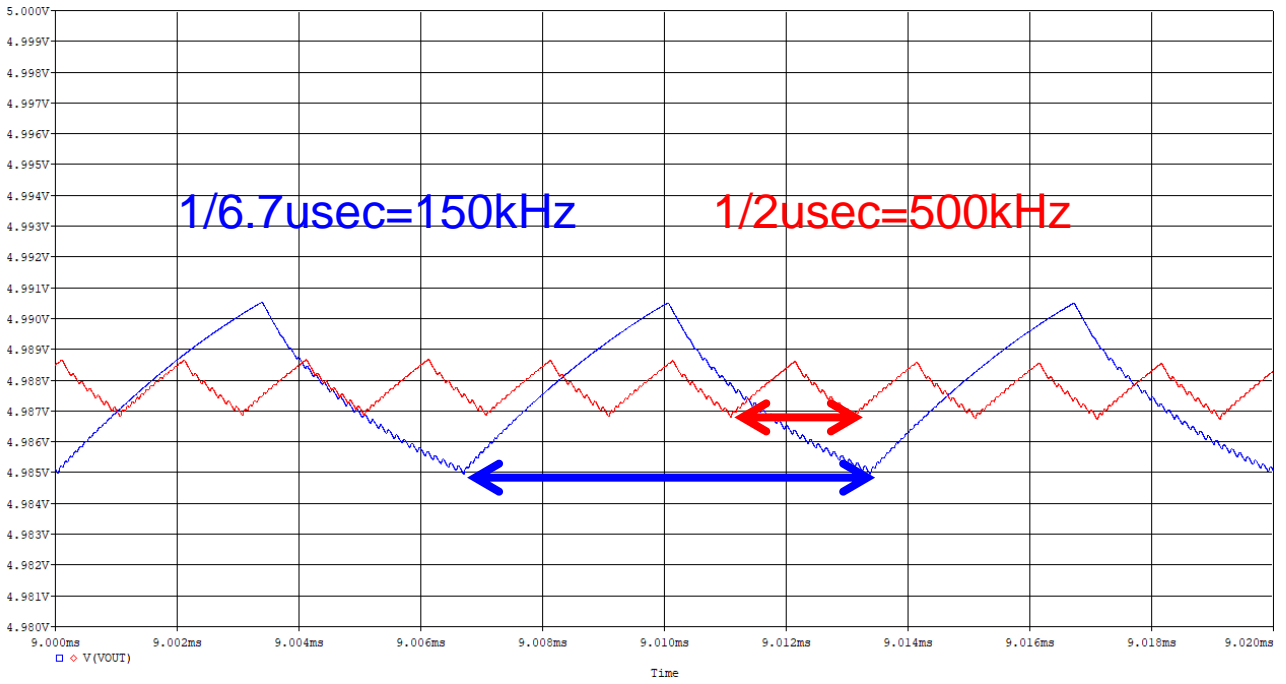


Freq-RT Testbench
 Referred to Data Sheet

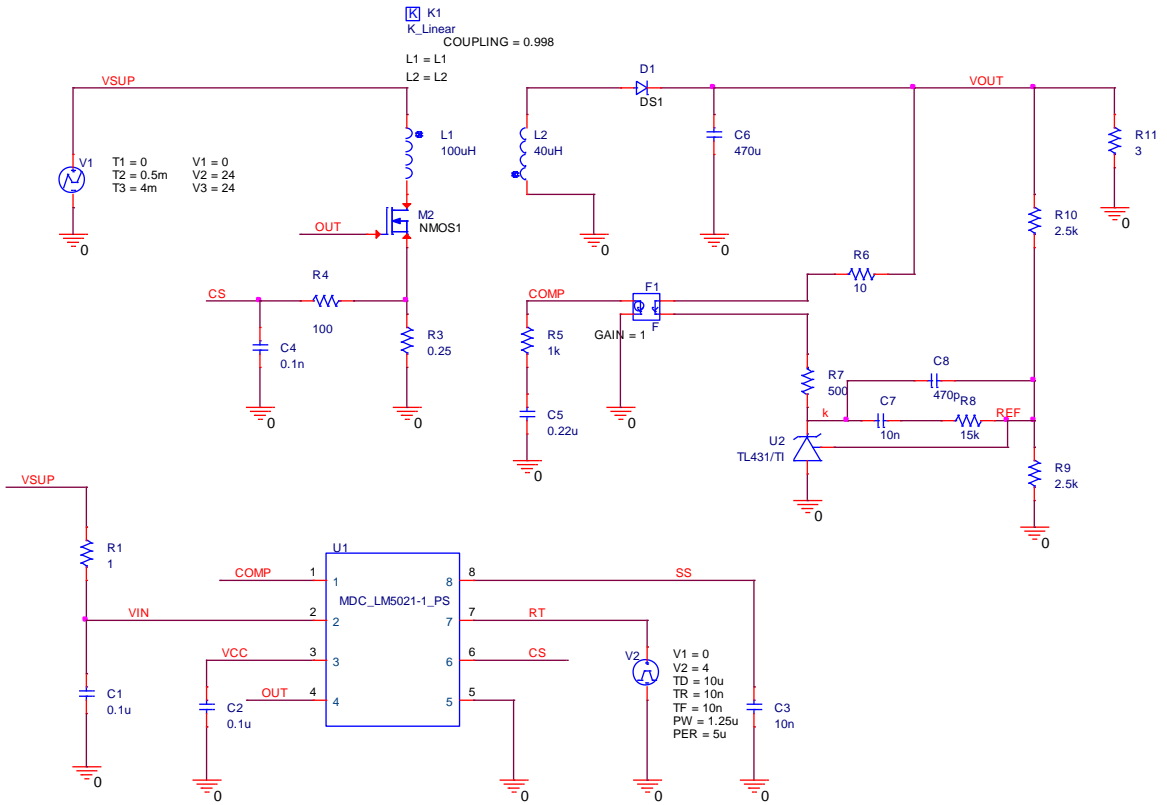


Simulation results are following.
Explanatory notes — : simulated

Freq-RT

