

LTspice Model

LDO

ON Semiconductor

MC79M08BDTRKG

Model Information

Model A macro model
Call Name MDC_MC79M08BDTRKG_LT
Pin Assign 1:Ground 2:Input 3:Output
File List Model Library MDC_MC79M08BDTRKG_LT01.lib
 Model Report MDC_MC79M08BDTRKG_LT.pdf(this file)

Verified Simulator Version

Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version July, 2013 – Rev. 15
- Product name MC79M08BDTRKG
- Company name ON Semiconductor

[Characteristics listed]

- Characteristics $V_{IN}-V_{OUT}$
Line Regulation
Load Regulation
Dropout Voltage

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

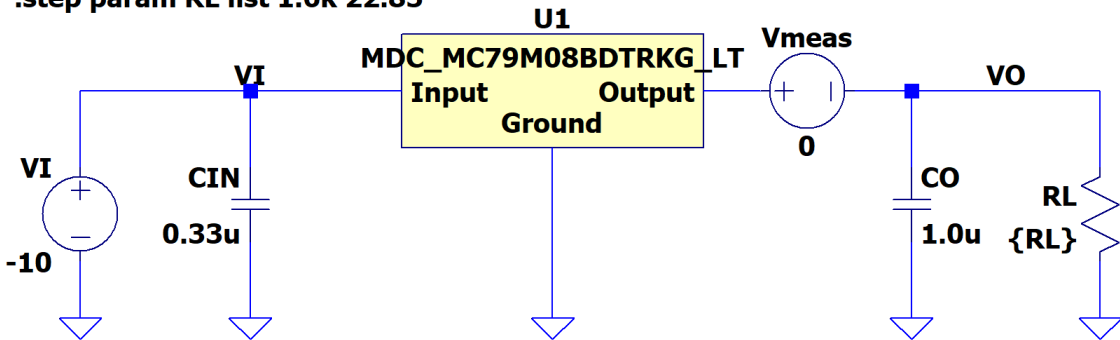
Model Functions Table

Functions	Implemented
$V_{IN}-V_{OUT}$	<input type="radio"/>
Line Regulation	<input type="radio"/>
Load Regulation	<input type="radio"/>
Dropout Voltage	<input type="radio"/>

V_{IN}-V_{OUT} Testbench

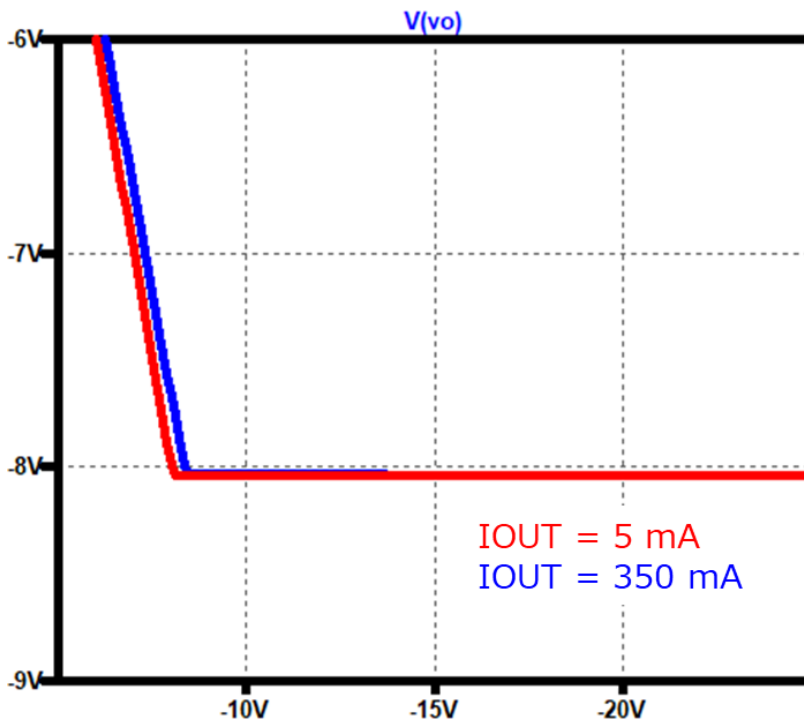
Referred to Data Sheet

```
.option TNOM=25
.temp 25
.dc VI -5 -25 0.1          .lib MDC_MC79M08BDTRKG_LT.lib
.step param RL list 1.6k 22.85
```



