

ADS Model

Intelligent Power Module

infineon

ICE5AR4780BZS

Model Information

Model A macro model
Call Name MDC_ICE5AR4780BZS_AD
Pin Assign 1:VERR 2:FB 3:CS 4:GATE 5:DRAIN 7:VCC 8:GND
File List Model Library MDC_ICE5AR4780BZS_AD.zip
 Model Report MDC_ICE5AR4780BZS_AD.pdf(this file)
Verified Simulator Version ADS 2020 Update 2

Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version V2.3 2020-02-03
- Product name ICE5AR4780BZS
- Company name infineon

[Characteristics listed]

- Characteristics isolated PWM operation
 isolated Active Burst Mode
 Non-isolated PWM operation
 Non-isolated Active Burst Mode

Simulation Condition

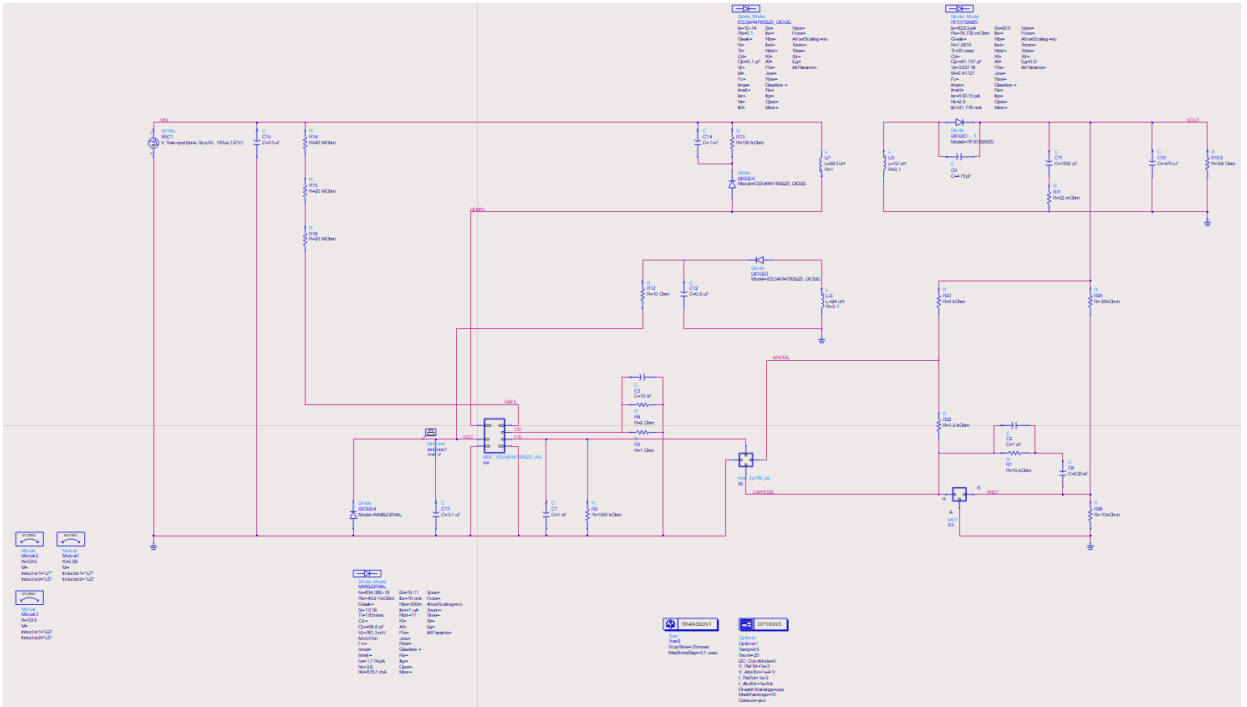
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

