

# LTspice Model

## Current Mode Controller

### infineon

### ICE3BR2280JZ

#### Model Information

<b>Model</b>	A macro model
<b>Call Name</b>	MDC_ICE3BR2280JZ_LT
<b>Pin Assign</b>	1:BBA 2:FBB 3:CS 4:n.c. 5:Drain 6:(no pin) 7:VCC 8:GND
<b>File List</b>	Model Library MDC_ICE3BR2280JZ_LT01.lib Model Report MDC_ICE3BR2280JZ_LT.pdf(this file)

**Verified Simulator Version** LTspice

#### Note

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 11 Jan 2012/Version 2.1a
- Product name TPS54302DDCR
- Company name TEXAS INSTRUMENTS

[Characteristics listed]

- Characteristics PWM(Current Mode)(Input=90VAC Output=5.0V IOU=3.0A)  
Active Burst Mode(Input=90VAC Output=5.0V IOU=3.0A⇒0.2A⇒3.0A)

#### 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

○ : Implemented  
 × : Not Implemented  
 — : Not applicable

**Model Functions Table**

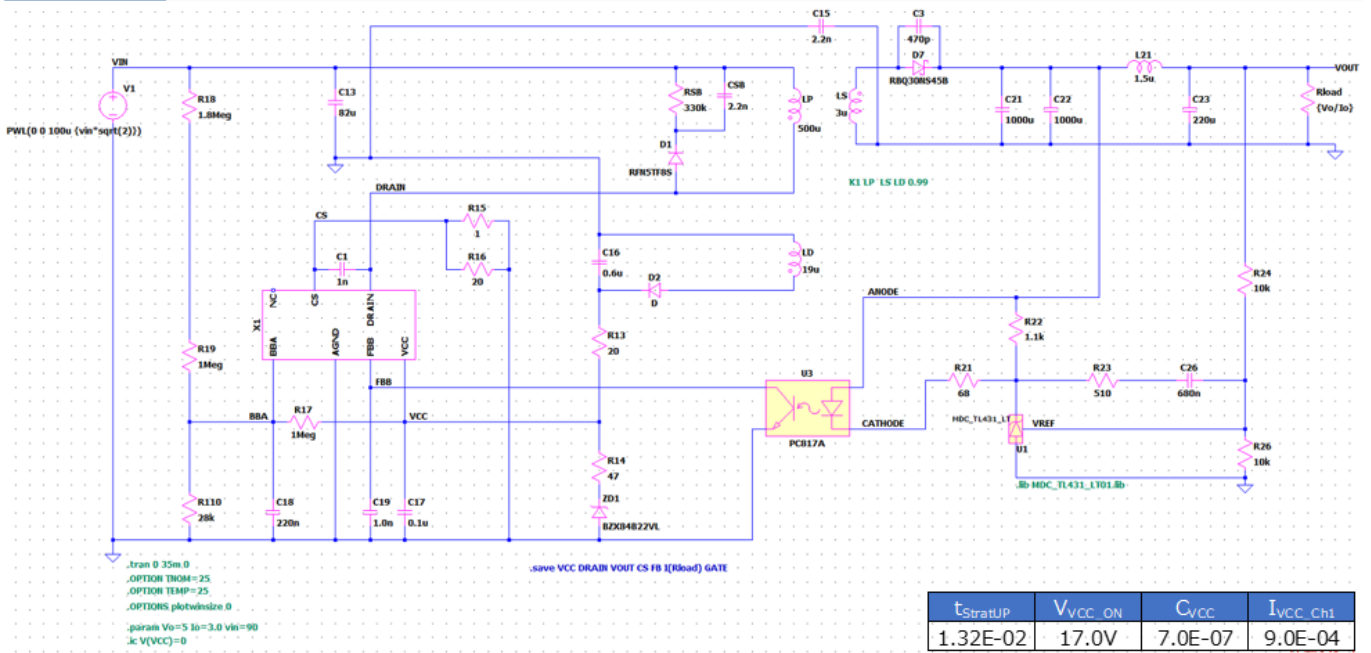
		RANK=2	
Functions	RANK	Implemented	
Control Method(PWM)	1	○	
Built-in 10ms Soft Start	1	○	
65kHz internally fixed switching frequency	1	○	
VCC UVLO	1	○	
Active Burst Mode	2	○	
External auto-restart enable pin	2	○	
Selectable entry and exit burst mode level	2	○	
Adjustable brownout	2	○	

PWM(Current Mode)(Input=90VAC Output=5.0V IOU=3.0A)

Simulation results are following.

