

LTspice Model

Dual Comparator

Texas Instruments Inc.

TLV7256IDDUR

Model Information

Model A macro model
Call Name MDC_TLV7256IDDUR_LT
Pin Assign 1:1OUT 2:1IN- 3:1IN+ 4:VCC- 5:2IN+ 6:2IN- 7:2OUT 8:VCC+
File List Model Library MDC_TLV7256IDDUR_LT01.lib
Model Report MDC_TLV7256IDDUR_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 10-Dec-2020
- Product name TLV7256IDDUR
- Company name Texas Instruments Inc.

[Characteristics listed]

- Characteristics Vio, Iio, Icc, Isink, Isource, Vol, Voh
tpLH, tpHL, tTLH, tTHL

Simulation Condition

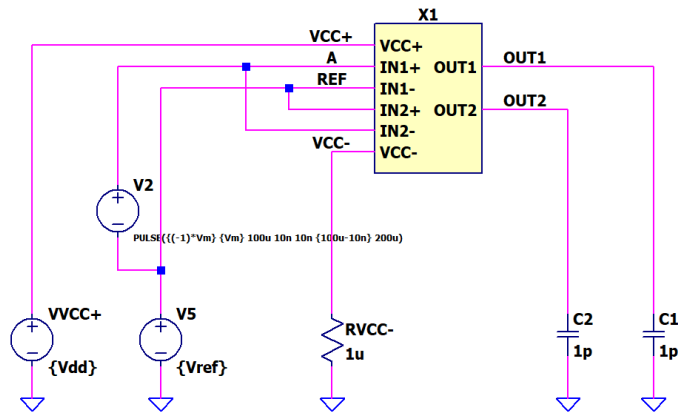
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Min	Typ	Max	Unit
VDD	1.5		7.0	V
Temperature		25		deg C

Model Functions Table

Functions	Implemented
Low supply current: $I_{DD} = 20\mu\text{A}$ (typ.)	<input type="radio"/>
Single power supply	<input type="radio"/>
Rail-to-Rail Common-Mode Input Voltage Range	<input type="radio"/>
Push-Pull Output Circuit	<input type="radio"/>
Low Input-Bias Current	<input type="radio"/>

Testbench for transient characteristics (Vcc+=5.0[V]/2.7[V]/1.8[V] Vcc-=0.0[V] Vin=+/-100[mV])
 Referred to Data Sheet

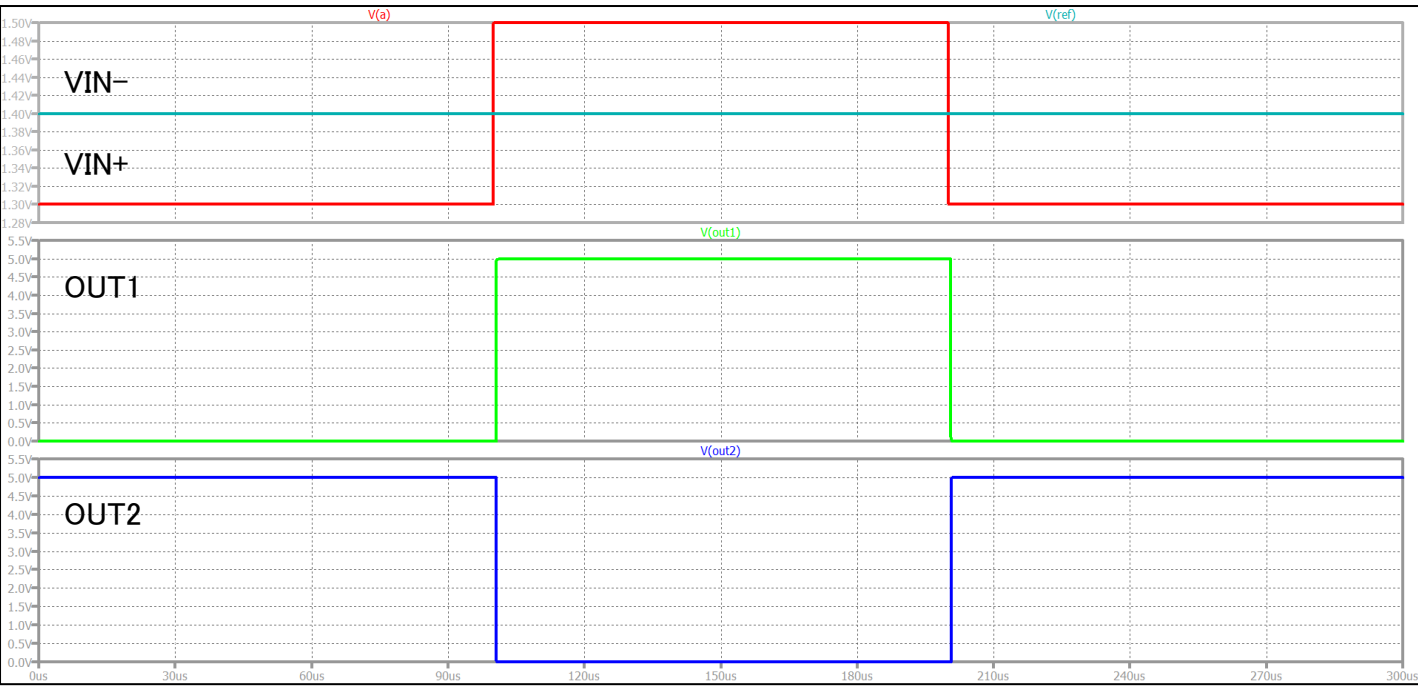


```
.tran 0 300u 0 10n
.temp 25
.options tnom=25
.options plotwinsize=0
.step param Vm list 100m 600m
.step param Vdd list 3.0 5.0
.param Vdd=5.0 Vm=0.1 Vref={(2.0+0.8)/2} Ro=10k
.meas TRAN tpLH TRIG v(a,ref)=0 RISE=1 TARG v(out1)=Vdd*0.5 RISE=1
.meas TRAN tpHL TRIG v(a,ref)=0 FALL=1 TARG v(out1)=Vdd*0.5 FALL=1
.meas TRAN tLH TRIG v(out1)=Vdd*0.1 RISE=1 TARG v(out1)=Vdd*0.9 RISE=1
.meas TRAN tHL TRIG v(out1)=Vdd*0.9 FALL=1 TARG v(out1)=Vdd*0.1 FALL=1
.meas TRAN Ivdd AVG abs(i(vvcc+)) FROM 0 TO 300u
.lib MDC_TLV7256IDDUR_LT01.lib
```

