LTspice Model
LDO
ON Semiconductor
NCV8537ML330R2G

Model Information

Model	A macro model
Call Name	MDC_NCV8537ML330R2G_LT
Pin Assign	1:VOUT 2:VOUT 3:SENSE 4:GND 5:PWRG 6:NC 7:NR 8:_SD 9:VIN 10:VIN 11:EPAD
File List	Model Library MDC_NCV8537ML330R2G_LT01.lib Model Report MDC_NCV8537ML330R2G_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	October, 2019 − Rev. 6
●Product name	NCV8537ML330R2G
●Company name	ON Semiconductor

[Characteristics listed]

●Characteristics	VIN-VOUT,Vdrop,Ilimit, Line-Reg,Load-Reg, Shutdown,Power good

Simulation Condition

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

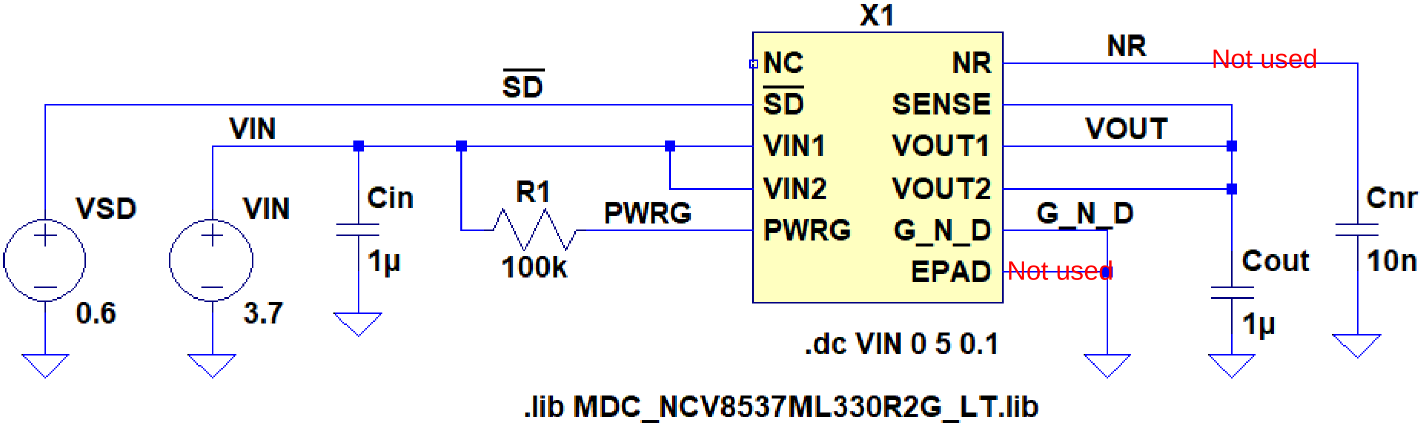
Item	Condition	Unit
Temperature	25	deg C

Model Functions Table

Functions–	Implemented
VIN–VOUT(3.3V)	○
Vdrop	○
Ilimit	○
Line–Reg	○
Load–Reg	○
Ripple–Rejection	○
SENSE	○
Shutdown	○
Power good	○
Noise Reduction	–
Exposed thermal	–

