

# PSpice Model Intelligent Power Module infineon ICE5AR4780BZS

## Model Information

**Model** A macro model  
**Call Name** MDC\_ICE5AR4780BZS\_PS  
**Pin Assign** 1:VERR 2:FB 3:CS 4:GATE 5:DRAIN 7:VCC 8:GND  
**File List** Model Library MDC\_ICE5AR4780BZS\_PS01.lib  
Model Report MDC\_ICE5AR4780BZS\_PS.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 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

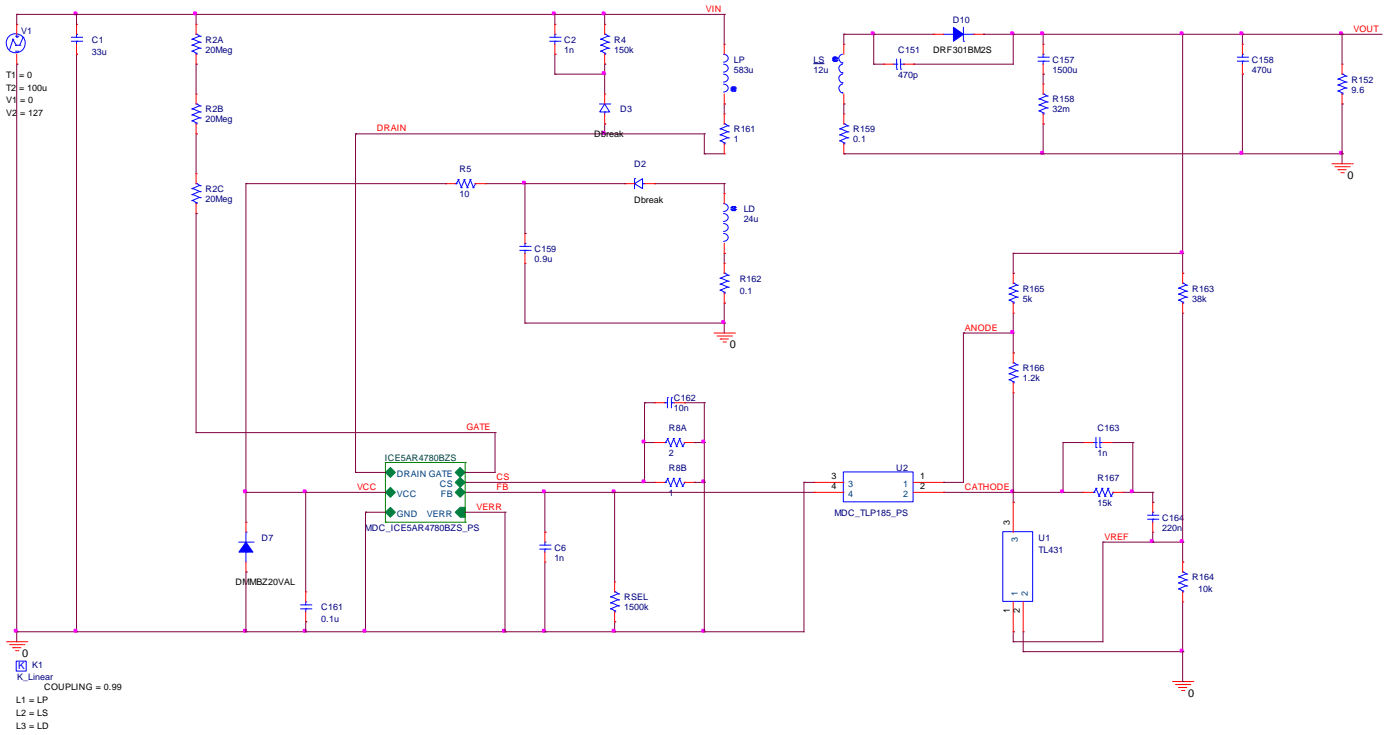
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Condition	Unit
Temperature	25	deg C

