LTspice Model
DC-DC Converter
FUJI ELECTRIC
FA5644N

Model Information

Model	A macro model	
Call Name	MDC_ FA5644N _LT	
Pin Assign	1:ZCD 2:FB 3:IS 4:GND 5:OUT 6:VCC 7:NC 8:VH	
File List	Model Library	MDC_FA5644N_LT01.lib
	Model Report	MDC_FA5644N_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 Sep,16 DS-063J Rev2.0
- ●Product name FA5644N
- ●Company name FUJI ELECTRIC CO., LTD.

[Characteristics listed]

- ●Characteristics $V_{o,}$ UVLO, OLP, OVP

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

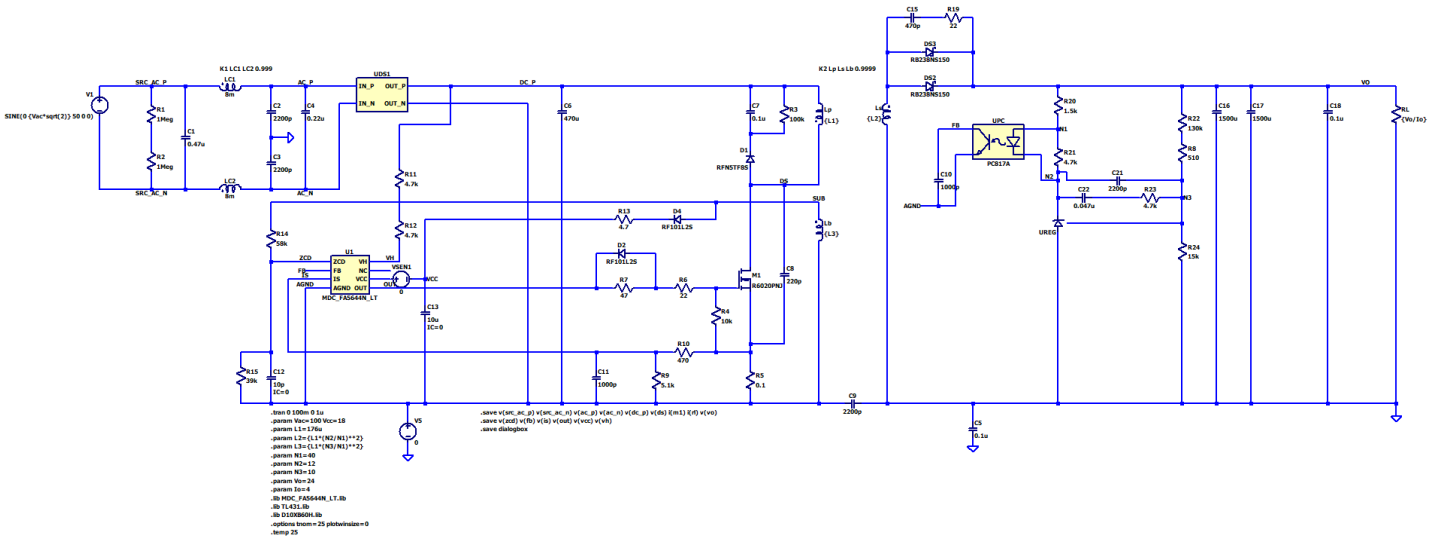
○ : Implemented
× : Not Implemented
— : Not applicable

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	○
Forard/Flyback Other Device in Circuit	3	–
Brown IN/OUT Function	—	–
ZT Pin OVP Function	—	–