Explanatory notes — : simulated

Testbench

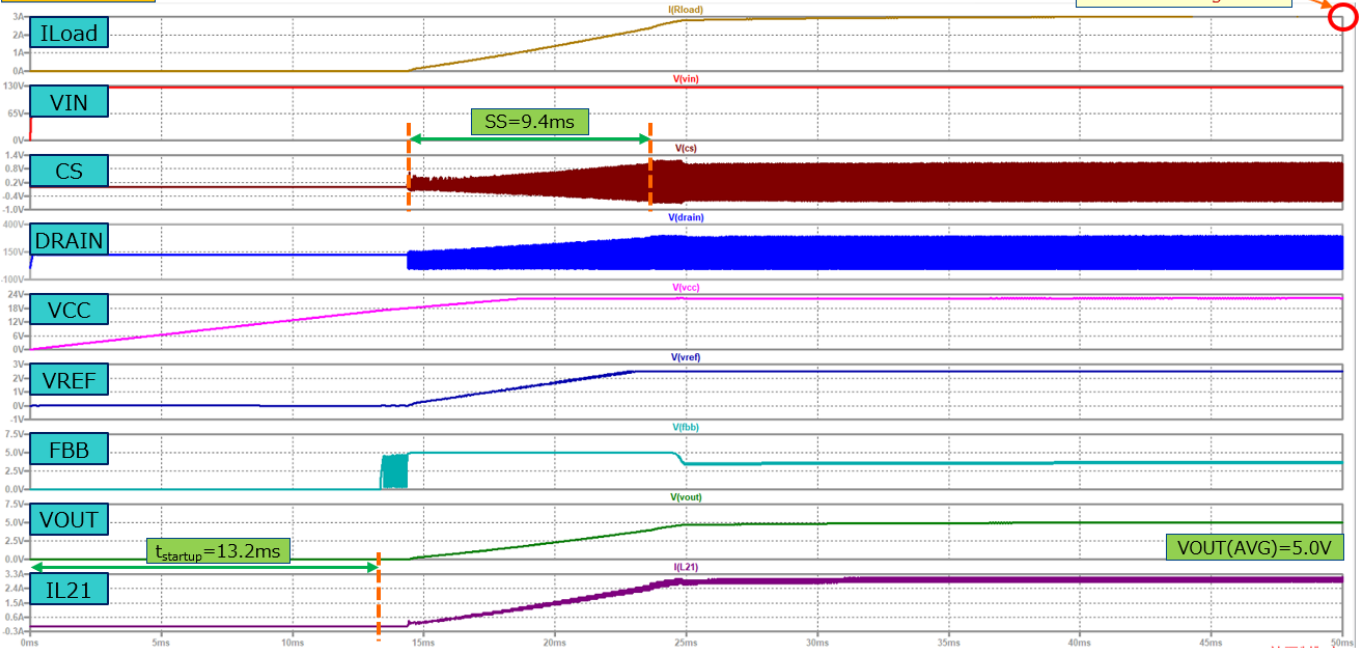


PWM(Current Mode)(Input=90VAC Output=5.0V IOU=3.0A)

Simulation results are following.