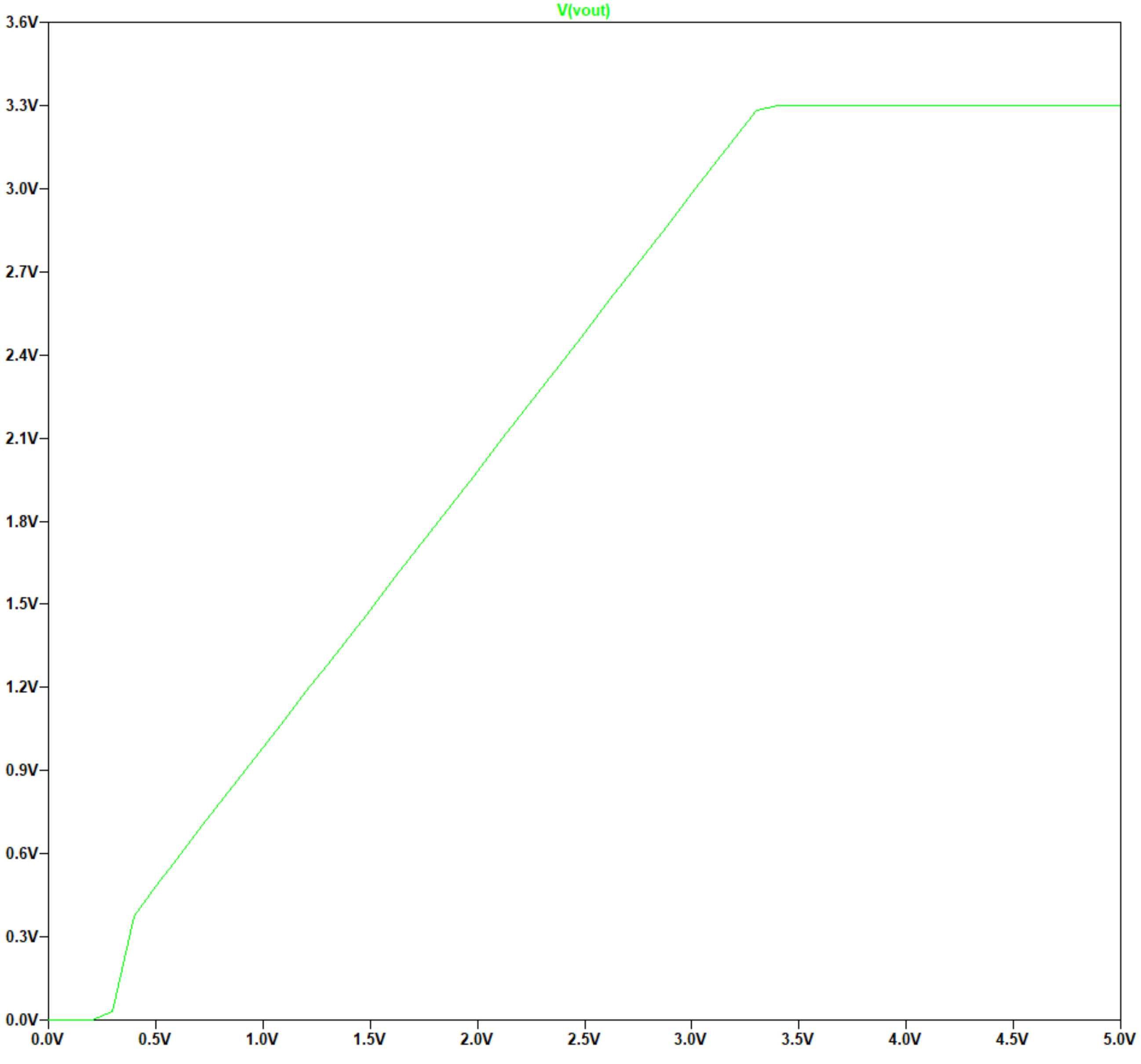
VIN-VOUT Testbench

Referred to Data Sheet



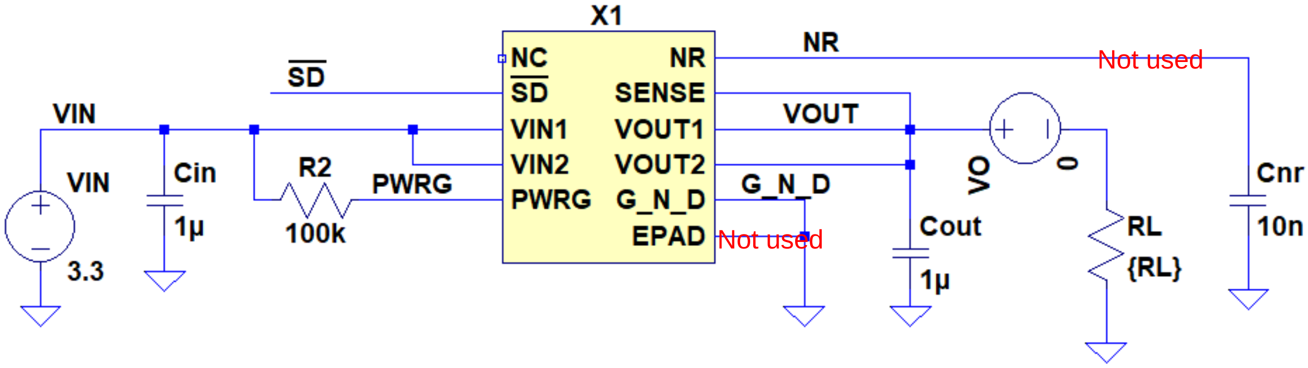
Simulation results are following.
Explanatory notes — : simulated

