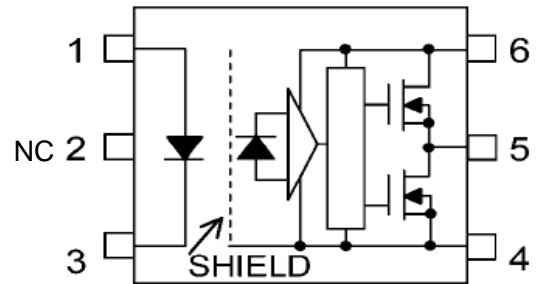


ADS Model

Photocoupler IC Output

TOSHIBA

TLP5701



Model Information

Model An original macro model
Call Name MDC_TLP5701_AD
Pin Assign 1:Anode 3:Cathode 4:GND 5:VO 6:VCC
File List Model Library MDC_TLP5701_AD.zip
 Model Report MDC_TLP5701_AD.pdf (this file)

Verified Simulator Version ADS version 2022 Update 1
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2017-03-17 Rev.4.0
- Product name TLP5701
- Company name Toshiba Corporation
- Characteristics IfVf[Temp],IcclTemp[Vcc],IcchTemp[Vcc],VolTemp[Vcc],VohTemp[Vcc],SwitchingWaveform

Simulation Range

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

Item	Range			Unit
	Min.		Max.	
Temperature	-55	to	125	deg C

Photo coupler

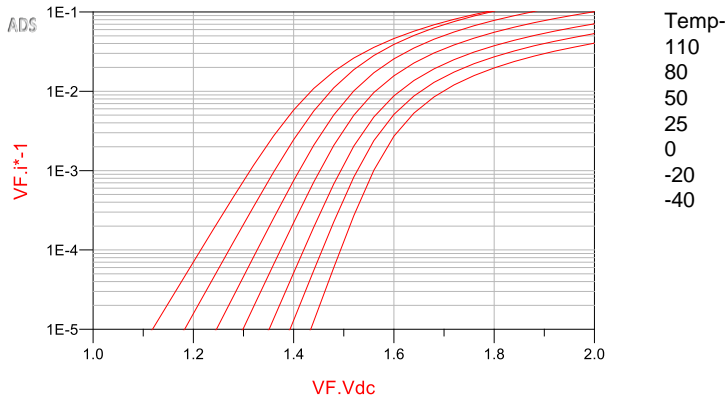
○ : Implemented
 × : Not Implemented
 — : Not applicable

Model Functions Table
RANK=1

Functions	RANK	Implemented
IF-VF-Temp	1	○
Iccl-Temp-Vcc	1	○
Icch-Temp-Vcc	1	○
Vol-Temp-Vcc	1	○
Voh-Temp-Vcc	1	○
Vol-Iop-Temp	1	—
Vohvcc-Ioph-Temp	1	—
Switching	1	○

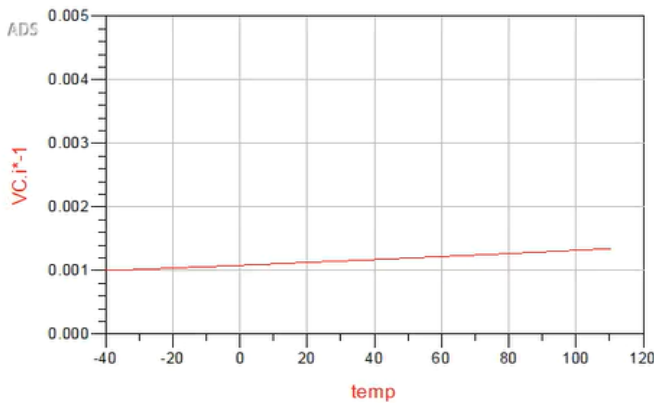
Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]



