

PSpice Model

LDO(Low Drop Out) Regulator

ABLIC Inc.

S-19213B00A-E8T1U7

Model Information

Model A macro model
Call Name MDC_S-19213B00A-E8T1U7_PS
Pin Assign 1:VIN 2:NC 3:NC 4:ONOFF 5:VSS 6:NC 7:VADJ 8:VOUT
File List Model Library MDC_S-19213B00A-E8T1U7_PS.lib
 Model Report MDC_S-19213B00A-E8T1U7_PS.pdf(this file)
Verified Simulator Version PSpice v17.2

Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.1.3_00
- Product name S-19213シリーズ
- Company name ABLIC Inc.

[Characteristics listed]

- Characteristics
 - Input/Output Voltage
 - Dropout Voltage
 - Line Regulation
 - Load Regulation
 - Enable
 - Current Limit

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

LDO

○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

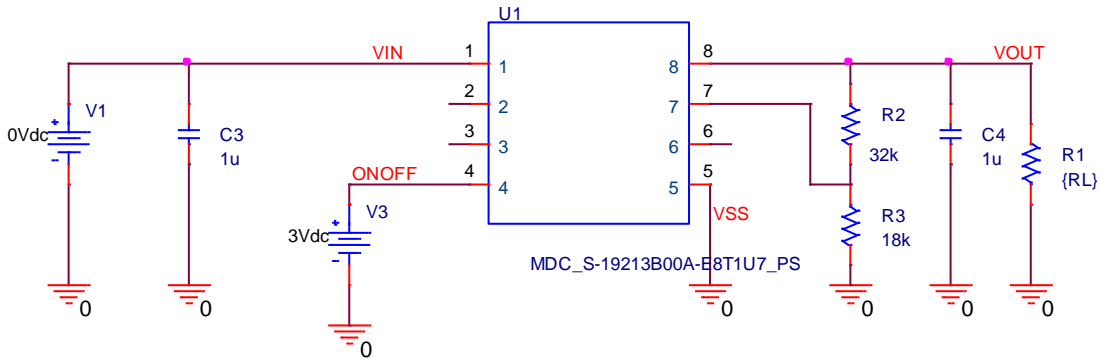
RANK=1

Functions	RANK	Implemented
Input/Output Voltage	1	○
Dropout Voltage	1	○
Line Regulation	1	○
Load Regulation	1	○
Line Transient	2	×
Load Transient	2	×
Ripple Rejection	3	×
Enable	1	○
UVLO	1	—
Current Limit	1	○
Auto Discharge	1	—

Input/Output Voltage Testbench
Referred to Data Sheet

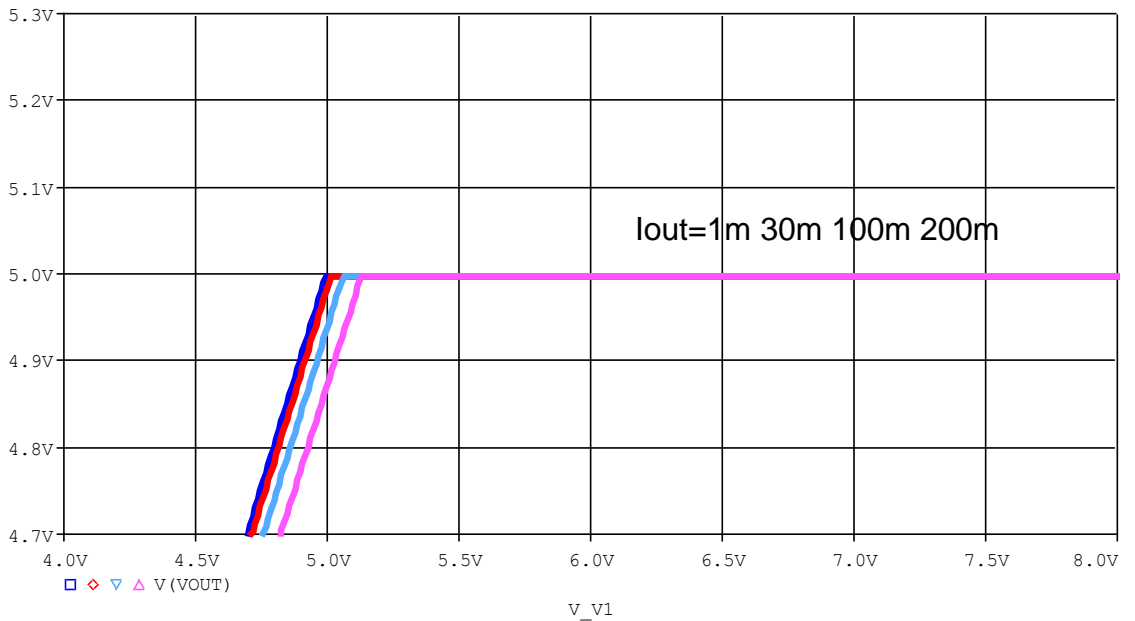
PARAMETERS:

RL = (VOUT/IOUT)
 IOUT = 0
 VOUT = 5



Simulation results are following.
 Explanatory notes — : simulated

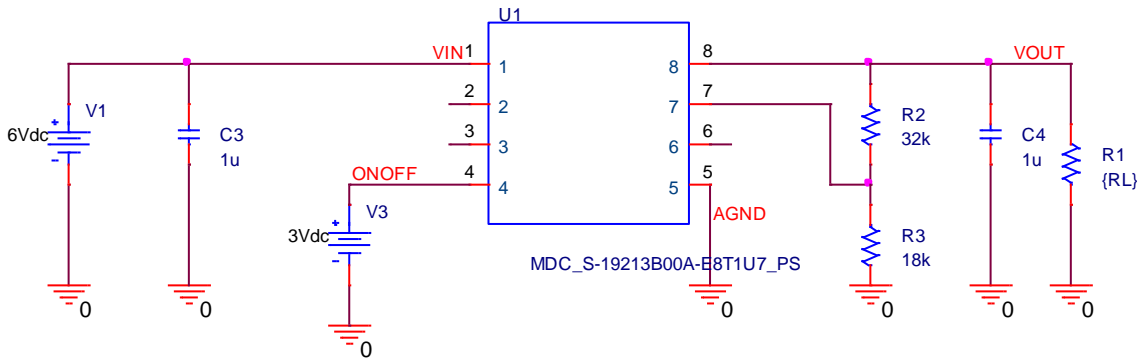
Input/Output Voltage



Dropout Voltage Testbench
Referred to Data Sheet

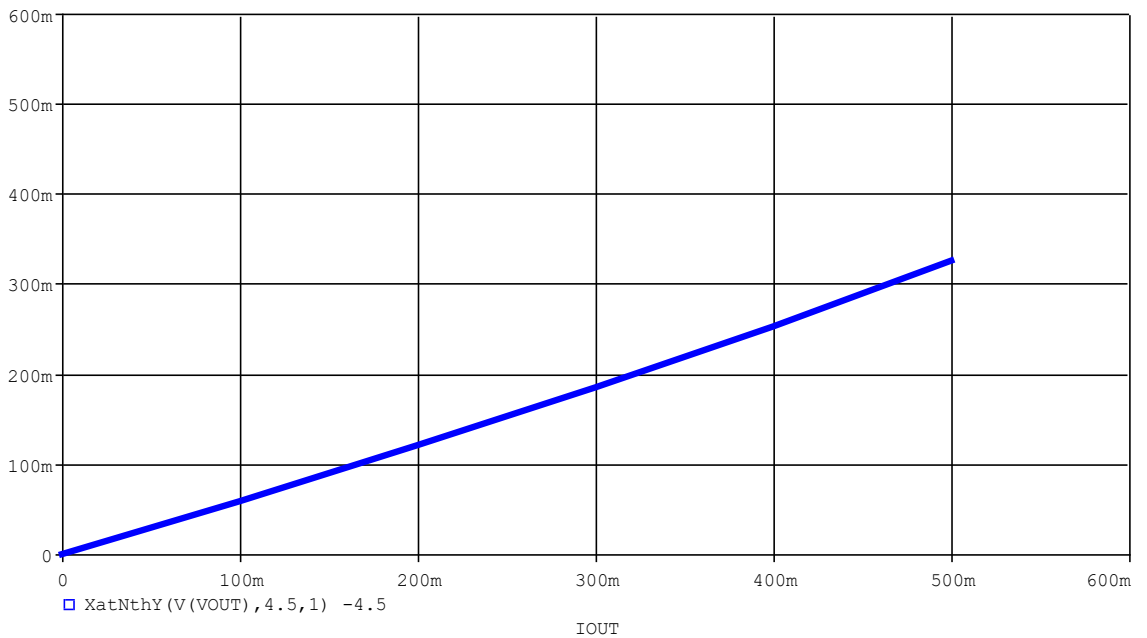
PARAMETERS:

RL = {5/IOUT}
 IOUT = 0

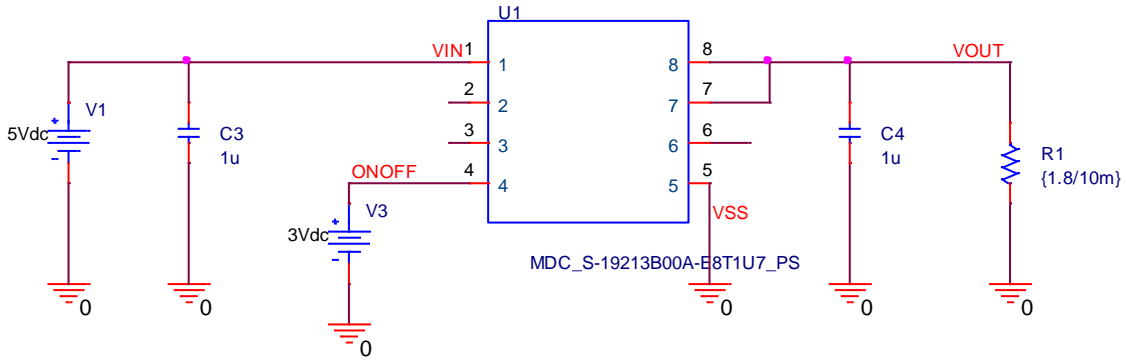


Simulation results are following.
 Explanatory notes — : simulated

Dropout Voltage

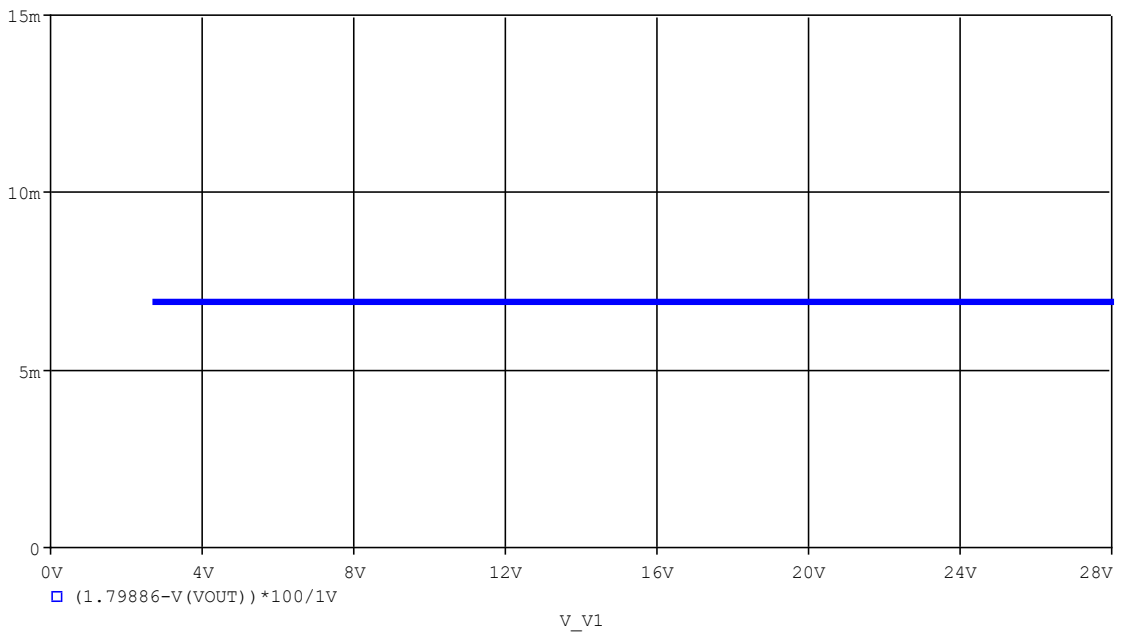


Line Regulation Testbench