VIN-VOUT



Vdrop Testbench

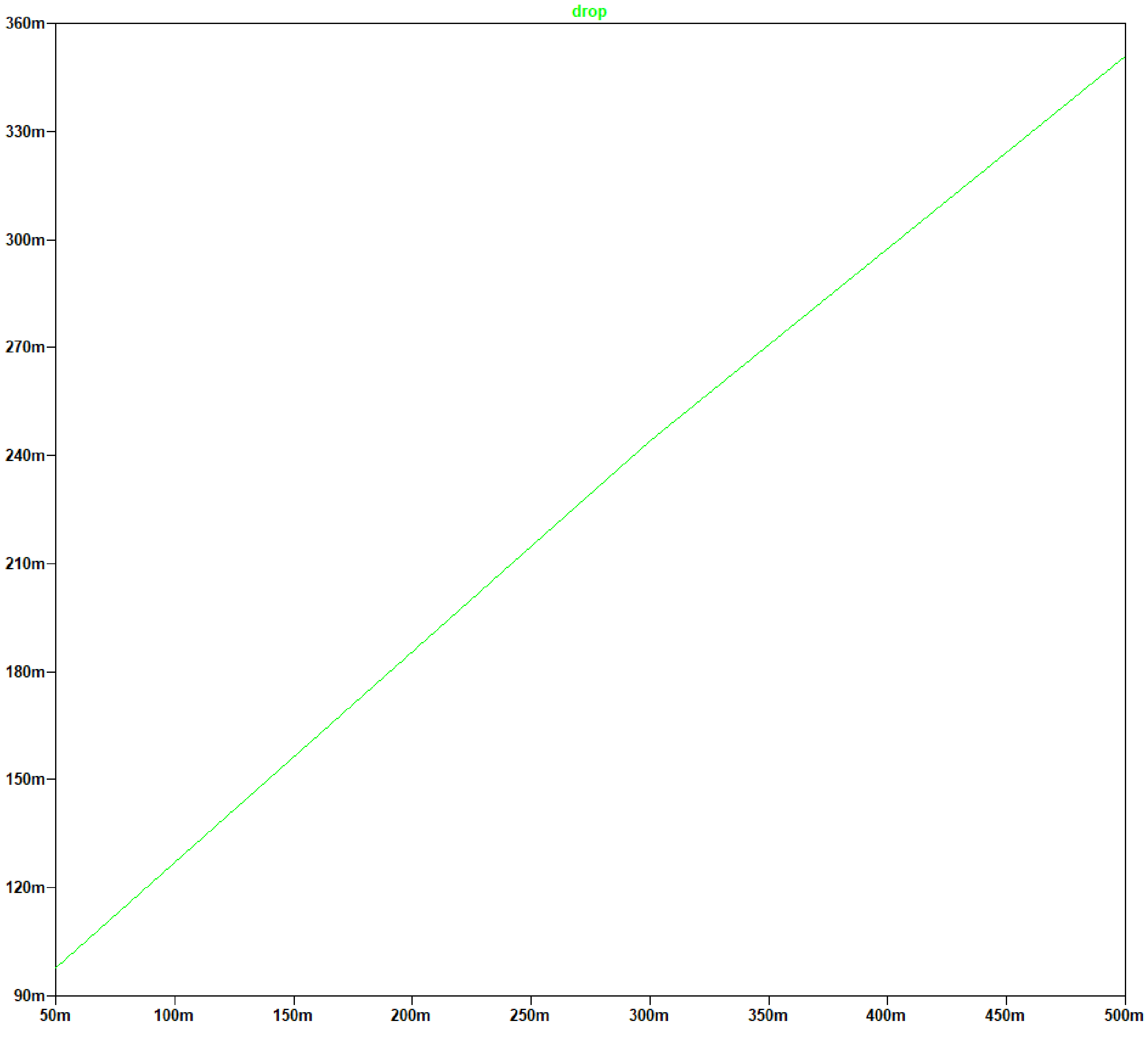
Referred to Data Sheet



```
.dc VIN 0 5 0.1
.param RL=VOUT/IOUT VOUT=3.3 IOUT=0.5
.step param IOUT list 50m 300m 500m
.meas DC iload FIND I(VOUT) AT 3.2
.meas DC drop FIND V(VIN)-V(VOUT) WHEN V(VOUT)=3.2 RISE=1
.lib MDC_NCV8537ML330R2G_LT.lib
```