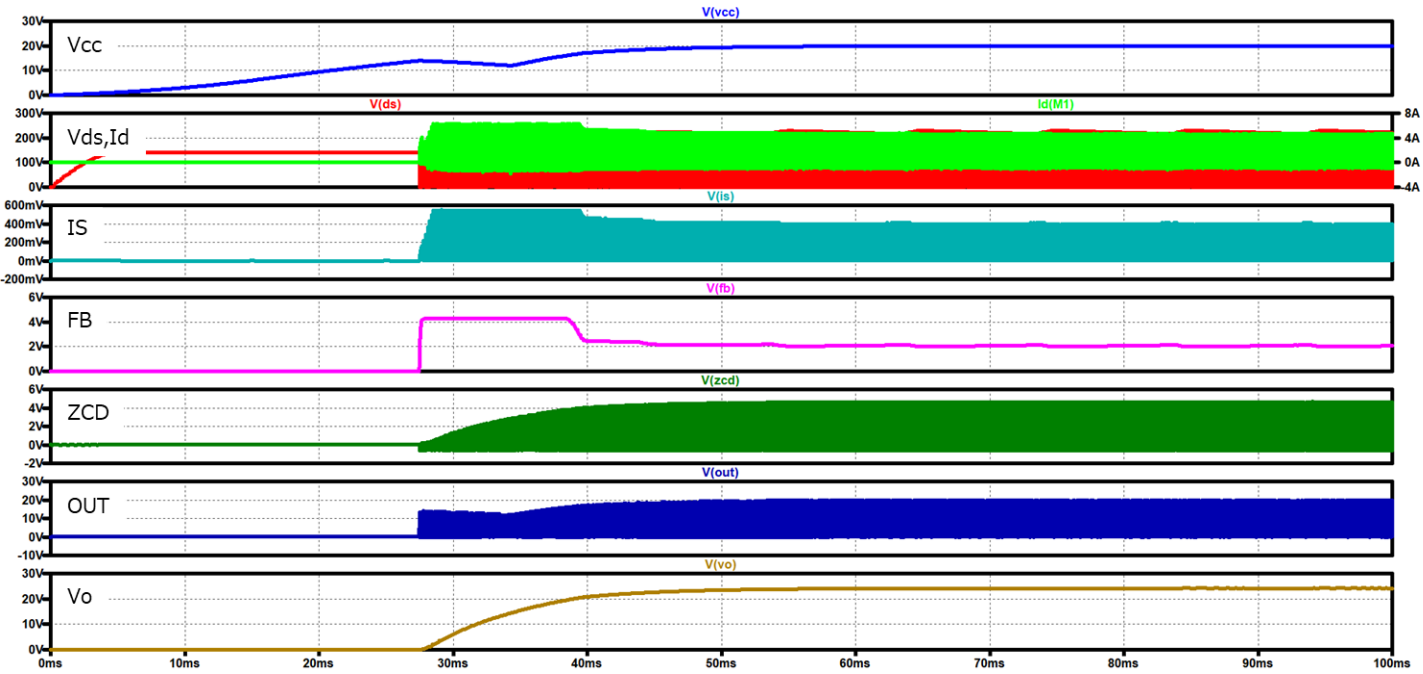
Application Circuit(Vac = 141V, Vo = 24V, Io = 4A) Testbench