Explanatory notes — : simulated

Sim result

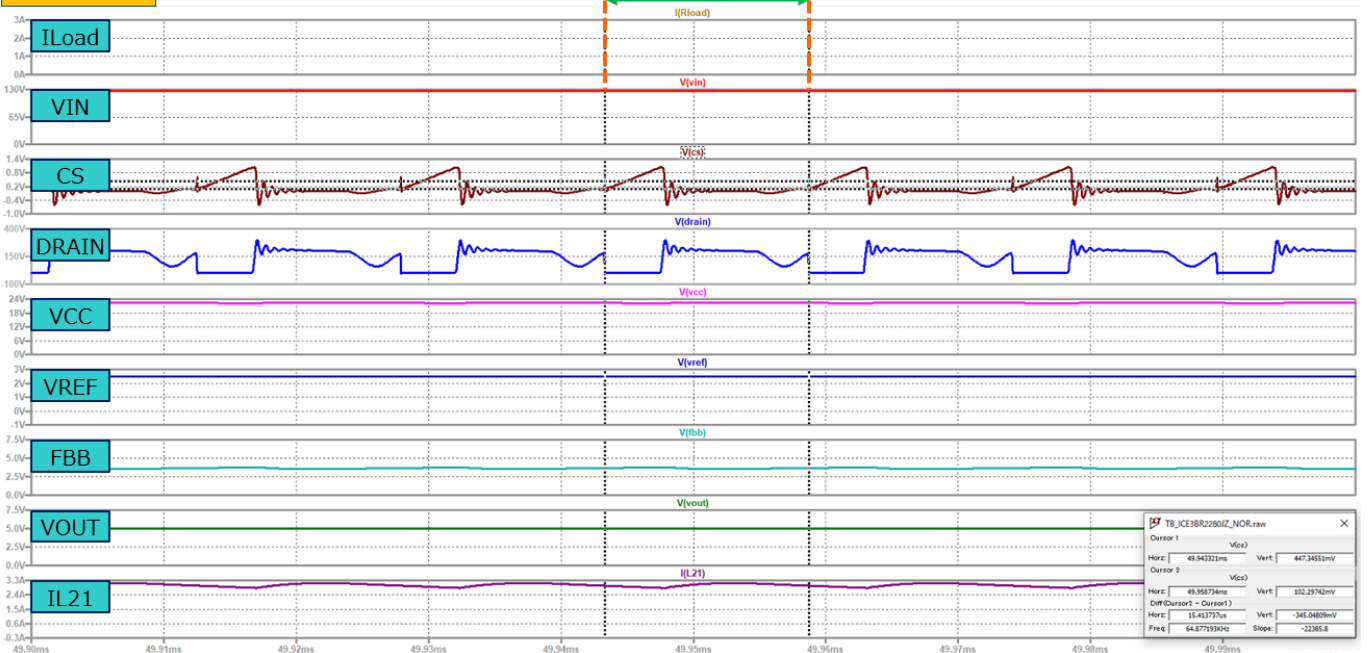


PWM(Current Mode)(Input=90VAC Output=5.0V IOU=3.0A)

Simulation results are following.