Simulation results are following.
 Explanatory notes — : simulated

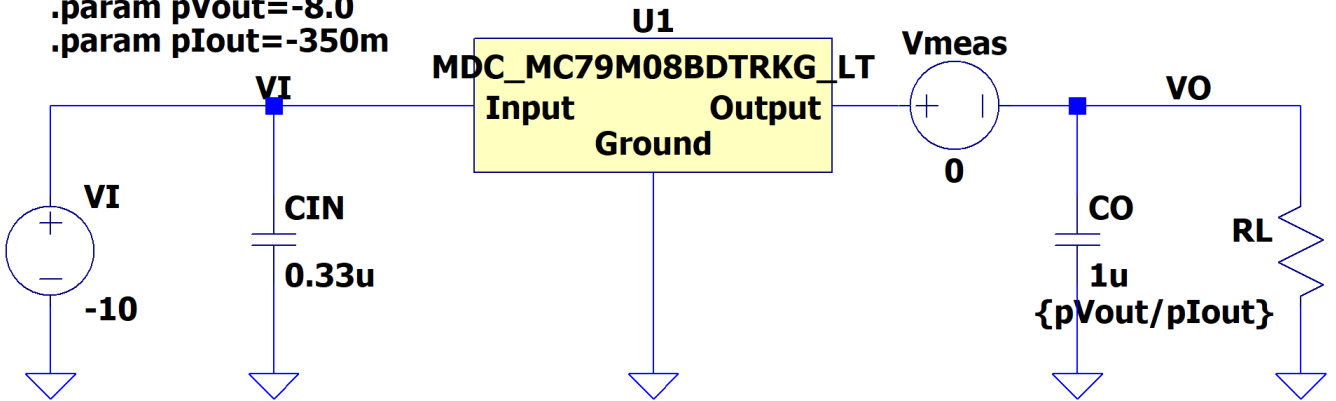
V_{IN}-V_{OUT}



Line Regulation Testbench

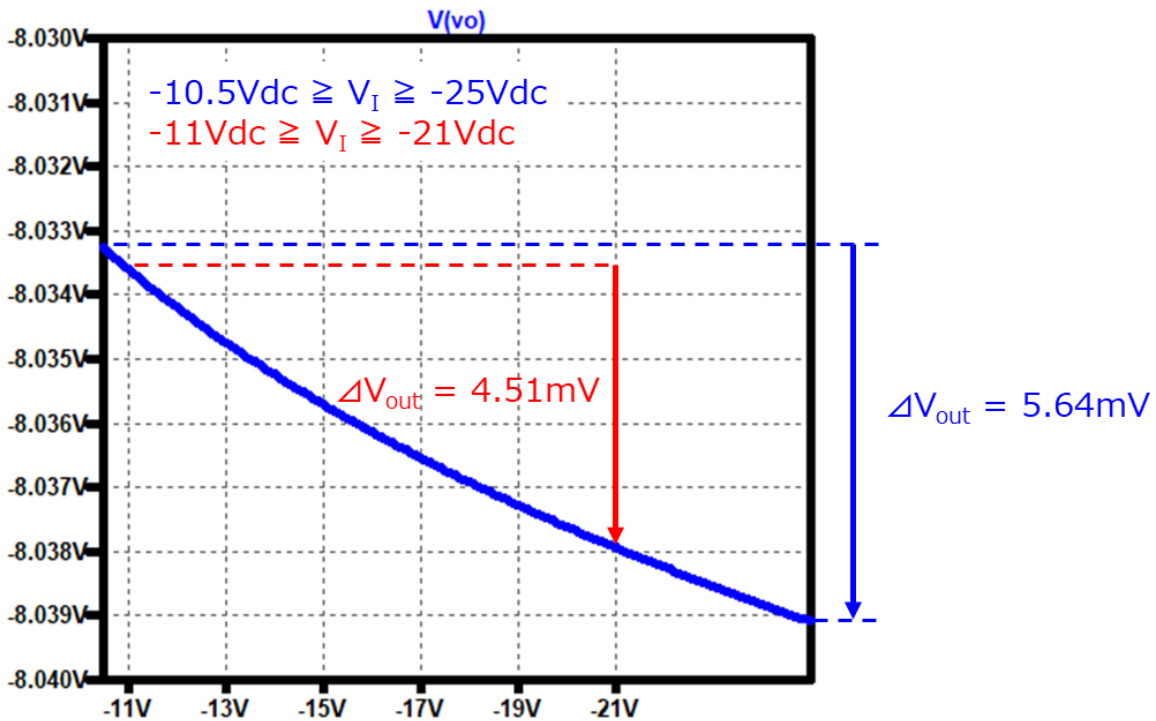
Referred to Data Sheet

```
.option TNOM=25
.temp 25
.dc VI -10.5 -25 0.1 .lib MDC_MC79M08BDTRKG_LT.lib
.param pVout=-8.0
.param pIout=-350m
```