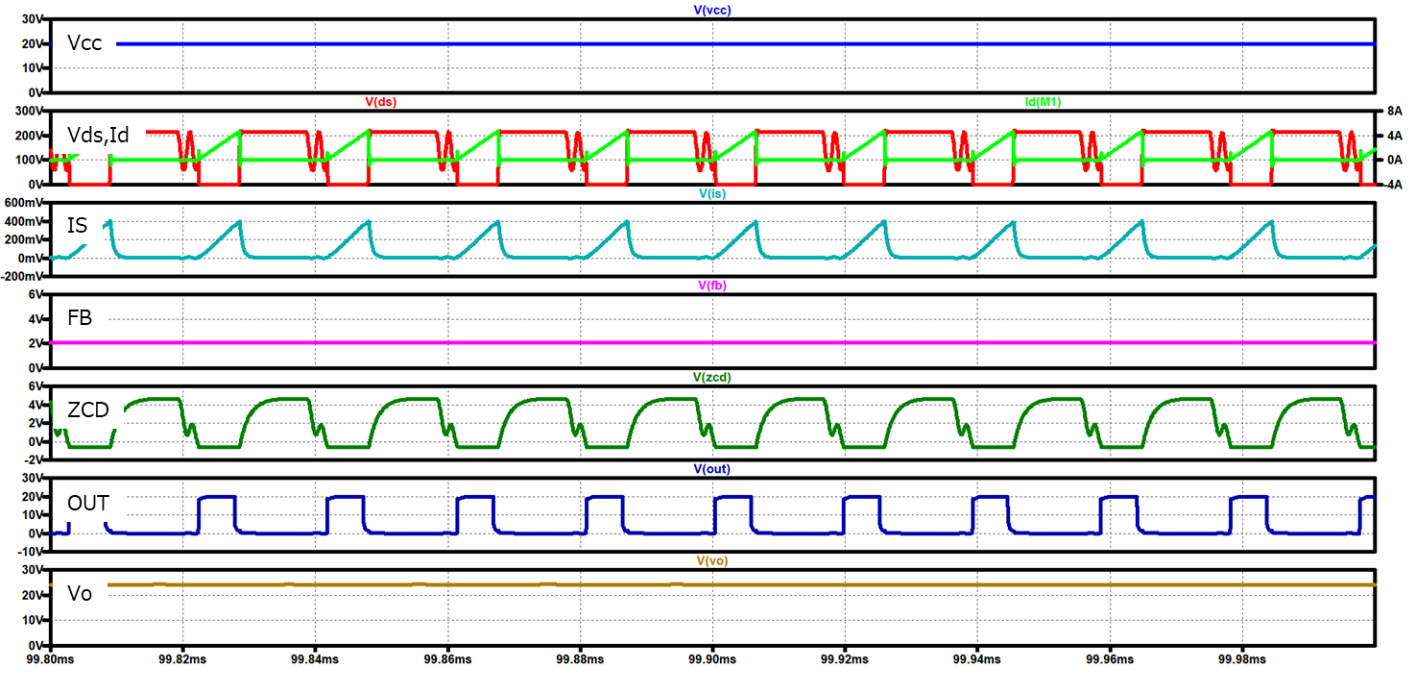
Referred to Data Sheet



Simulation results are following.
Explanatory notes — : simulated

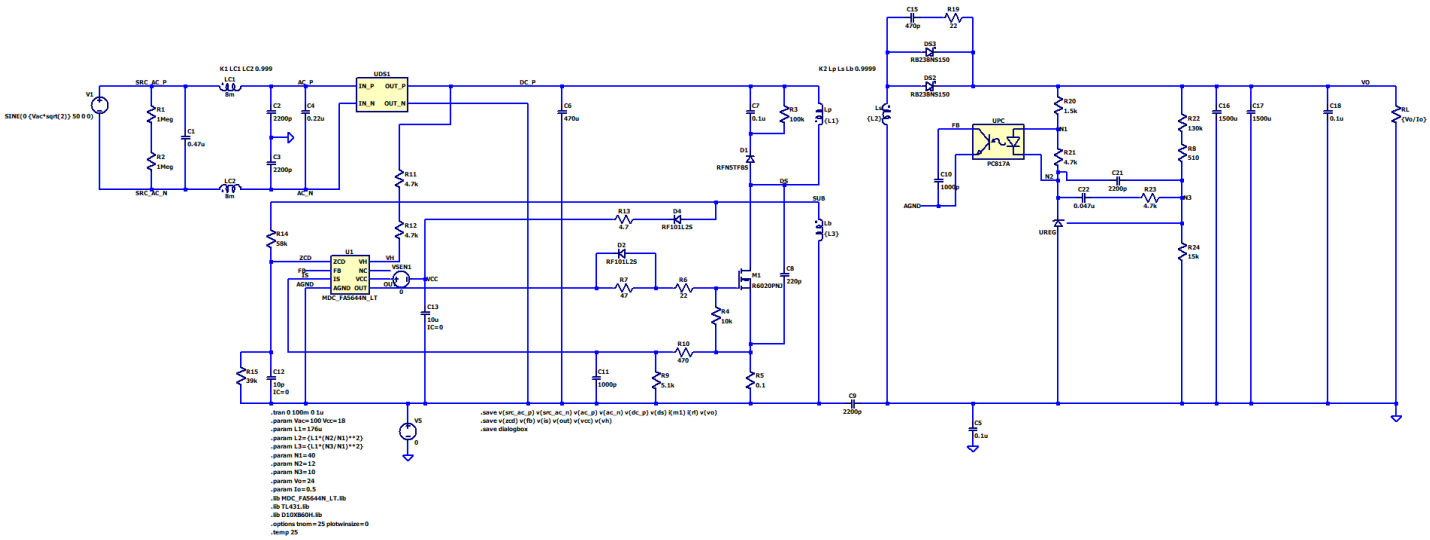