**Model Functions Table**

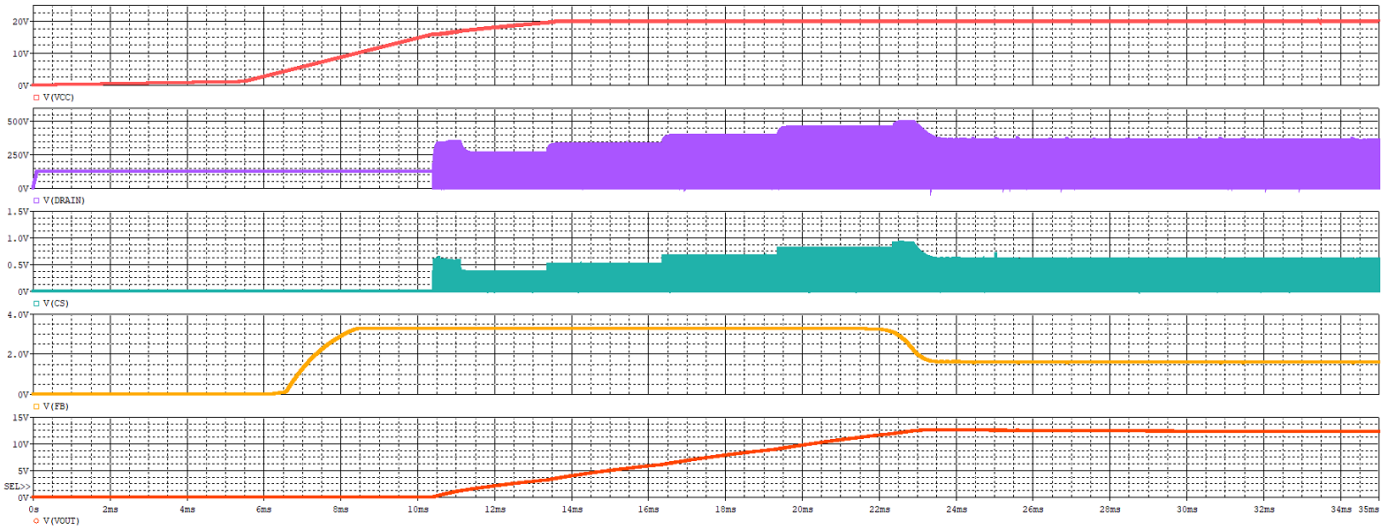
Functions	Implemented
PWM operation	<input type="radio"/>
VCC Pre Charge	<input type="radio"/>
Soft Start	<input type="radio"/>
Frequency reduction	<input type="radio"/>
Leading Edge Blanking	<input type="radio"/>
Slope compensation	<input type="radio"/>
Non-isolated/isolated configuration	<input type="radio"/>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