 Referred to Data Sheet

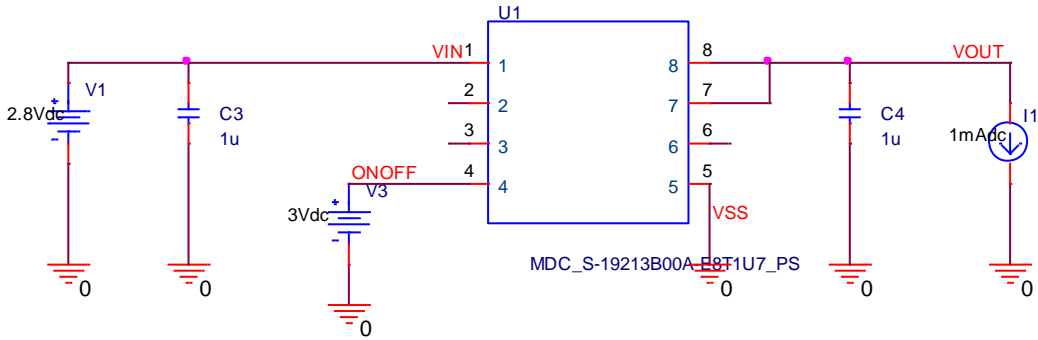


Simulation results are following.
 Explanatory notes — : simulated

Line Regulation

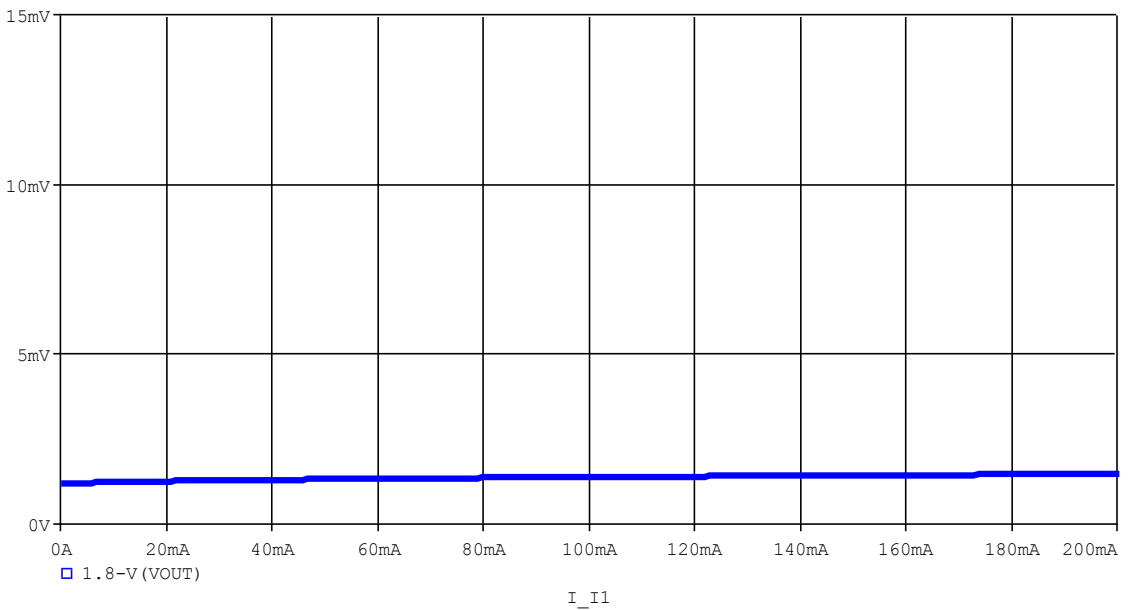


Load Regulation Testbench
Referred to Data Sheet



