

LTspice Model

Buck Converter

Power Integrations, Inc.,

TNY177PG

Model Information

Model A original macro model
Call Name MDC_TNY177PG_LT
Pin Assign 1:EN 2:BP/M 4:D 5:S1 6:S2 7:S3 8:S4
File List Model Library MDC_TNY177PG_LT01.lib
 Model Report MDC_TNY177PG_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 Rev. H 11/18
 ●Product name TNY177PG
 ●Company name Power Integrations, Inc.,

[Characteristics listed]
 ●Characteristics OUTPUT_DC

Simulation Condition

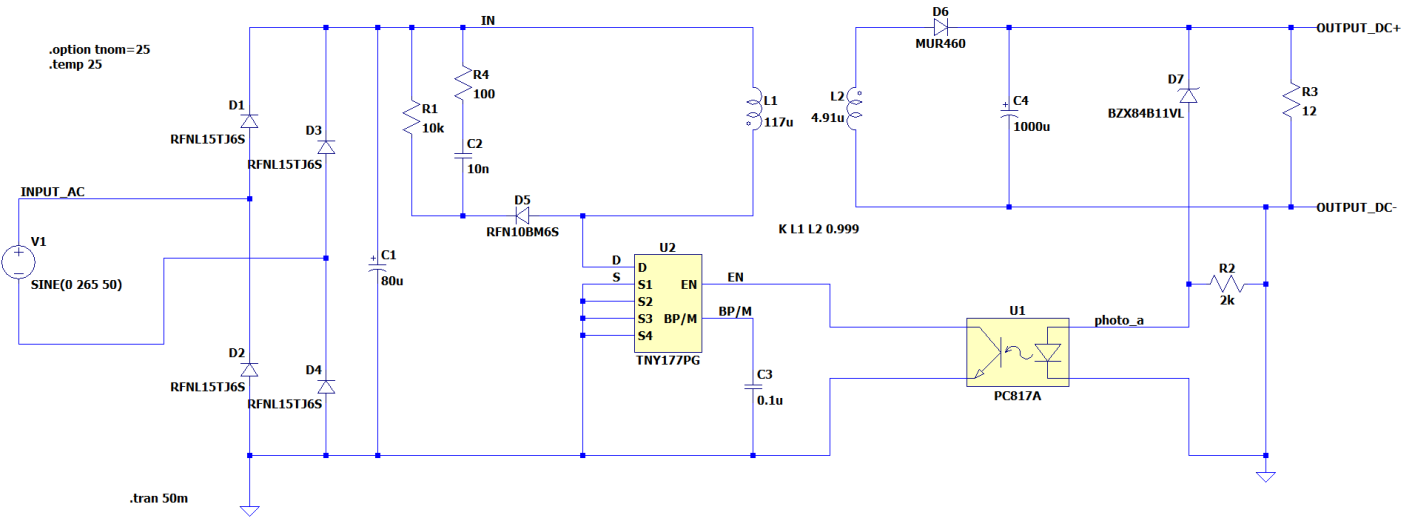
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