Model Functions Table

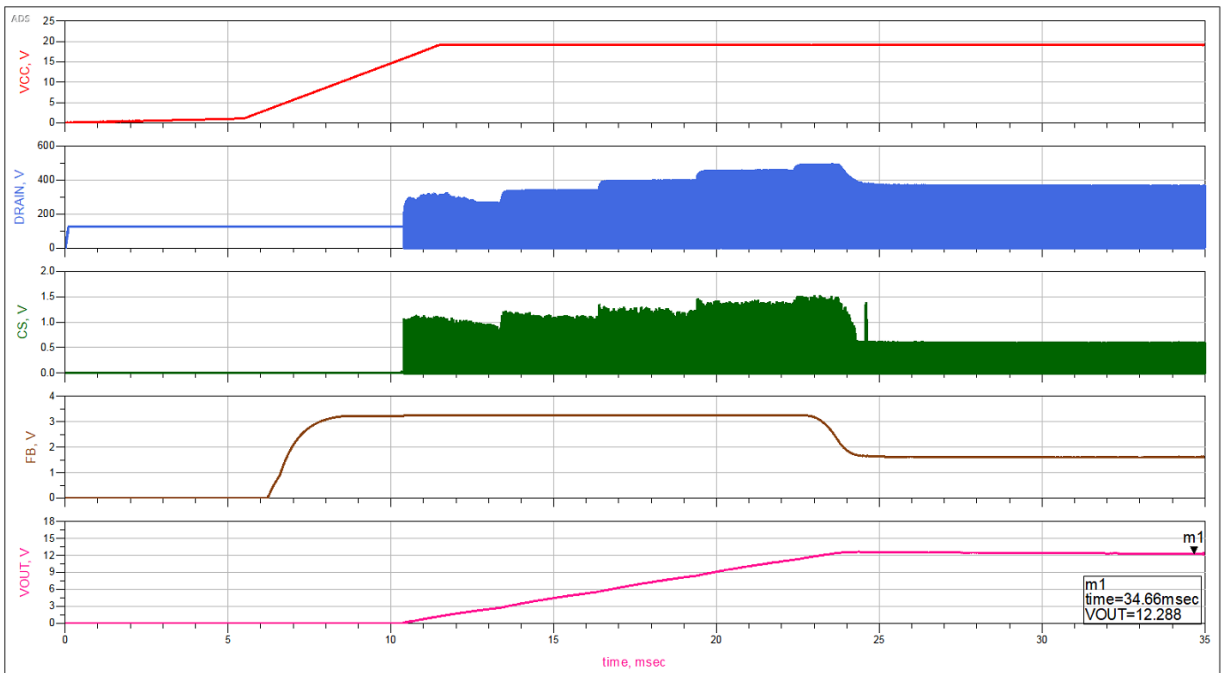
Functions	Implemented
PWM operation	<input type="radio"/>
VCC Pre Charge	<input type="radio"/>
Soft Start	<input type="radio"/>
Frequency reduction	<input type="radio"/>
Leading Edge Blanking	<input type="radio"/>
Slope compensation	<input type="radio"/>
Non-isolated/isolated configuration	<input type="radio"/>
Active Burst Mode(ABM)	<input type="radio"/>
VCC under voltage protection(Auto restart)	<input type="radio"/>