Application Circuit(Vac = 141V, Vo = 24V, Io = 4A)





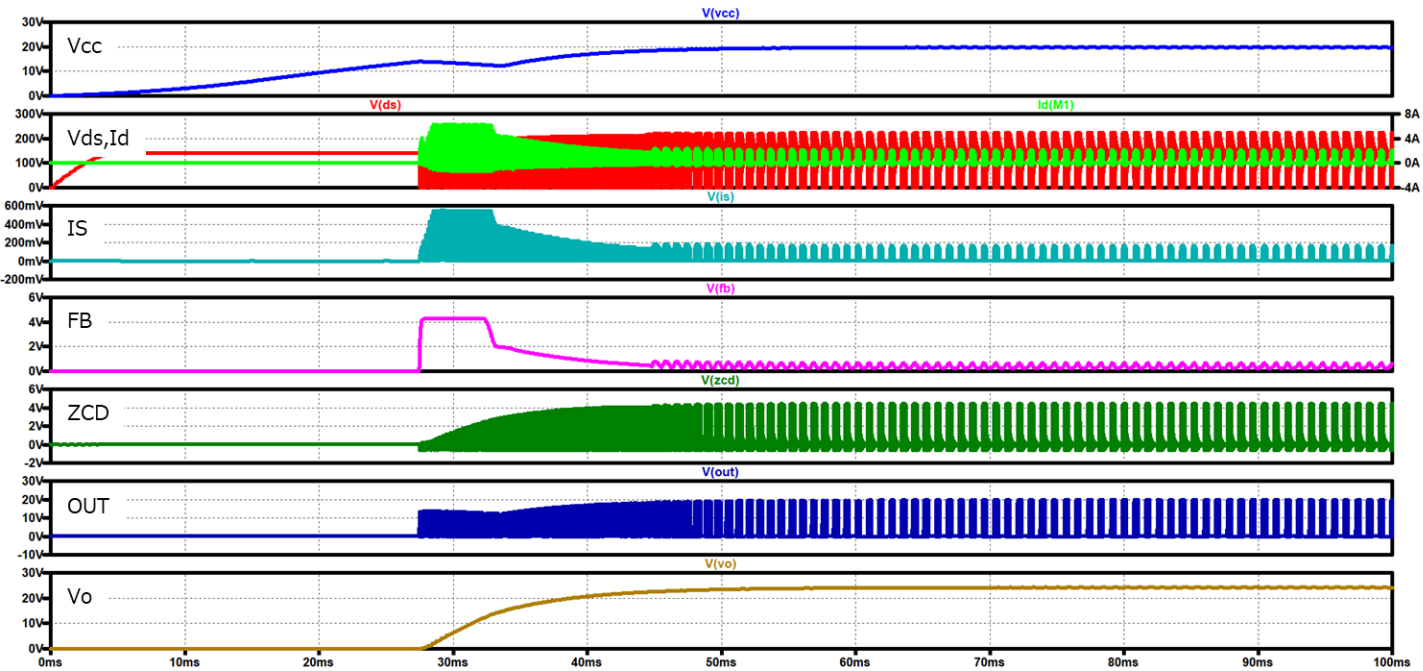
Application Circuit Burst Mode (Vac = 141V, Vo = 24V, Io = 0.5A) Testbench