Simulation results are following.

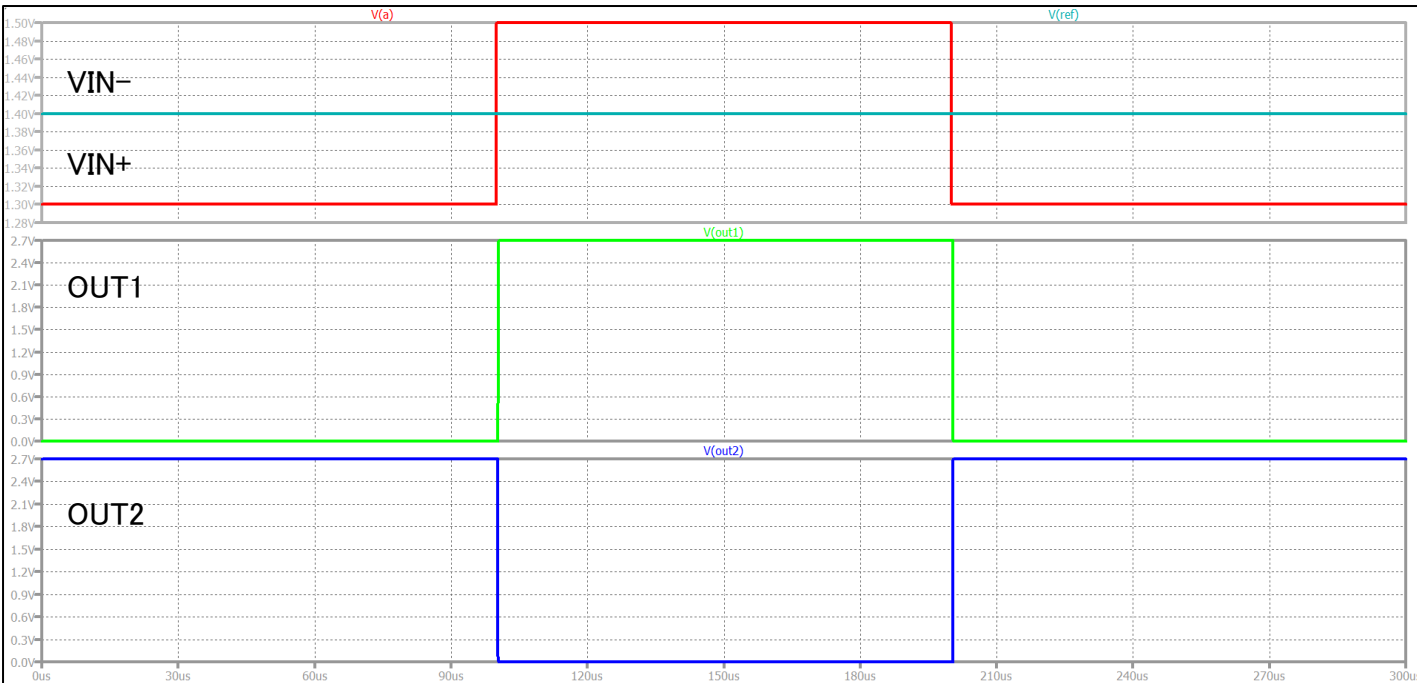
Explanatory notes — : simulated

transient characteristics (Vdd=5.0[V] Vss=0.0[V] Vin=+/-100[mV])



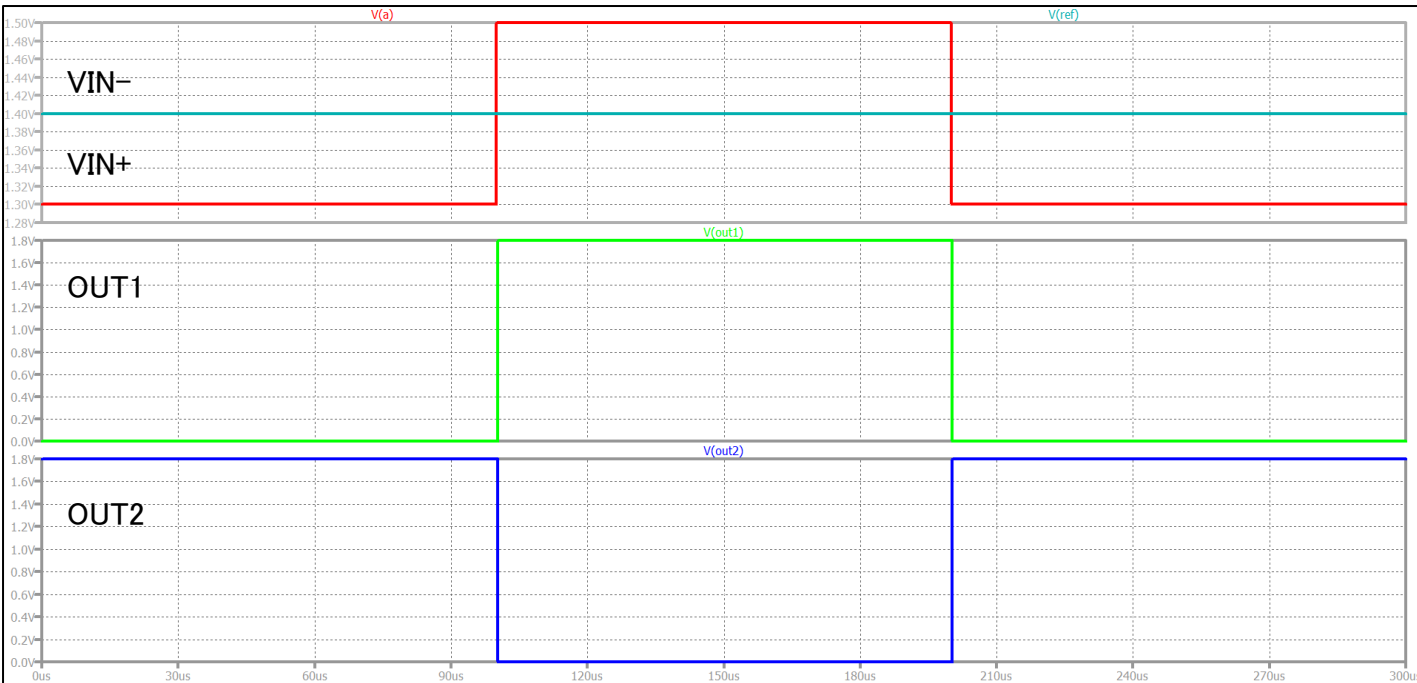
Simulation results are following.
Explanatory notes — : simulated

transient characteristics (Vdd=2.7[V] Vss=0.0[V] Vin=+/-100[mV])



Simulation results are following.
Explanatory notes — : simulated

transient characteristics (Vdd=1.8[V] Vss=0.0[V] Vin=+/-100[mV])



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