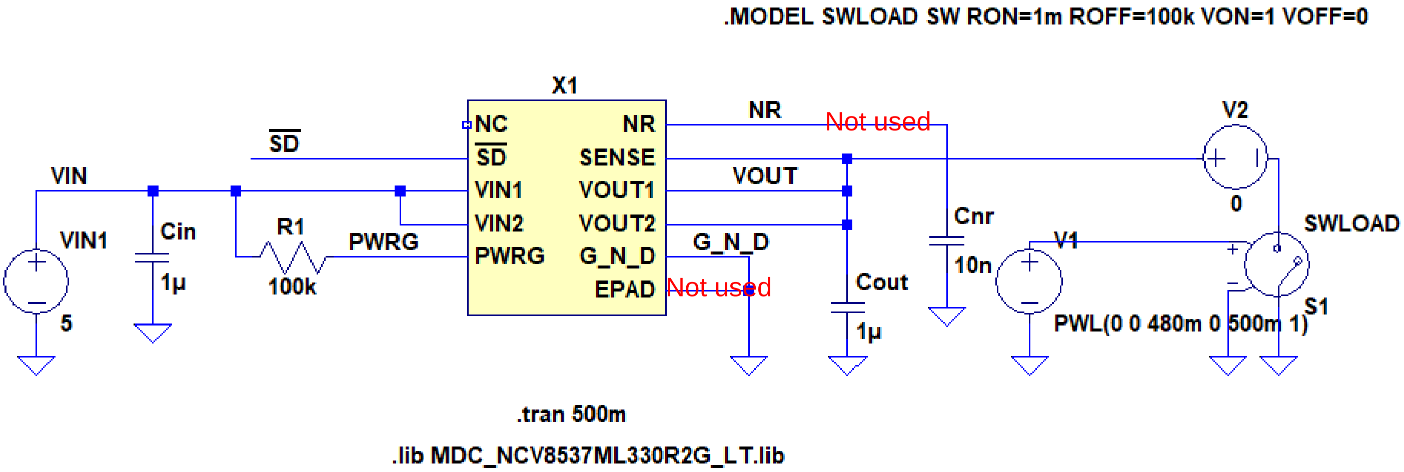
Simulation results are following.
Explanatory notes — : simulated