Simulation results are following.
 Explanatory notes — : simulated

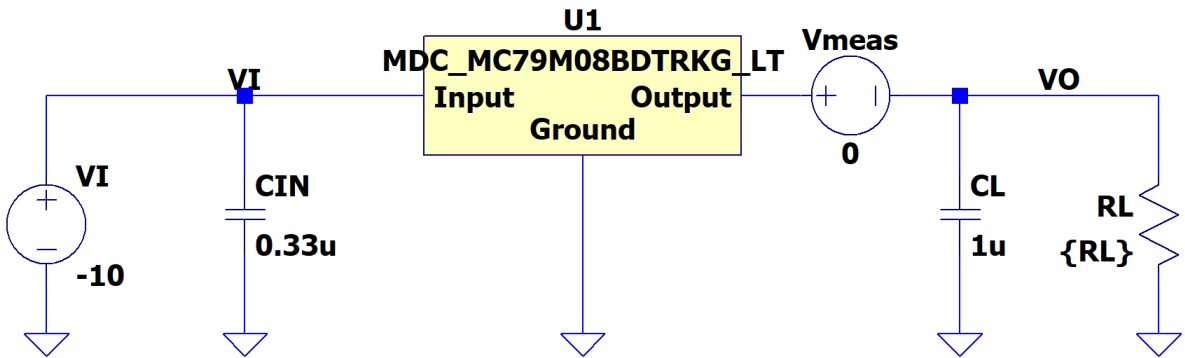
Line Regulation



Load Regulation Testbench

Referred to Data Sheet

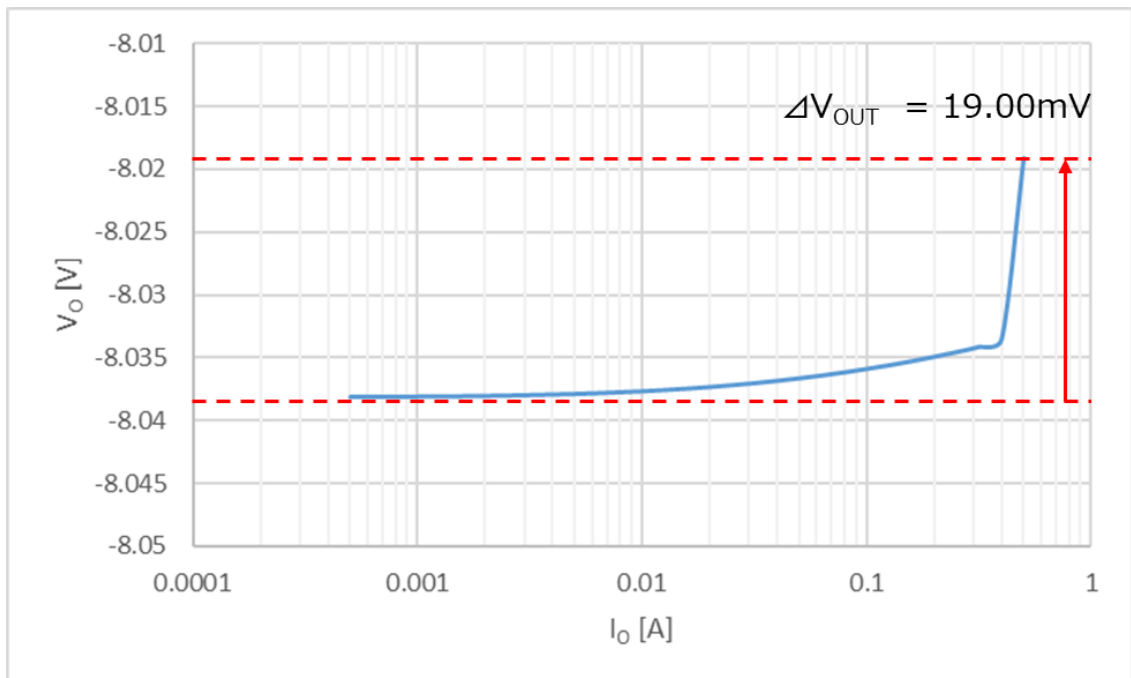
```
.option TNOM=25
.temp 25
.tran 0 10m 0 .lib MDC_MC79M08BDTRKG_LT.lib
```



```
.option MEASDGT = 8
.meas tran VOUT find V(Vout) at 1m
.meas tran IOOUT find I(Vmeas) at 1m
.step dec param RL 16k 16 10
```