Explanatory notes — : simulated

Sim result

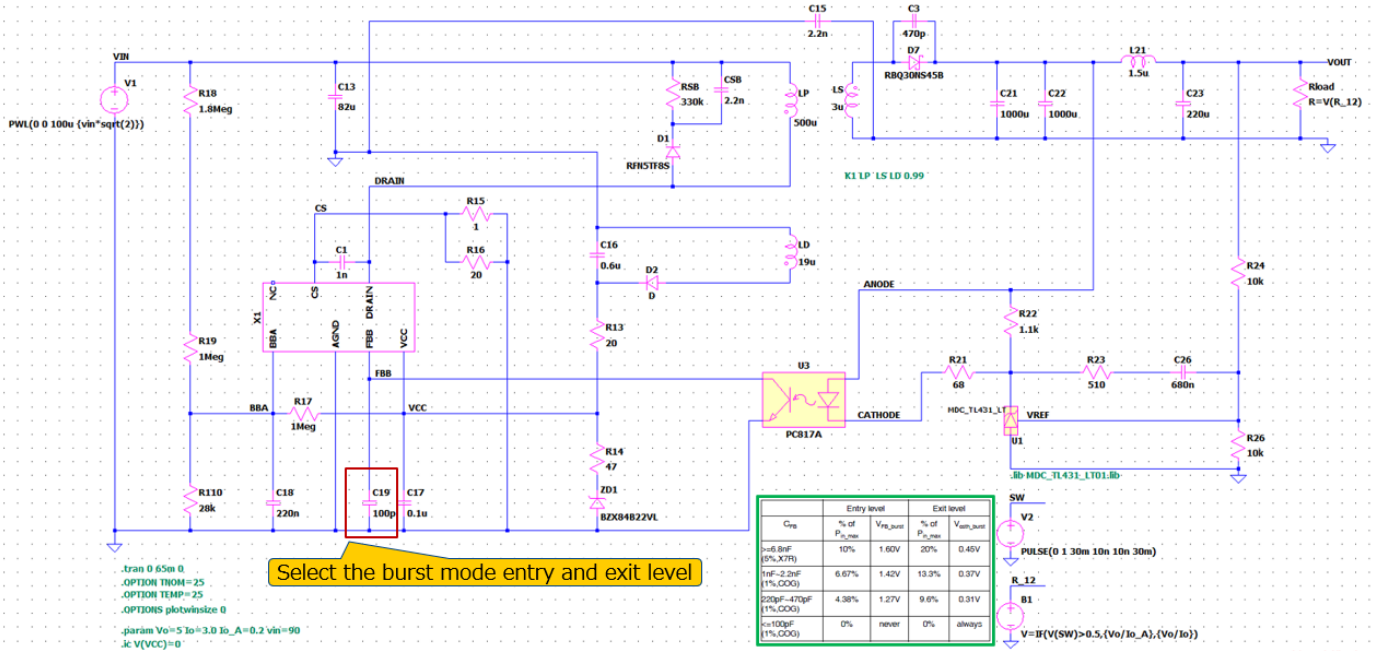


Active Burst Mode(Input=90VAC Output=5.0V IO<sub>UT</sub>=3.0A⇒0.2A⇒3.0A)

Simulation results are following.