isolated PWM operation Testbench

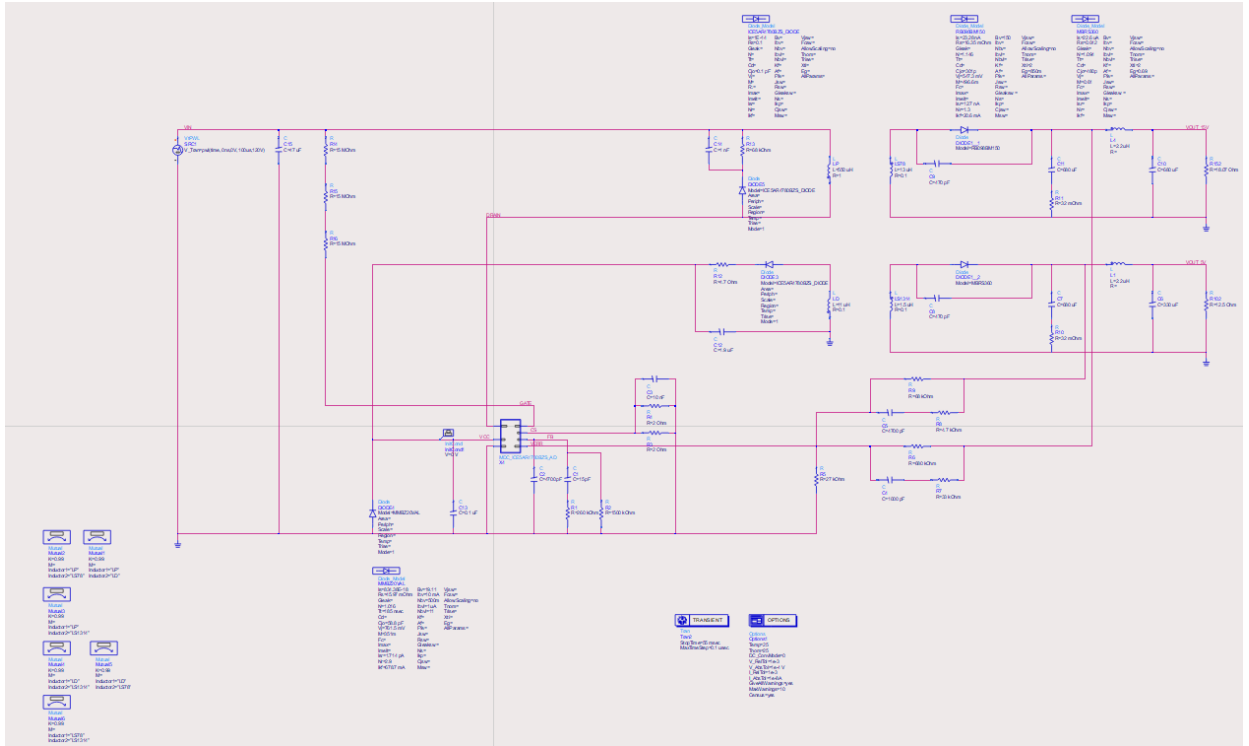


Simulation results are following.
 Explanatory notes — : simulated

isolated PWM operation

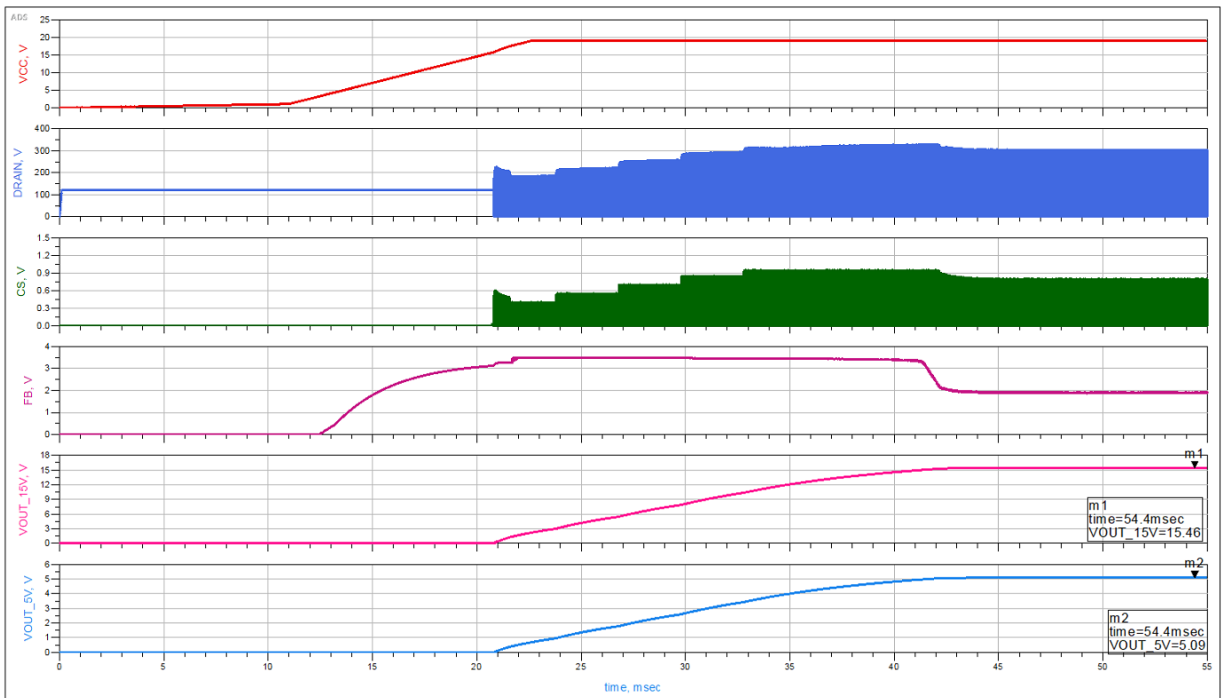