Vdrop



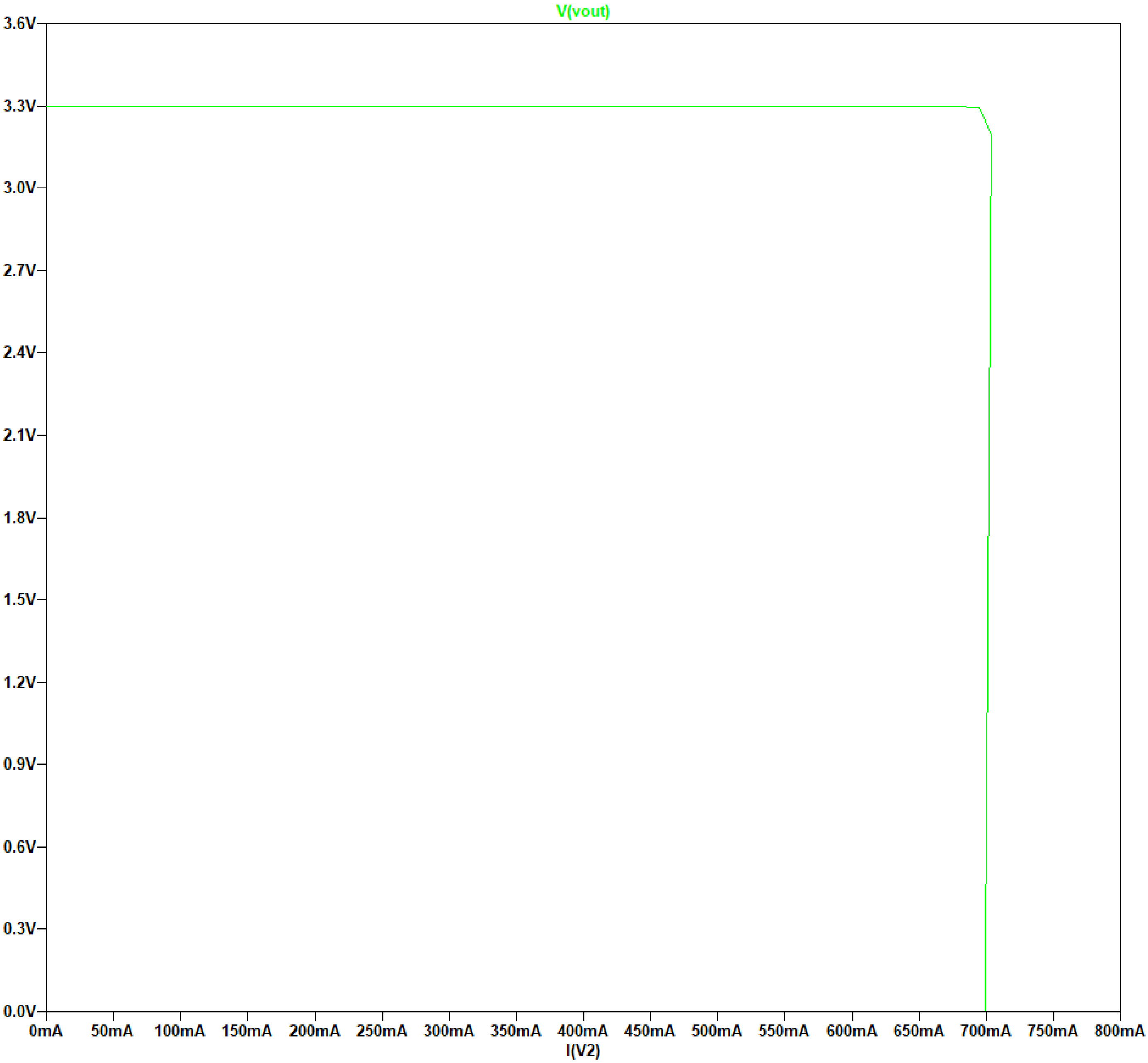
Ilimit Testbench

Referred to Data Sheet



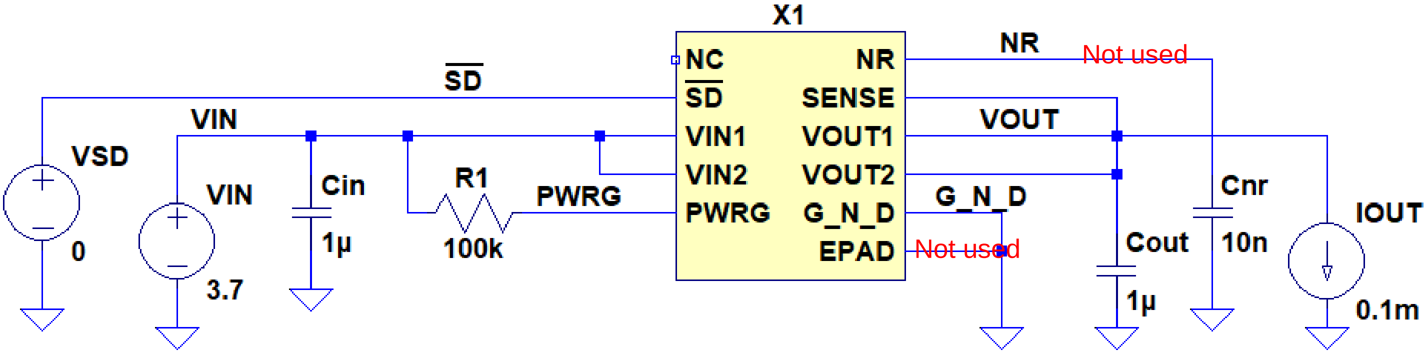
Simulation results are following.
Explanatory notes — : simulated

Ilimit



Line-Reg Testbench

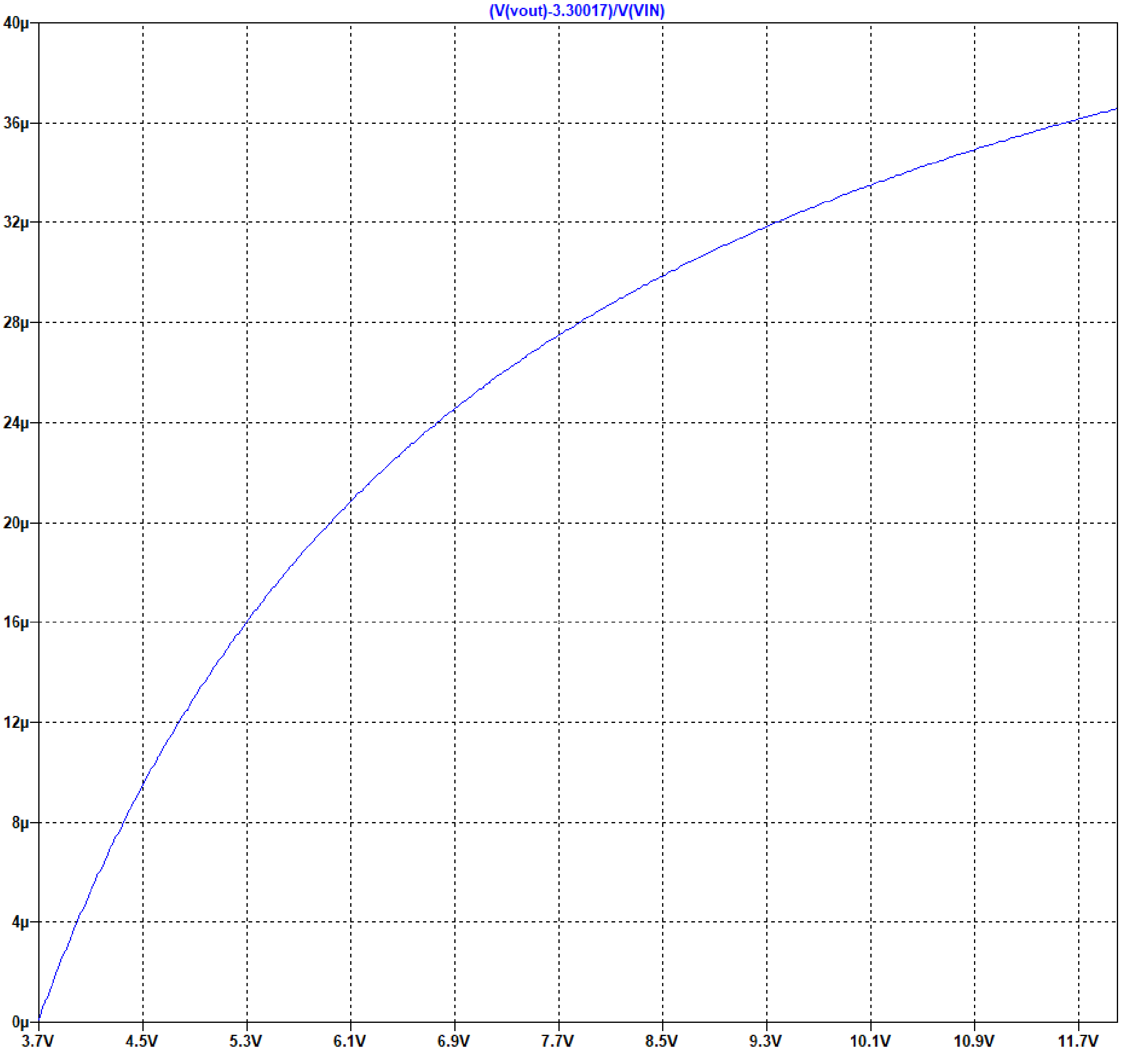
Referred to Data Sheet



```
.dc VIN 3.7 12 0.01
.lib MDC_NCV8537ML330R2G_LT.lib
```