isolated PWM operation Testbench

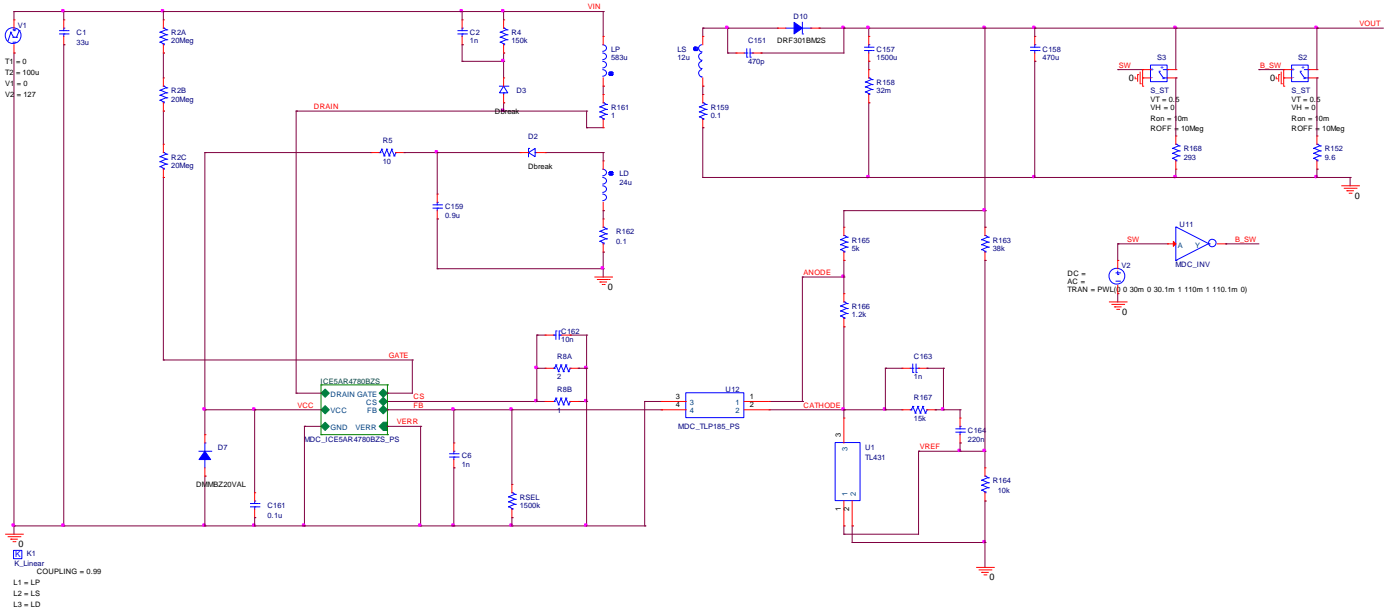


Simulation results are following.  
 Explanatory notes — : simulated

isolated PWM operation

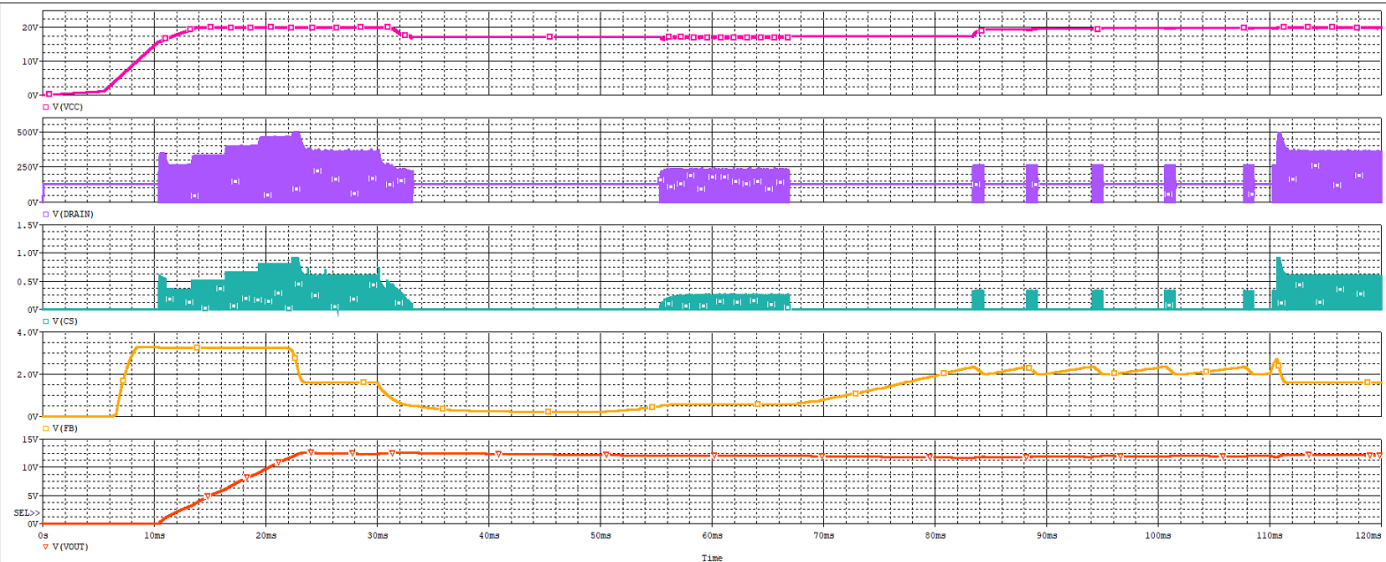