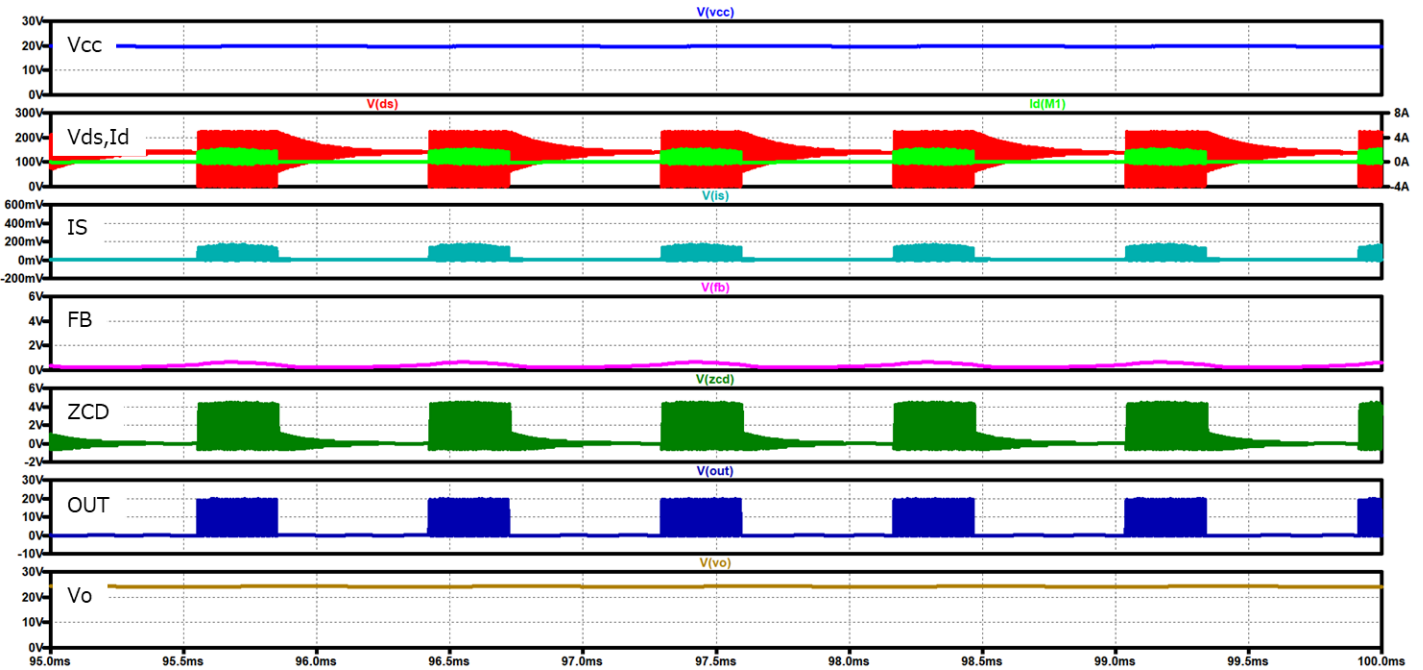
Referred to Data Sheet



Simulation results are following.
Explanatory notes — : simulated

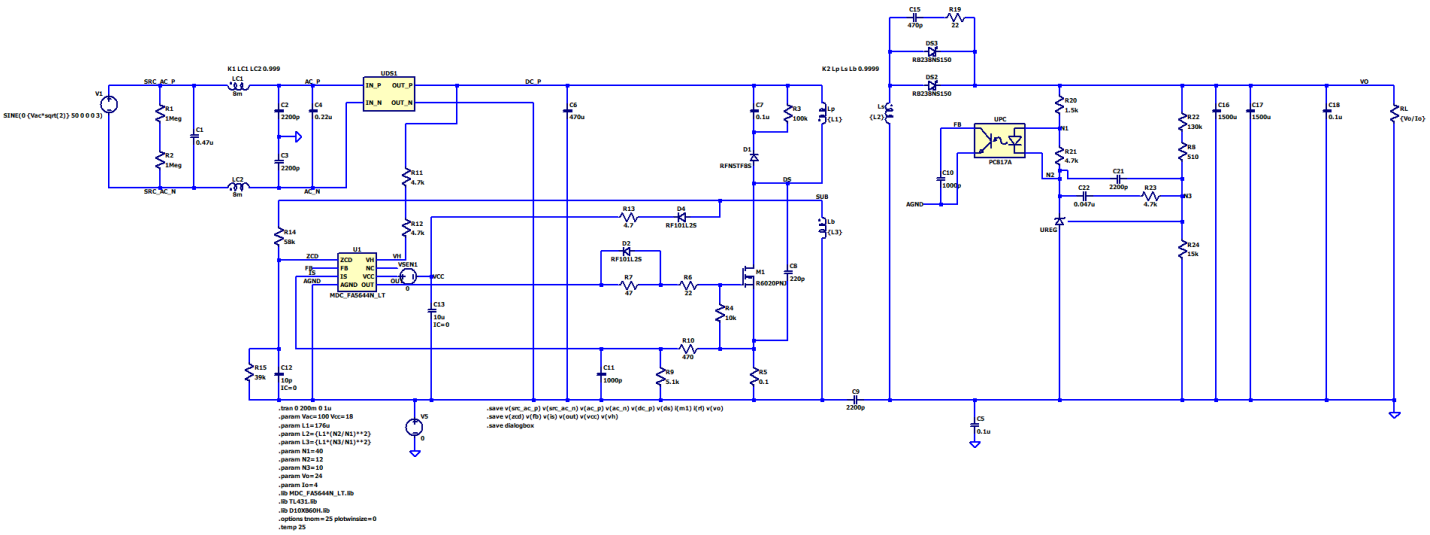
Application Circuit Burst Mode (Vac = 141V, Vo = 24V, Io = 0.5A)