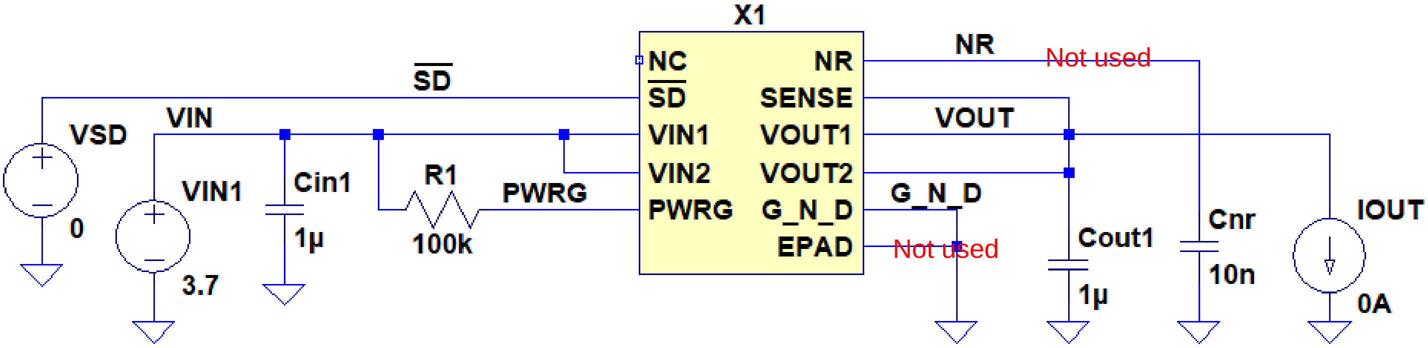
Simulation results are following.
Explanatory notes — : simulated