Non-isolated PWM operation Testbench

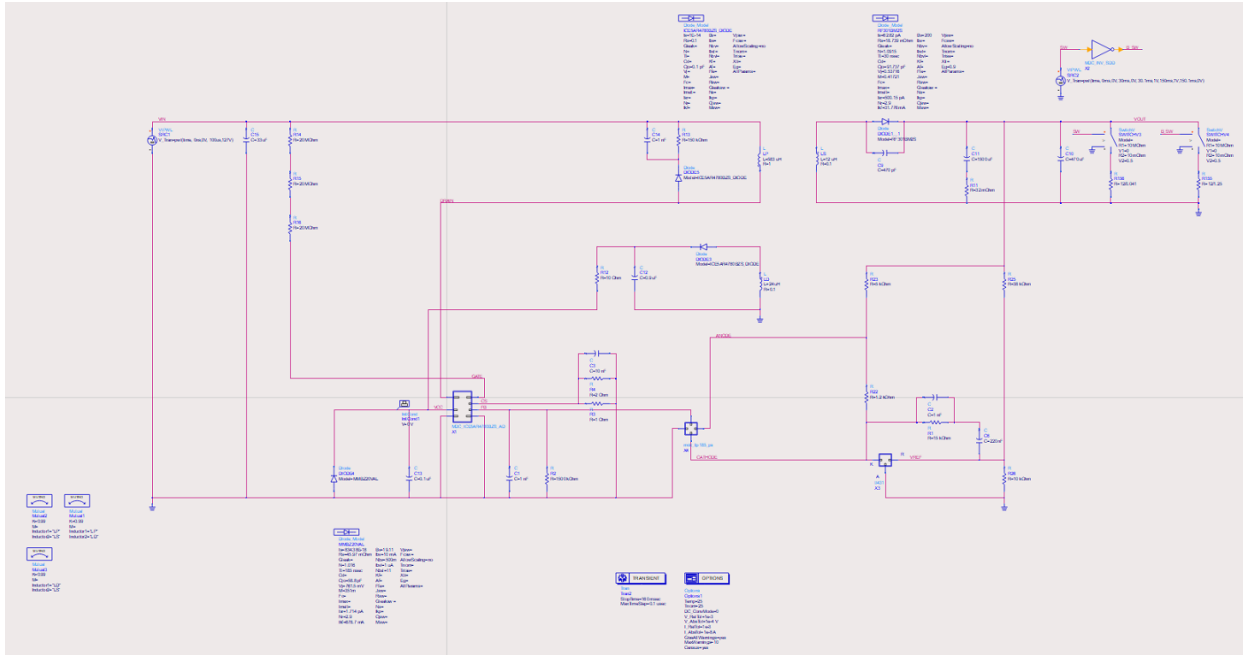


Simulation results are following.
 Explanatory notes — : simulated

Non-isolated PWM operation

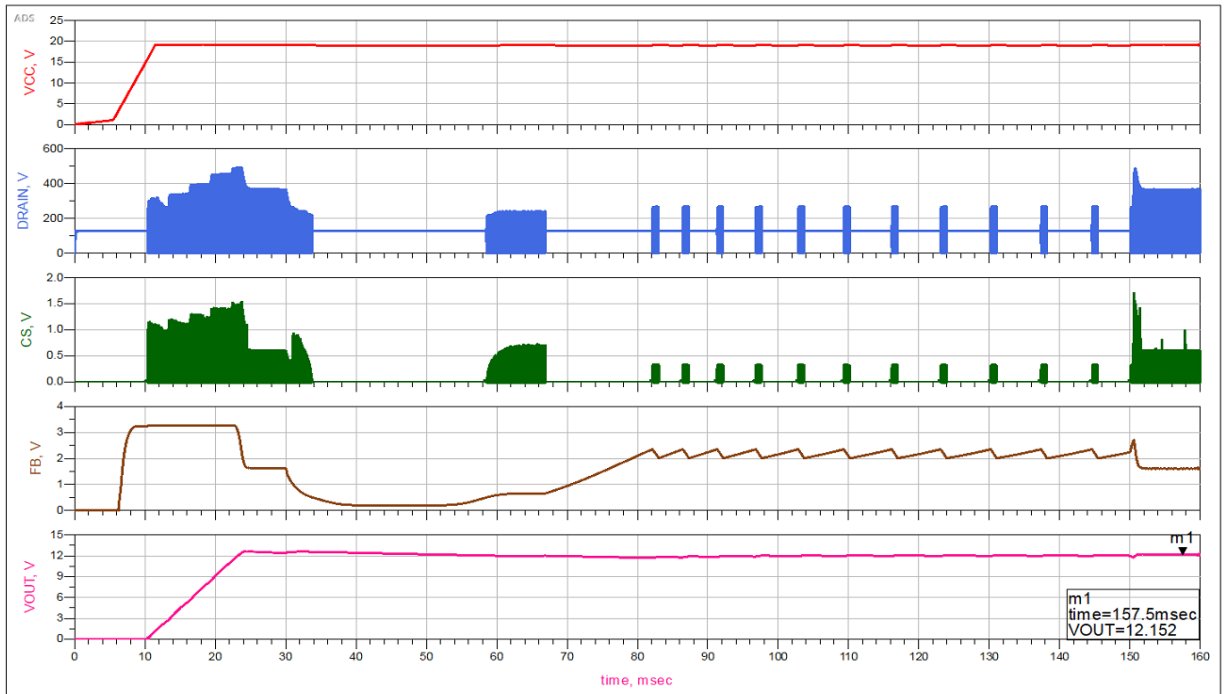