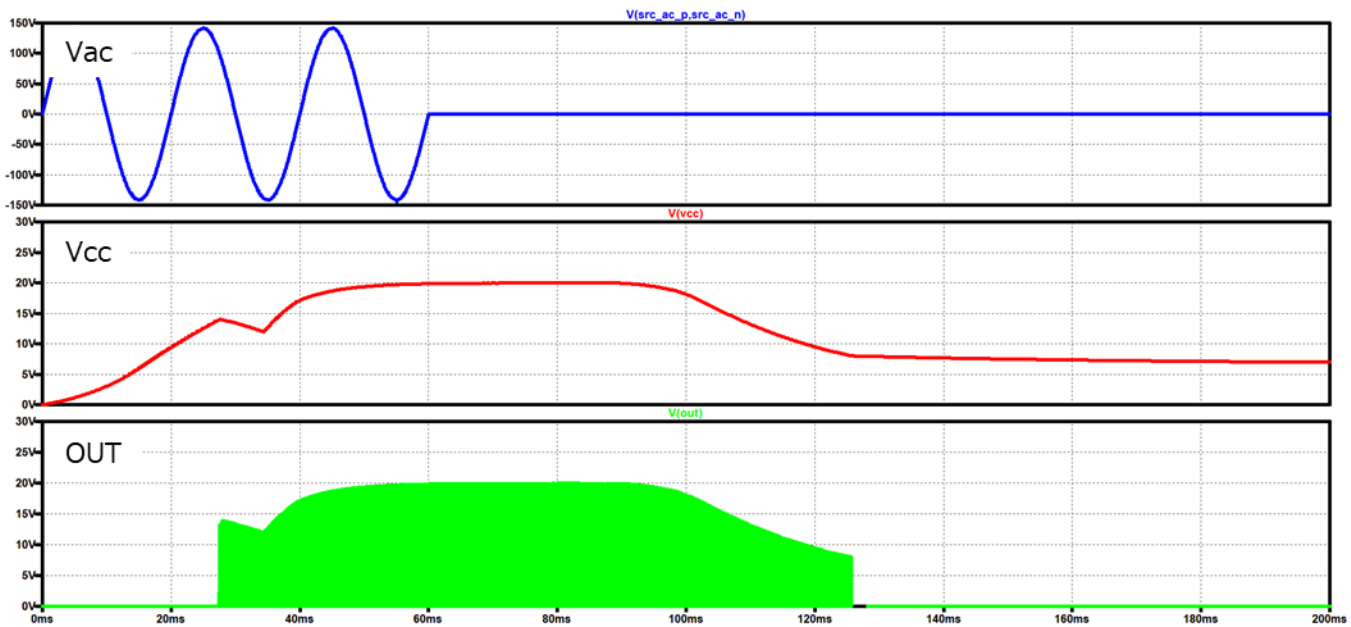
UVLO Testbench

Referred to Data Sheet



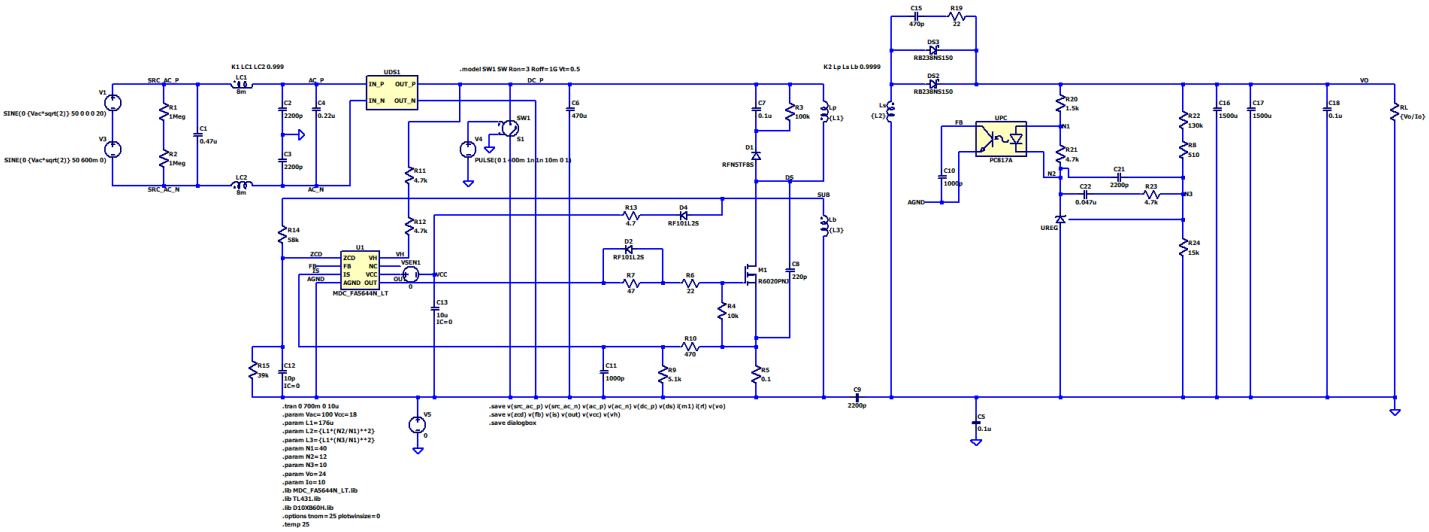
Simulation results are following.
Explanatory notes — : simulated