Line-Reg



Load-Reg Testbench

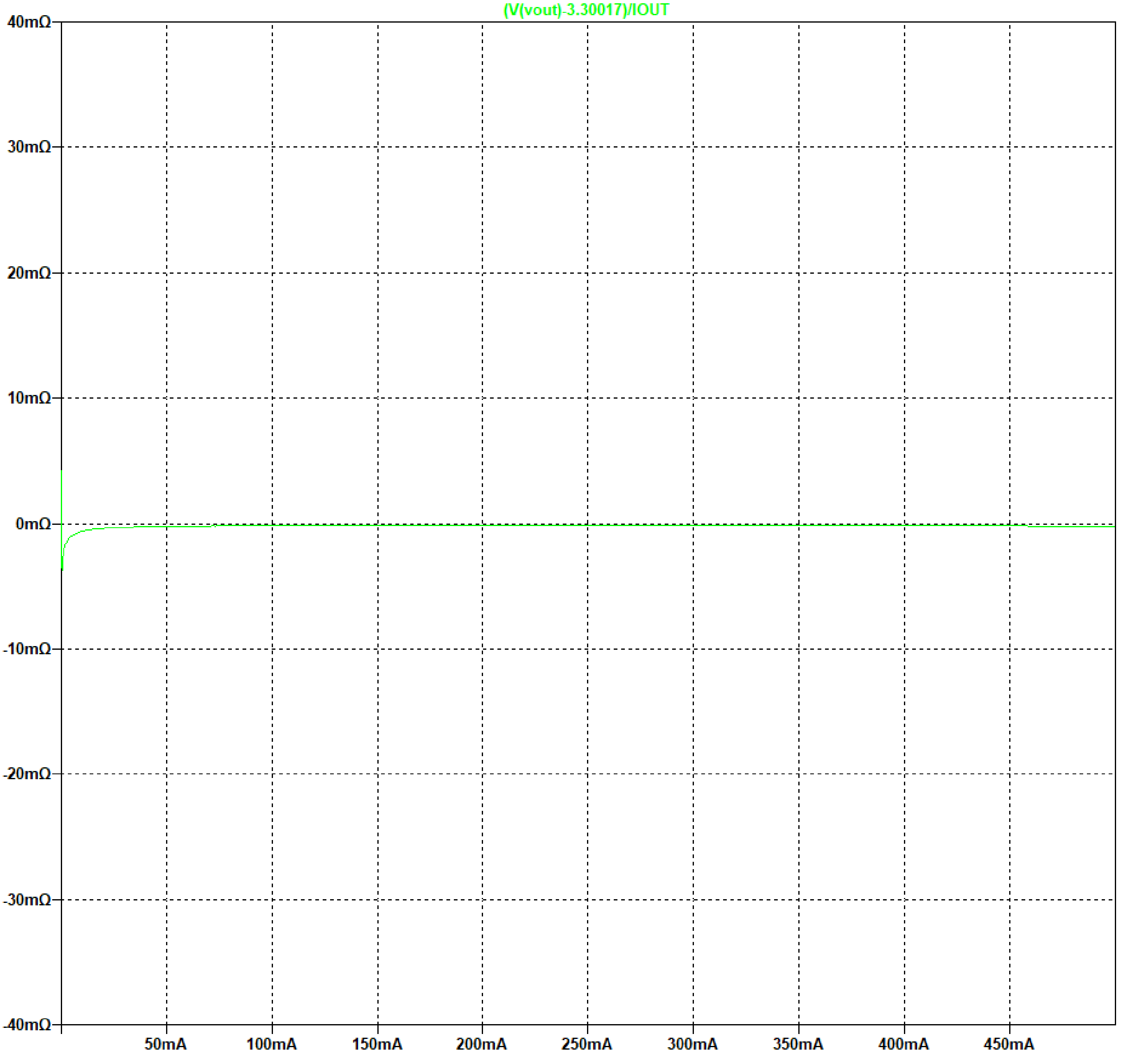
Referred to Data Sheet



```
.dc IOUT 0.1m 500m 0.1m
.lib MDC_NCV8537ML330R2G_LT.lib
```

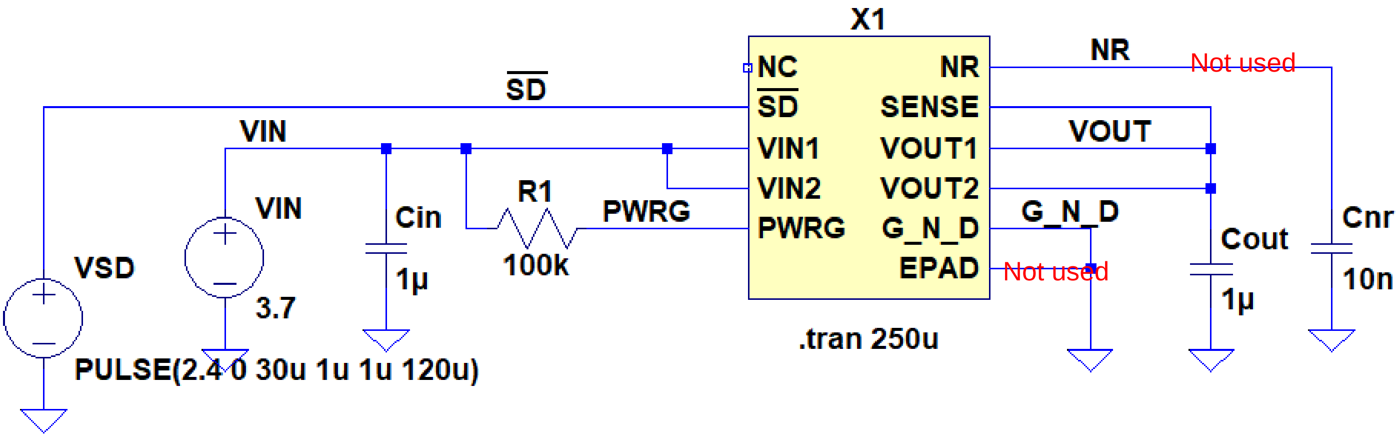
Simulation results are following.
Explanatory notes — : simulated