isolated Active Burst Mode Testbench

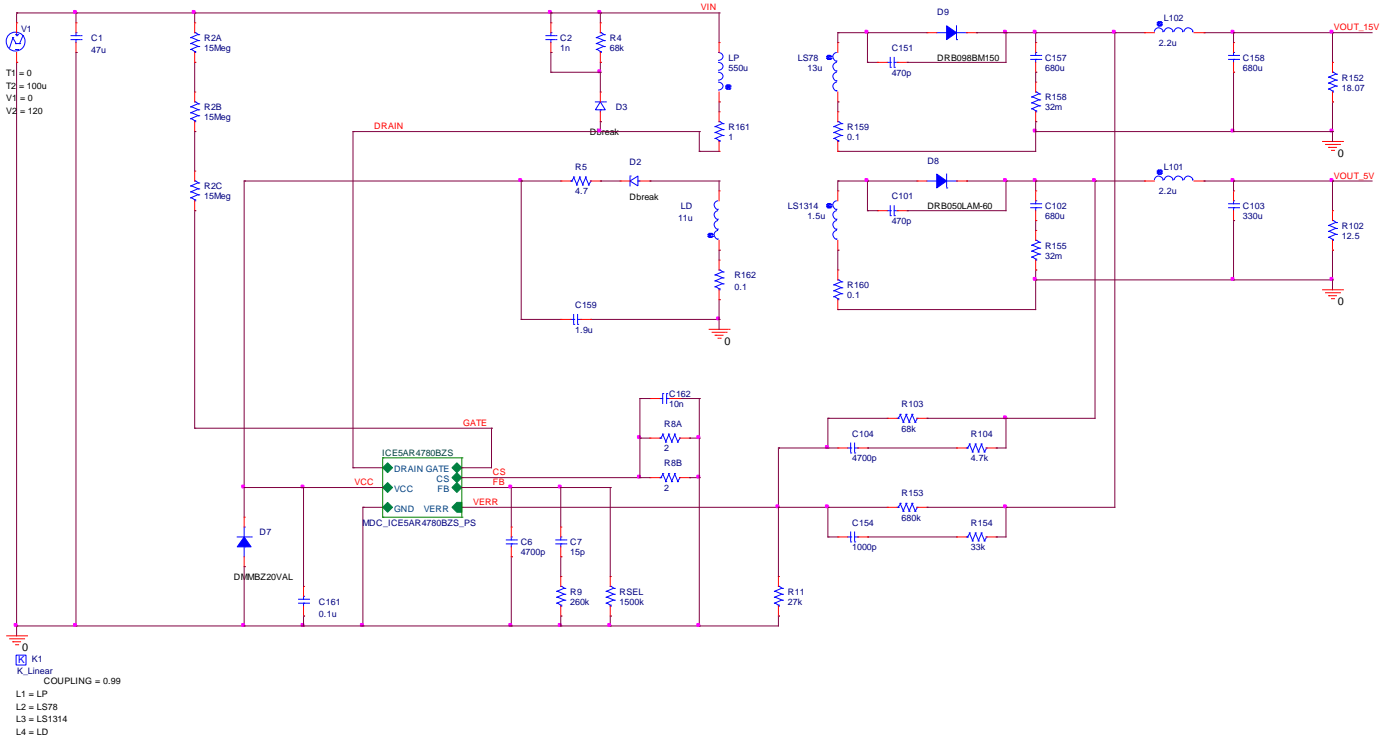


Simulation results are following.  
 Explanatory notes — : simulated

isolated Active Burst Mode

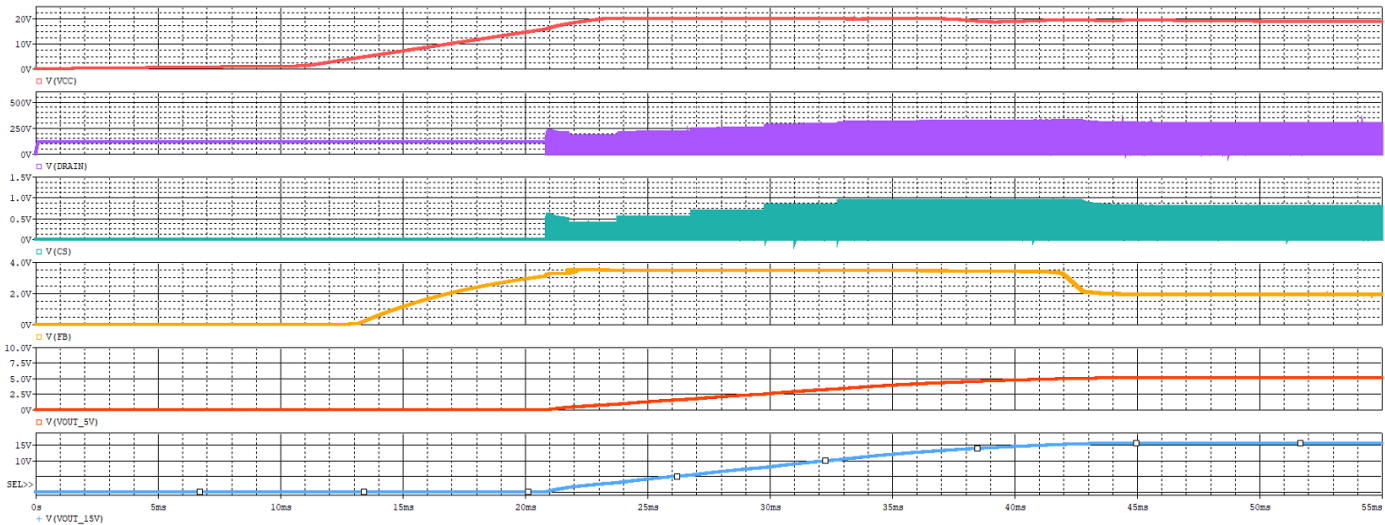