Explanatory notes — : simulated

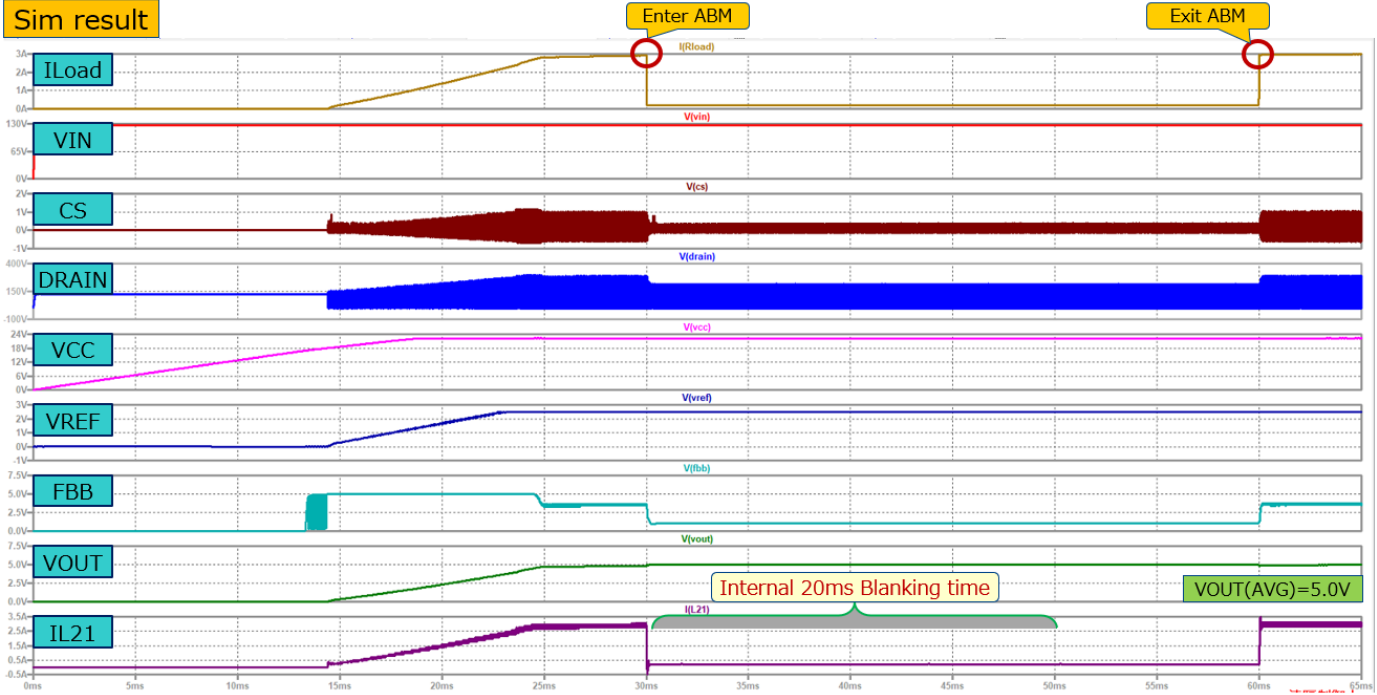
Testbench



Active Burst Mode(Input=90VAC Output=5.0V IO<sub>UT</sub>=3.0A⇒0.2A⇒3.0A CFB=100pF)

Simulation results are following.

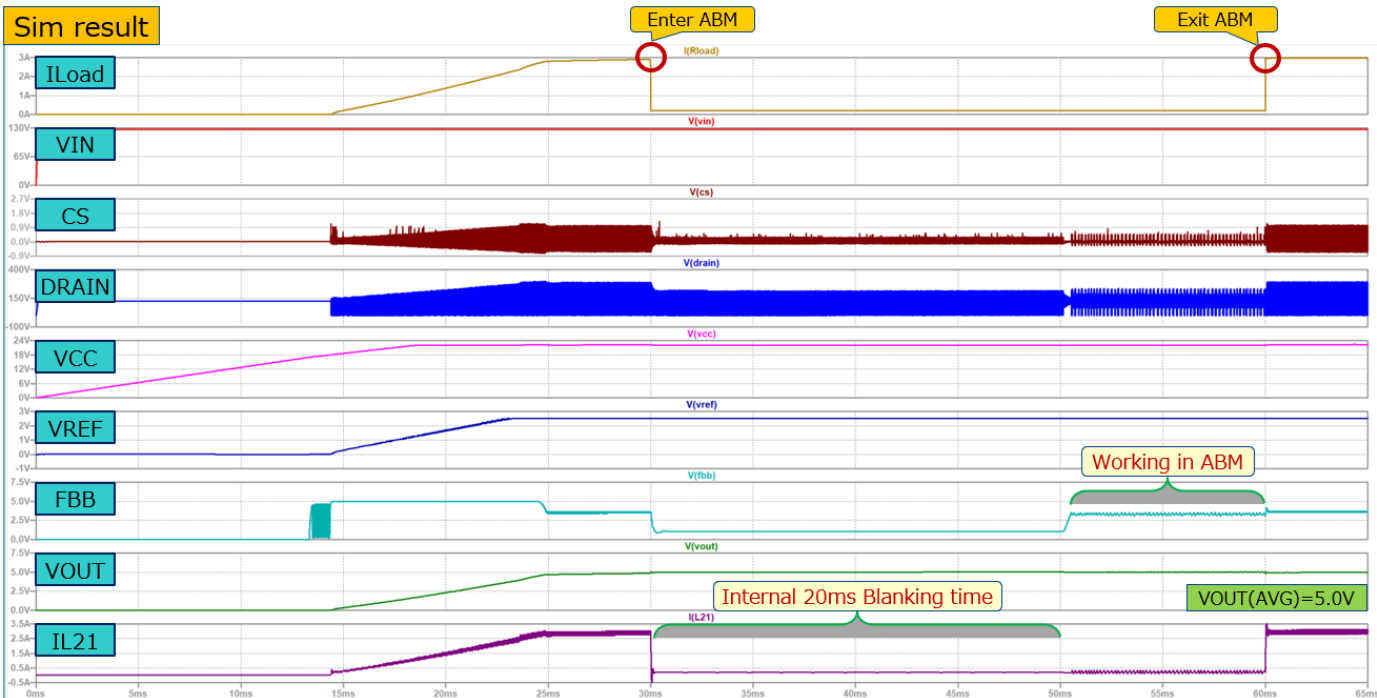
Explanatory notes — : simulated



Active Burst Mode(Input=90VAC Output=5.0V IO<sub>UT</sub>=3.0A⇒0.2A⇒3.0A CFB=1.0nF)

Simulation results are following.

Explanatory notes — : simulated



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