Load-Reg



Shutdown/Power good Testbench

Referred to Data Sheet

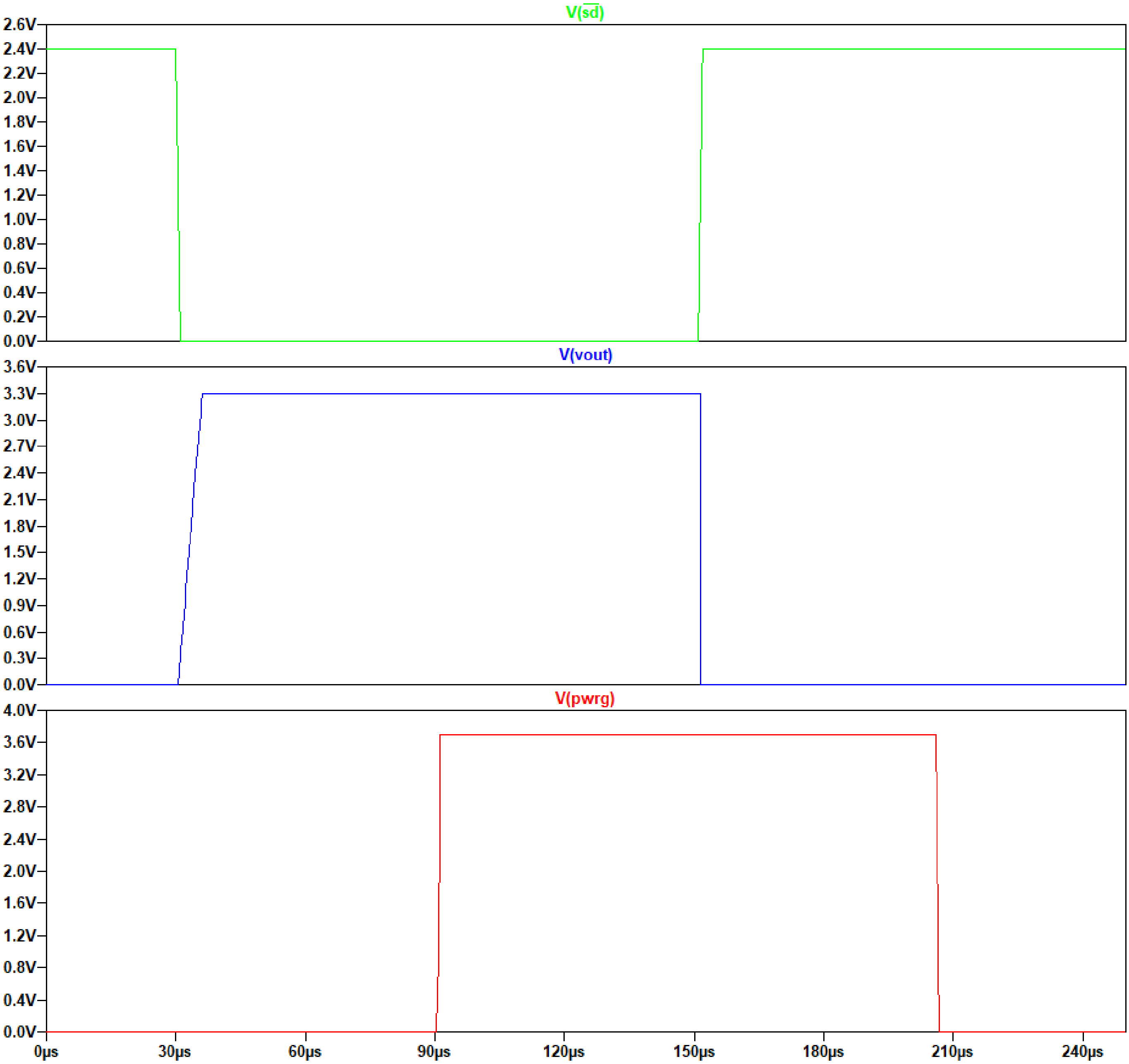


```
.tran 250u
```

```
.meas TRAN ON TRIG V(vout)=1.65 RISE=1 TARG V(pwrg)=3.35 RISE=1
.meas TRAN OFF TRIG V(vout)=1.65 FALL=1 TARG V(pwrg)=3.35 FALL=1
.lib MDC_NCV8537ML330R2G_LT.lib
```

Simulation results are following.
Explanatory notes — : simulated

Shutdown/Power good



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