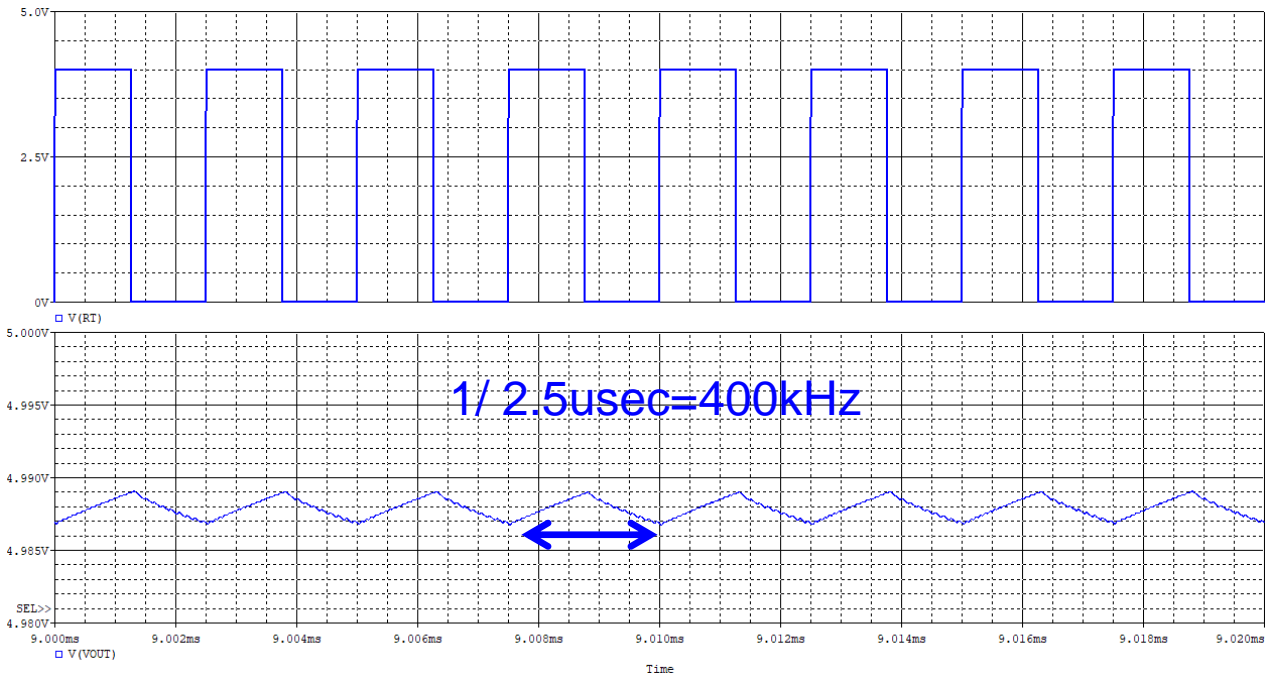


External Clock Testbench
Referred to Data Sheet



Simulation results are following.
Explanatory notes — : simulated

External Clock



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