Simulation results are following.
 Explanatory notes — : simulated

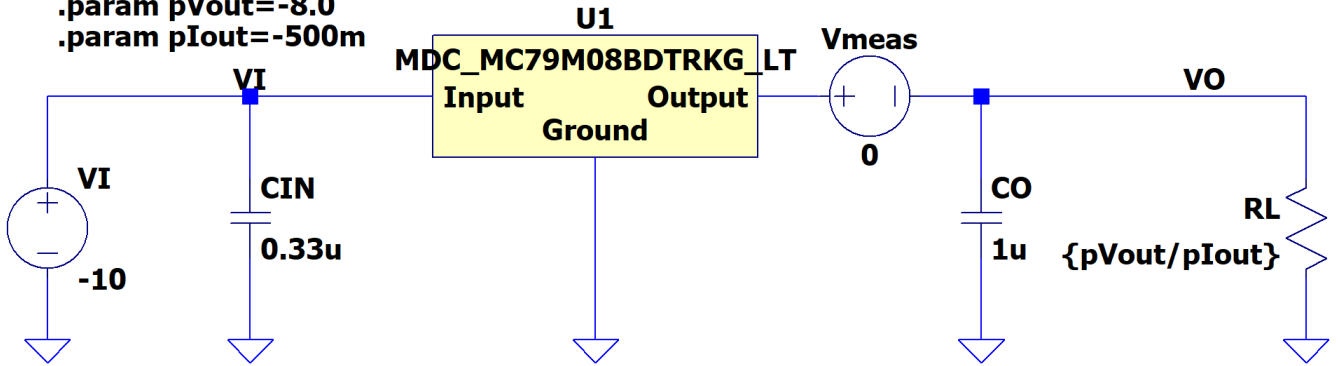
Load Regulation



Dropout Voltage Testbench

Referred to Data Sheet

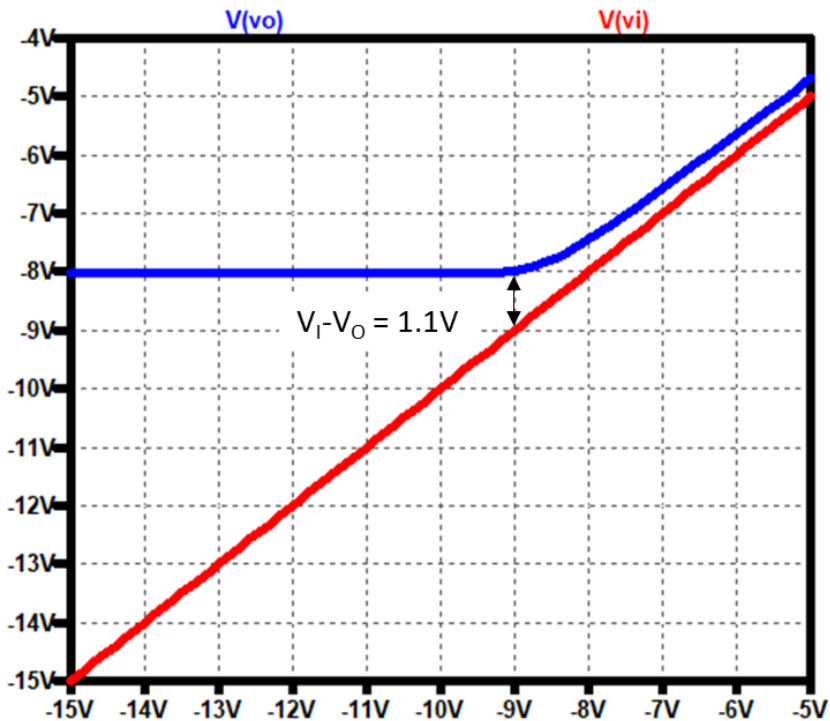
```
.option TNOM=25
.temp 25
.dc VI -15 -5 0.1
.param pVout=-8.0
.param pIout=-500m
.lib MDC_MC79M08BDTRKG_LT.lib
```



```
.meas DC Vdiff FIND V(VIN)-V(VOUT) WHEN V(VOUT)=-8.0
.meas DC Iout FIND I(Vmeas) WHEN V(VOUT)=-8.0
```

Simulation results are following.
 Explanatory notes — : simulated

Dropout Voltage



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