Model Functions Table

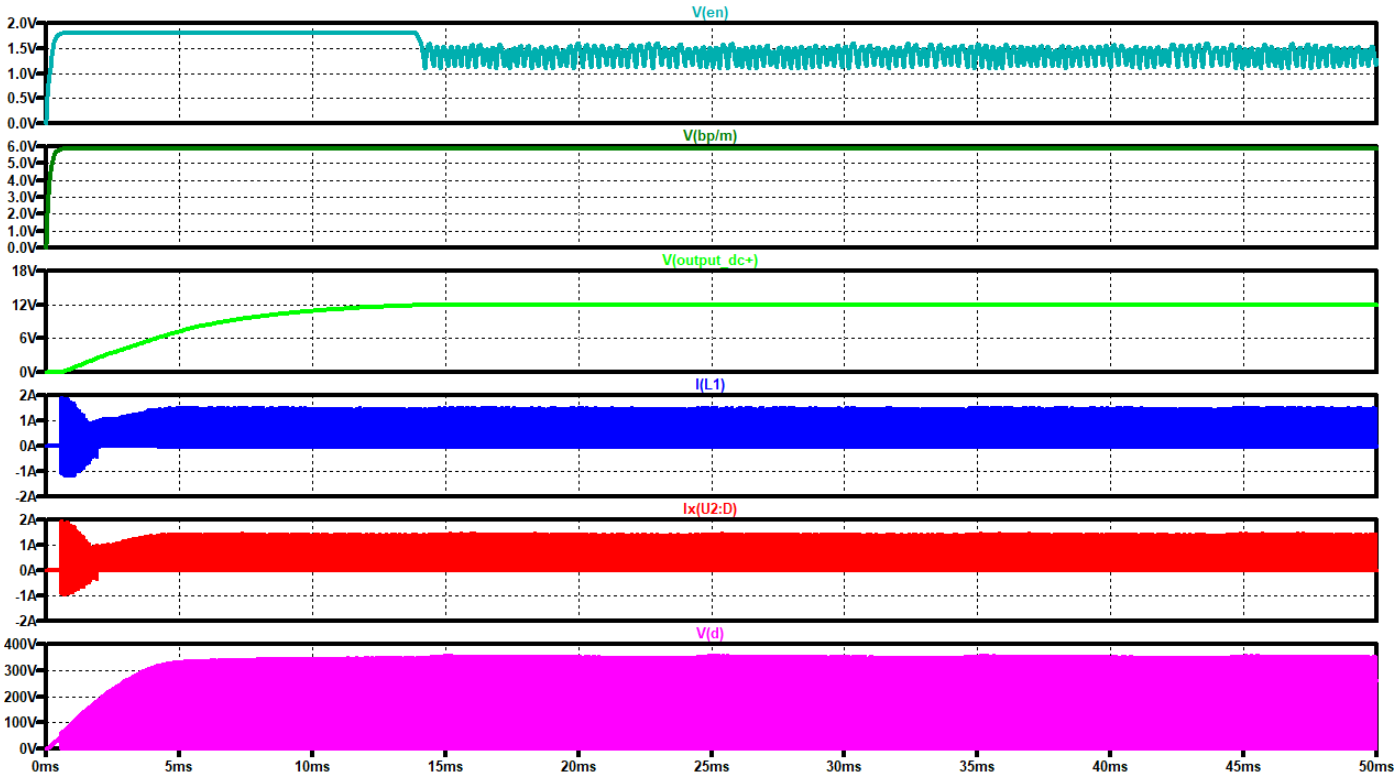
Functions	Implemented
Output Frequency	<input type="radio"/>
Maximum Duty Cycle	<input type="radio"/>
ENABLE Pin Voltage	<input type="radio"/>
Drain Supply Current	<input type="radio"/>
BP/M Pin Charge Current	<input type="radio"/>
BP/M Pin Voltage	<input type="radio"/>
Standard Current Limit	<input type="radio"/>
Leading Edge Blanking Time	<input type="radio"/>
Current Limit Delay	<input type="radio"/>
ON-State Resistance	<input type="radio"/>
Breakdown Voltage	<input type="radio"/>
Drain Capacitance	<input type="radio"/>

OUTPUT_DC Testbench
 Referred to Data Sheet



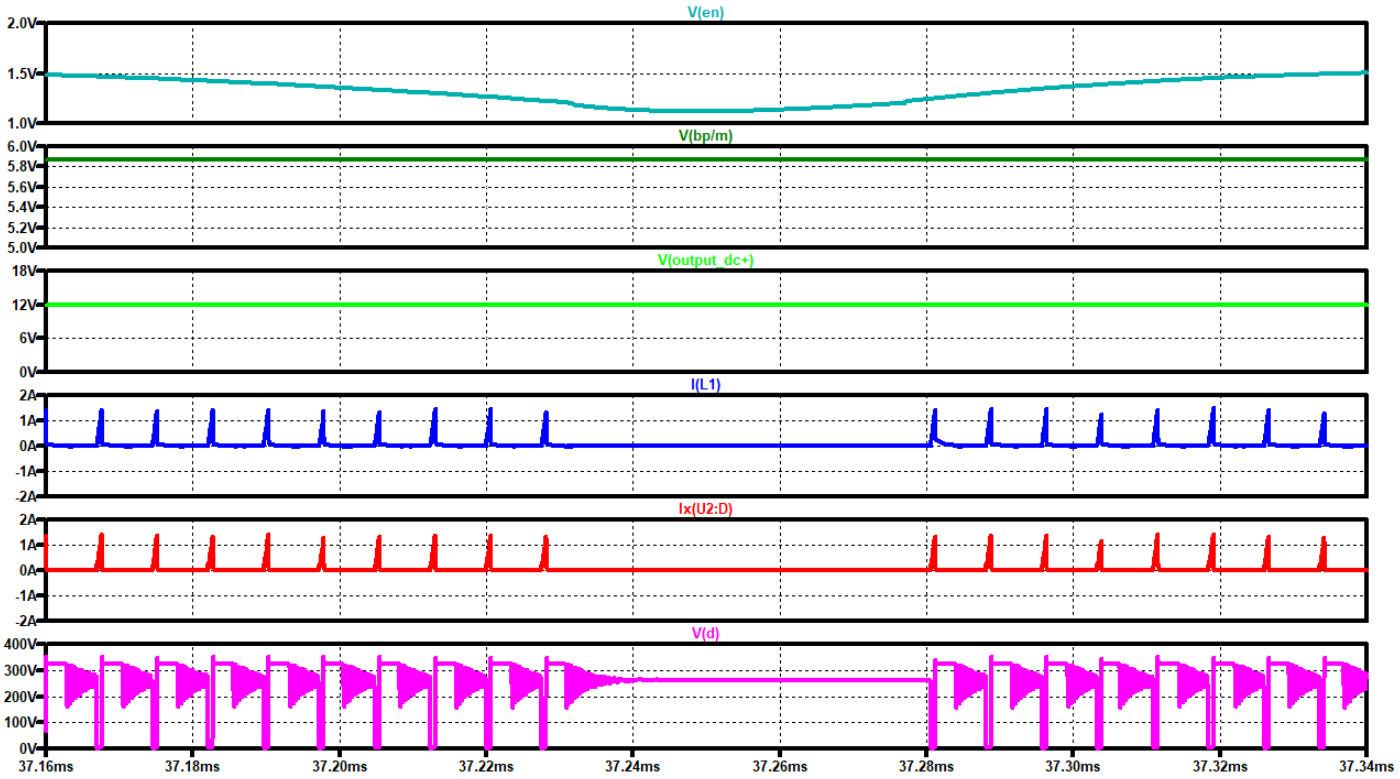
Simulation results are following.
Explanatory notes — : simulated