UVLO



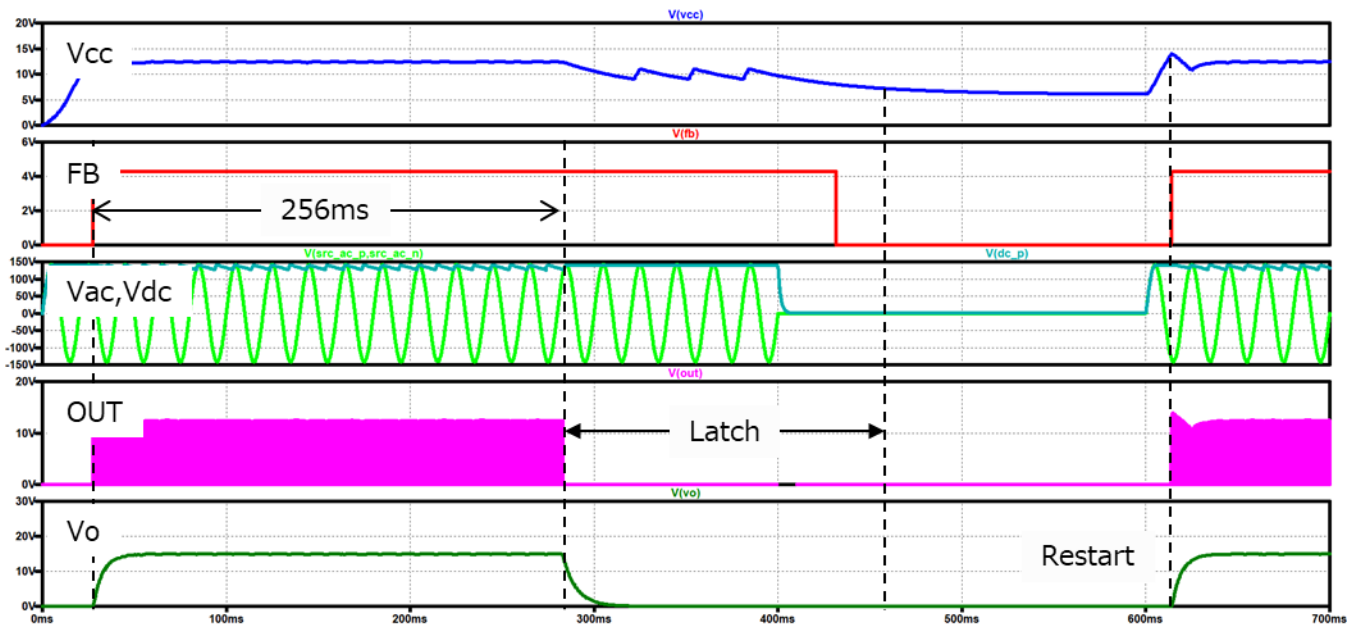
OLP Testbench

Referred to Data Sheet



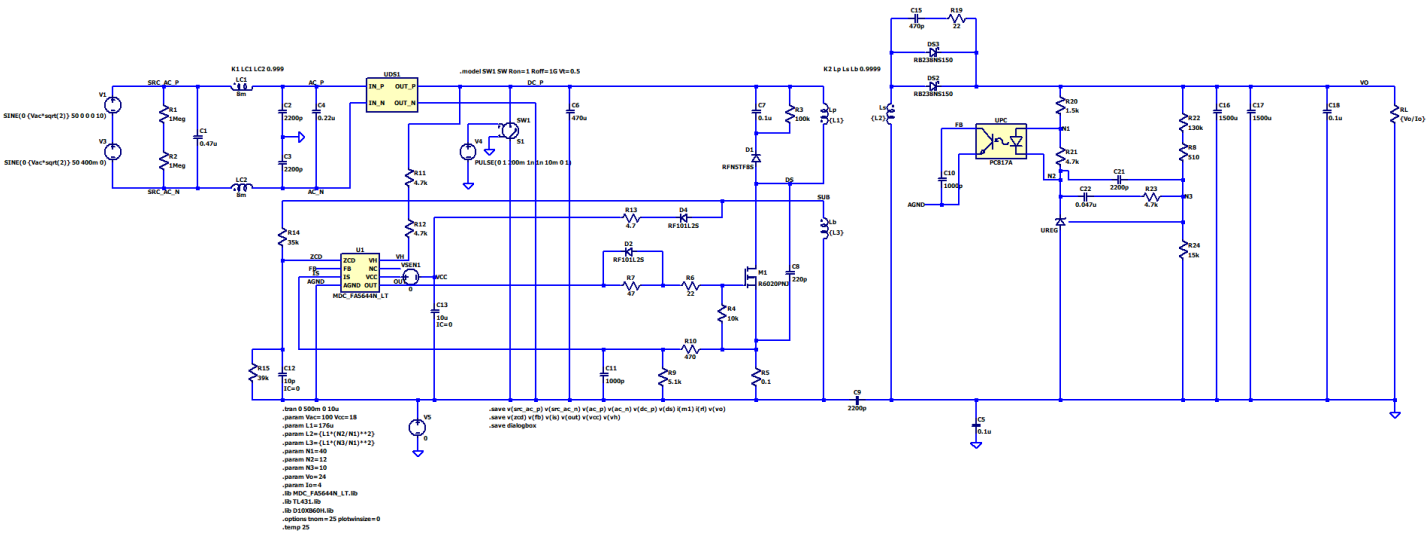
Simulation results are following.
Explanatory notes — : simulated