Simulation results are following.
 Explanatory notes — : simulated

Load Regulation

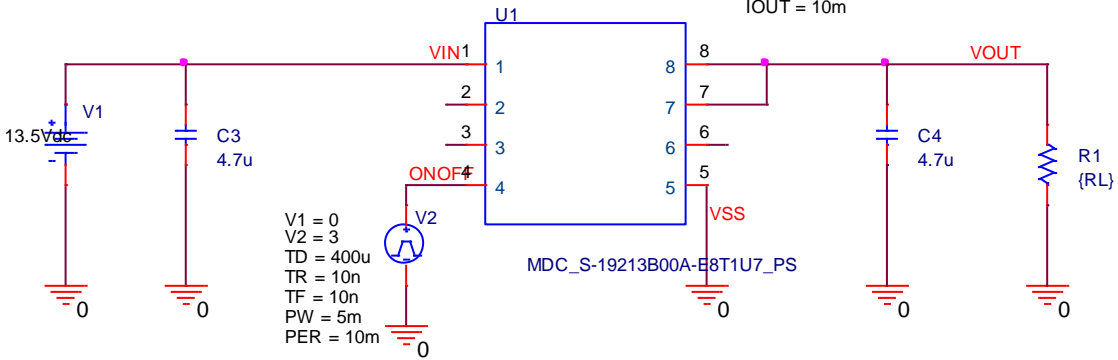


Enable Testbench

Referred to Data Sheet

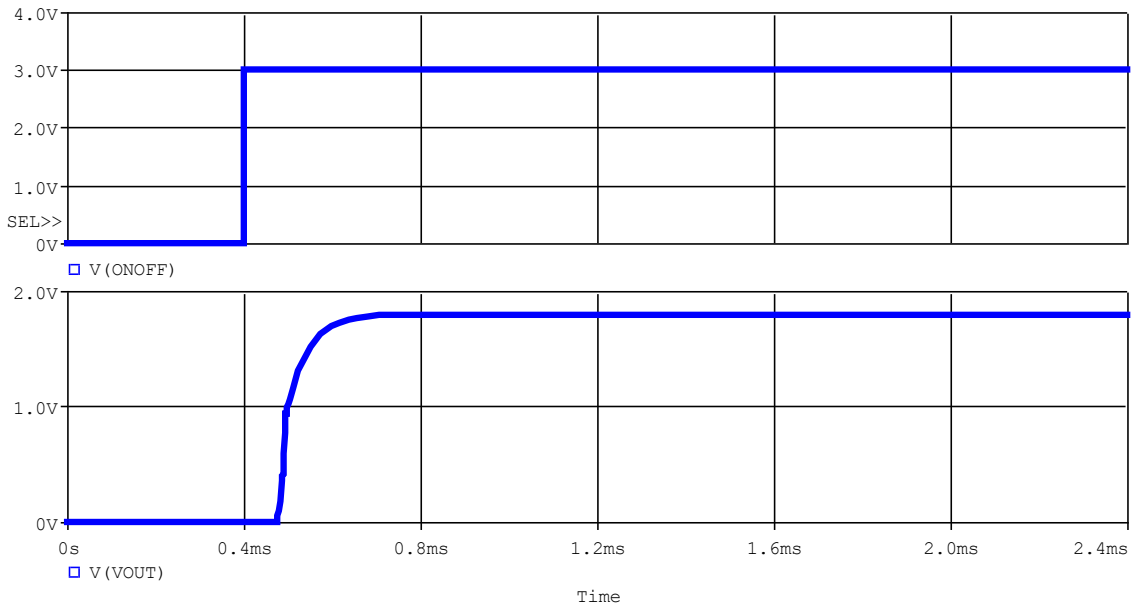
PARAMETERS:

RL = {1.8/IOUT}
 IOUT = 10m



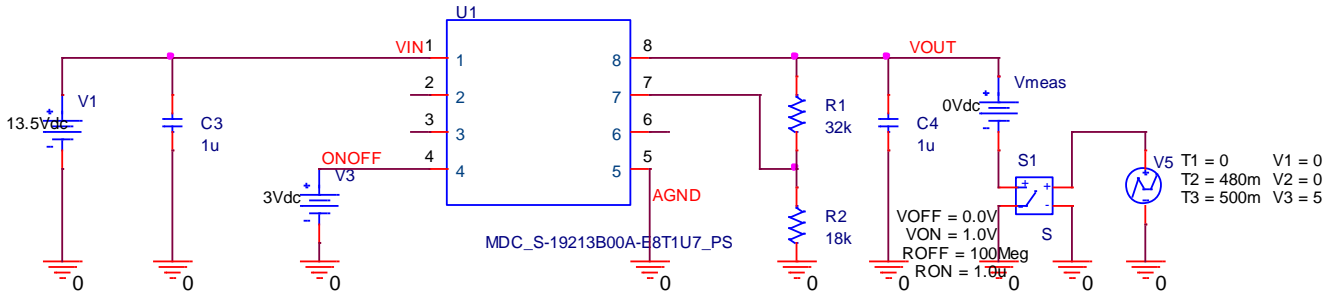
Simulation results are following.
 Explanatory notes — : simulated

Enable



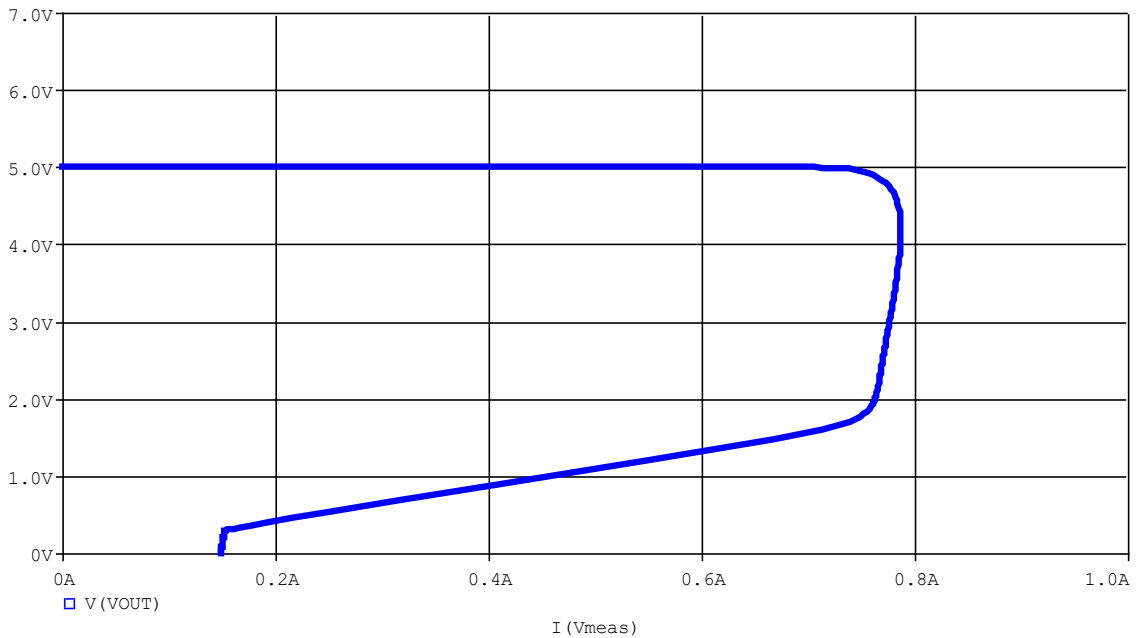
Current Limit Testbench

Referred to Data Sheet



Simulation results are following.
 Explanatory notes — : simulated

Current Limit



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