OUTPUT_DC (0s-50ms)



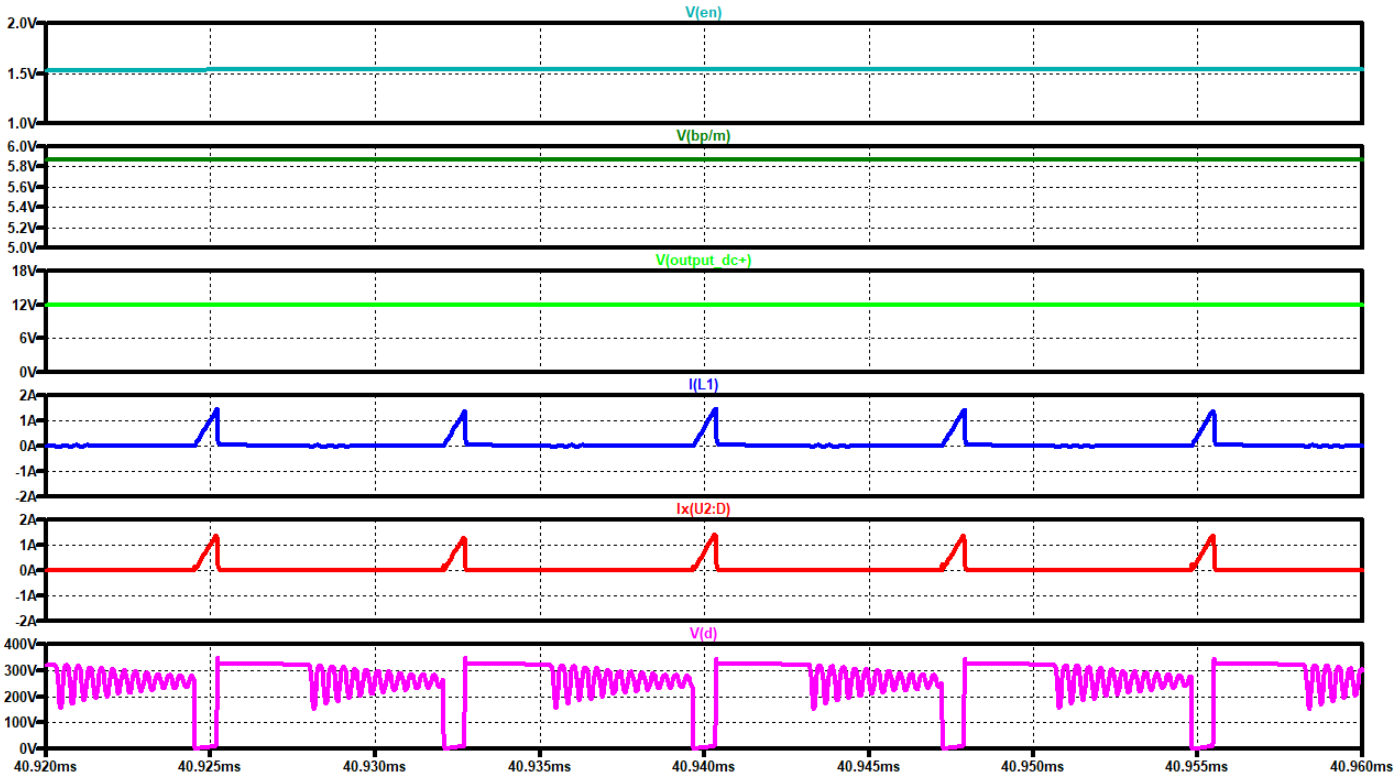
Simulation results are following.
Explanatory notes — : simulated

OUTPUT_DC (37.16ms-37.34ms)



Simulation results are following.
Explanatory notes — : simulated

OUTPUT_DC (40.92ms-40.96ms)



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