OLP



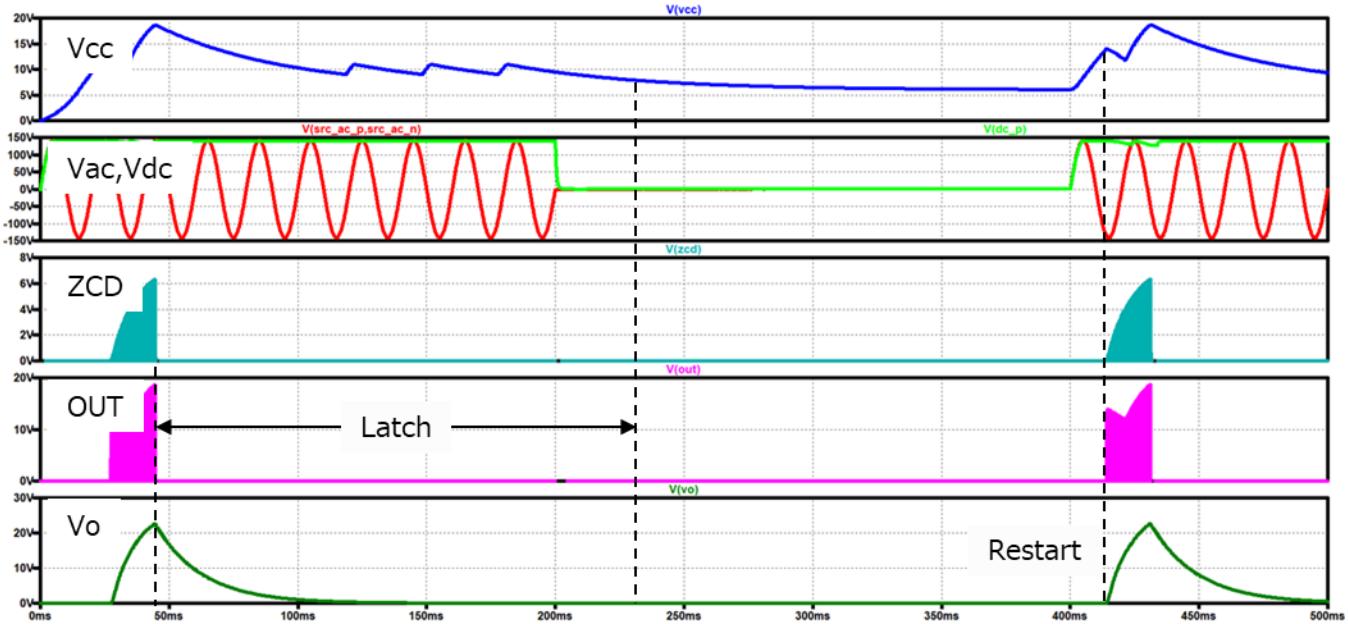
OVP Testbench

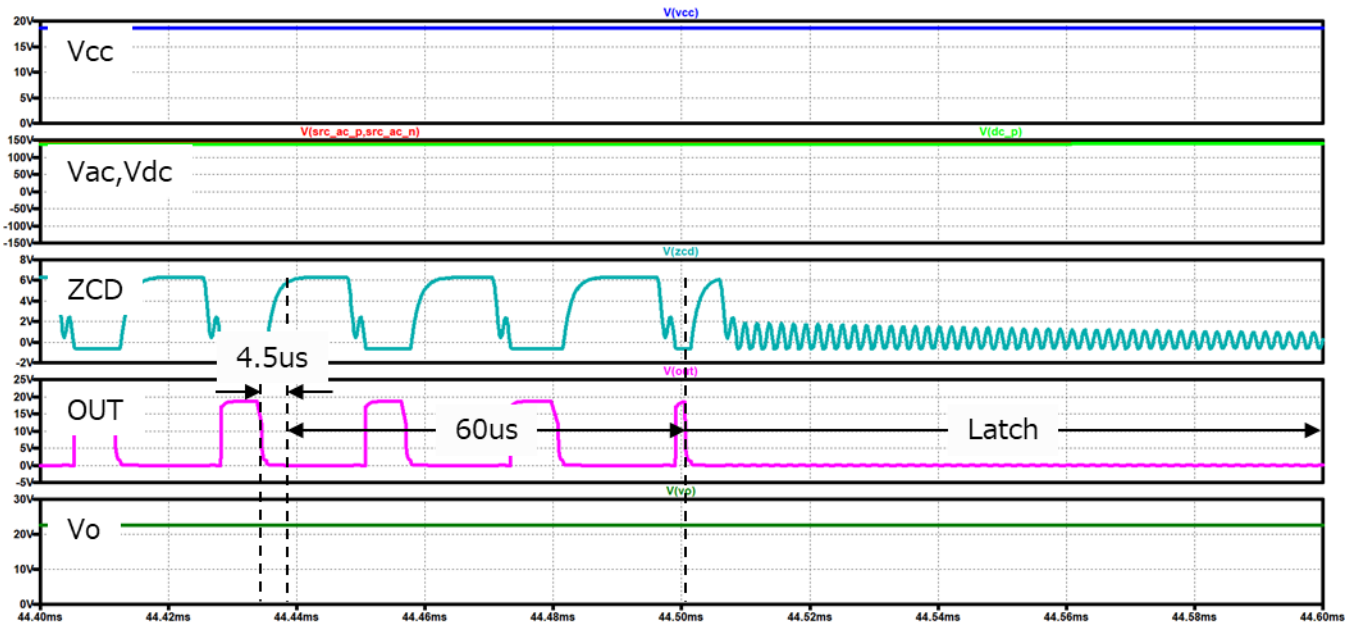
Referred to Data Sheet



Simulation results are following.
Explanatory notes — : simulated

OVP





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