isolated Active Burst Mode Testbench

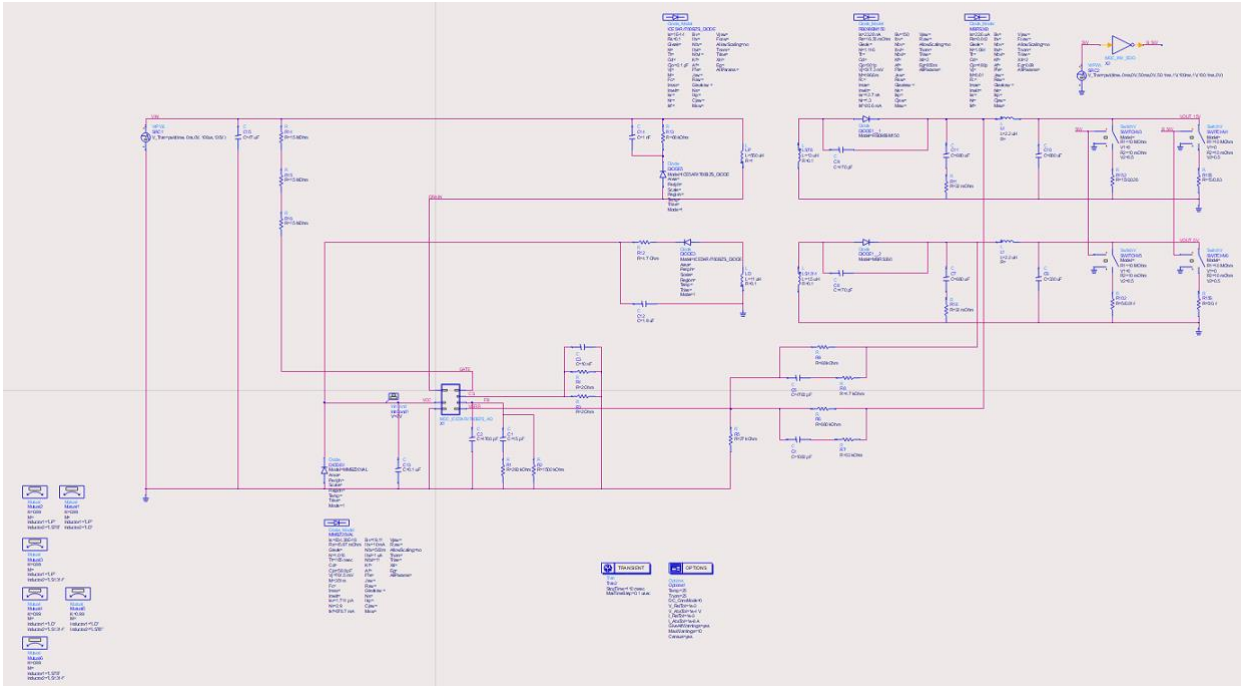


Simulation results are following.
 Explanatory notes — : simulated

isolated Active Burst Mode

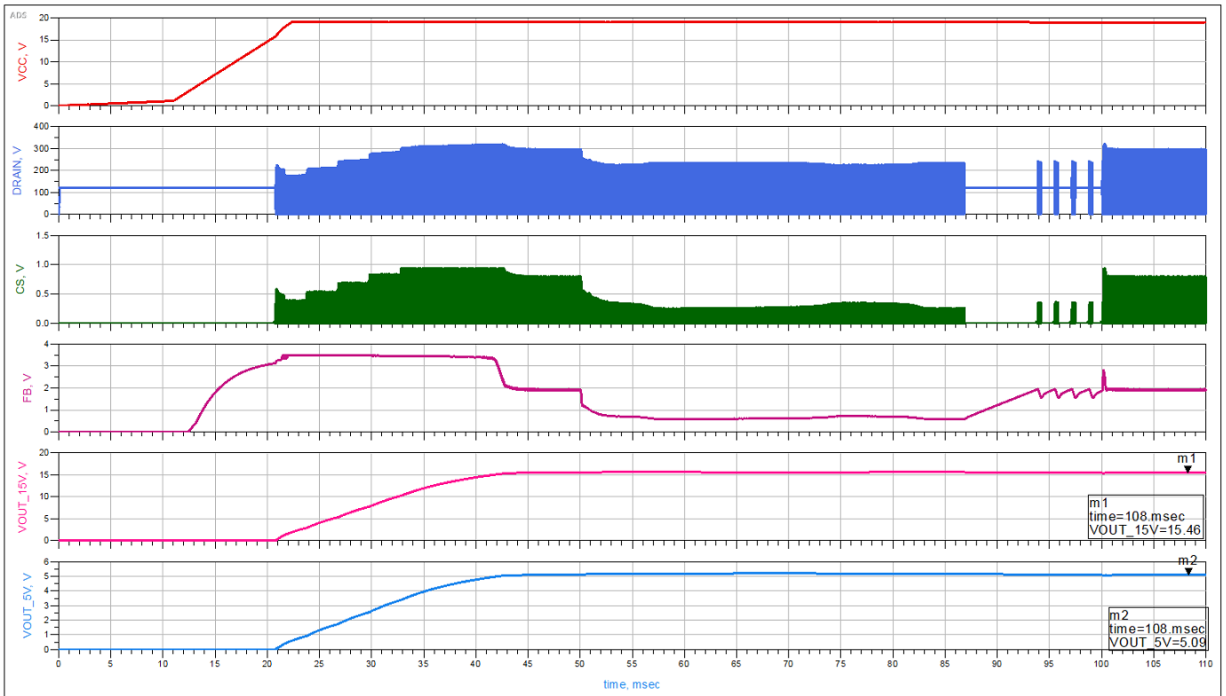


Non-isolated Active Burst Mode Testbench



Simulation results are following.
 Explanatory notes — : simulated

Non-isolated Active Burst Mode



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