Non-isolated PWM operation Testbench

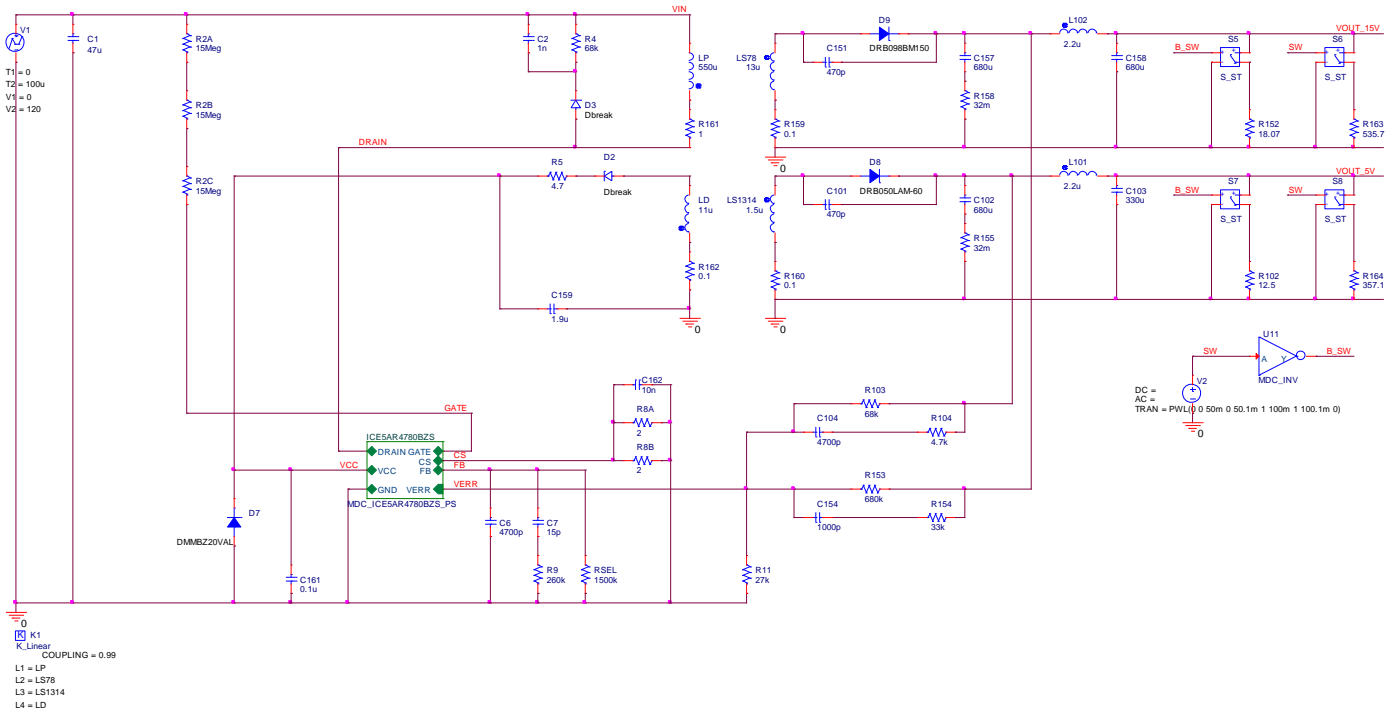


Simulation results are following.  
 Explanatory notes — : simulated

Non-isolated PWM operation

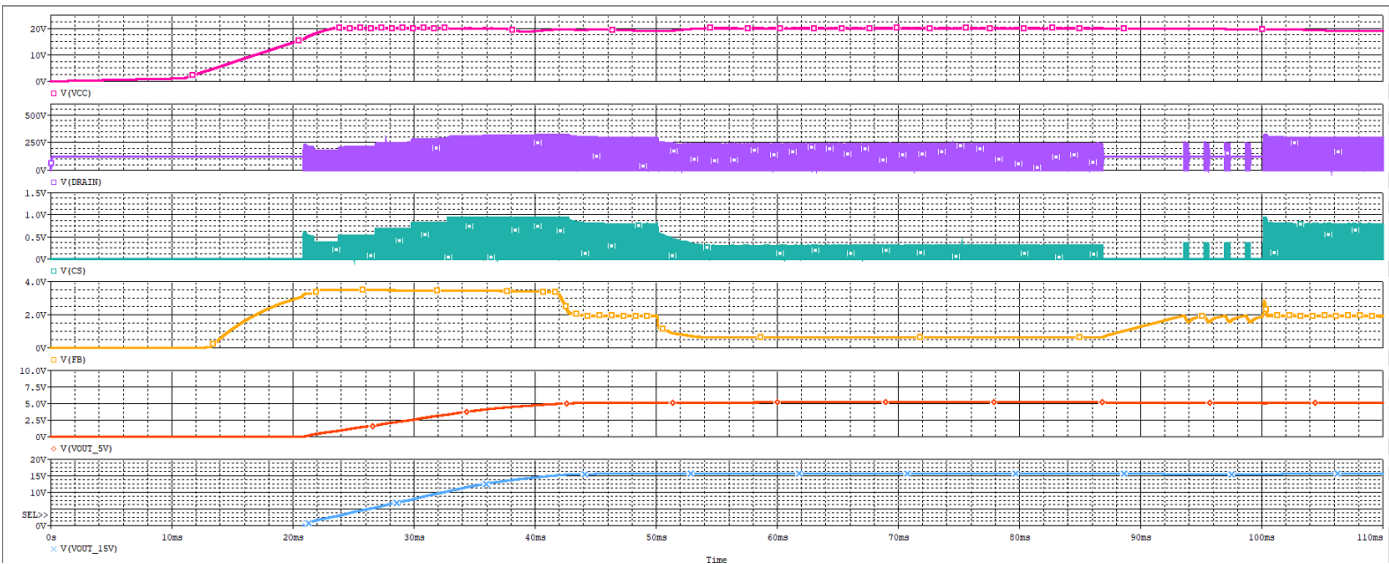


Non-isolated Active Burst Mode Testbench



Simulation results are following.  
 Explanatory notes — : simulated

Non-isolated Active Burst Mode



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