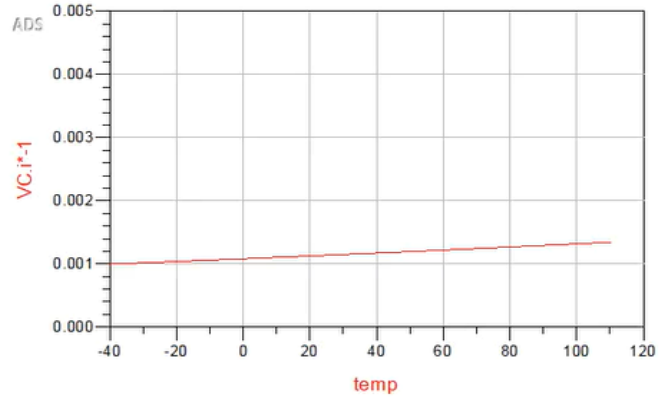
IcclTemp[Vcc]

if = 0A, vcc=30V



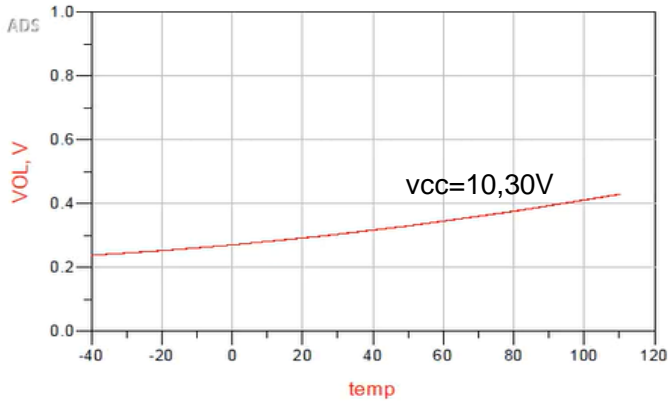
IcchTemp[Vcc]

if = 0.001A, vcc=30V



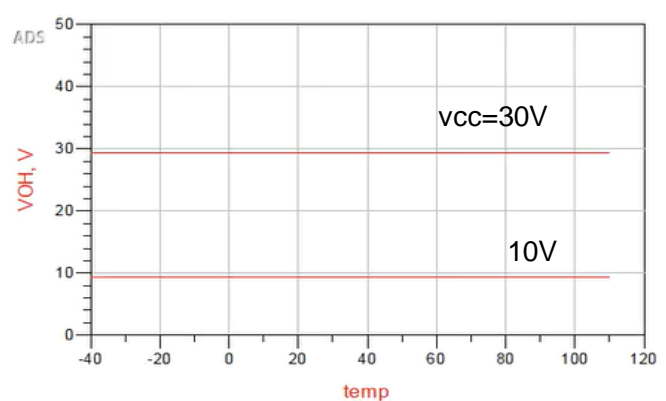
VoITemp[Vcc]

vf = 0.8V, io = 0.1A



VohTemp[Vcc]

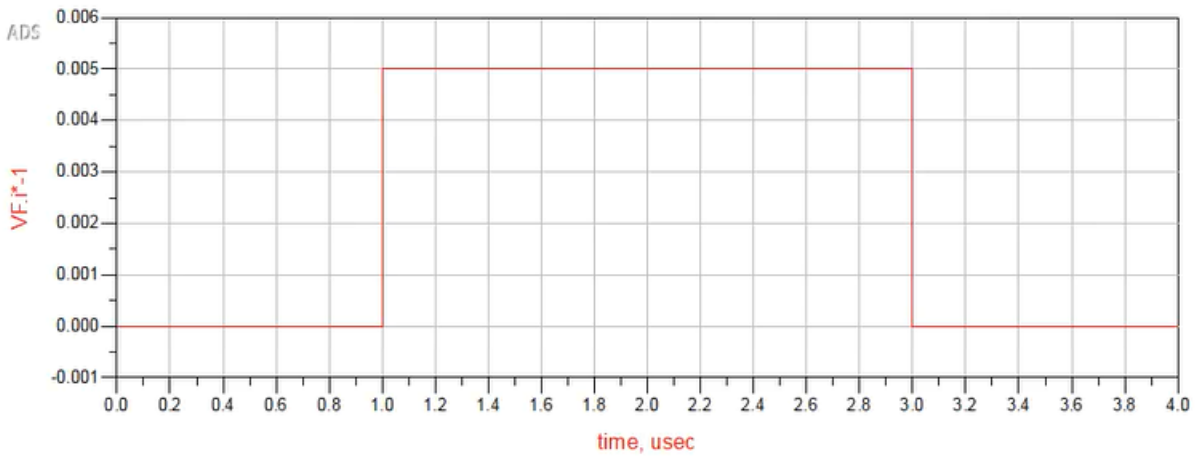
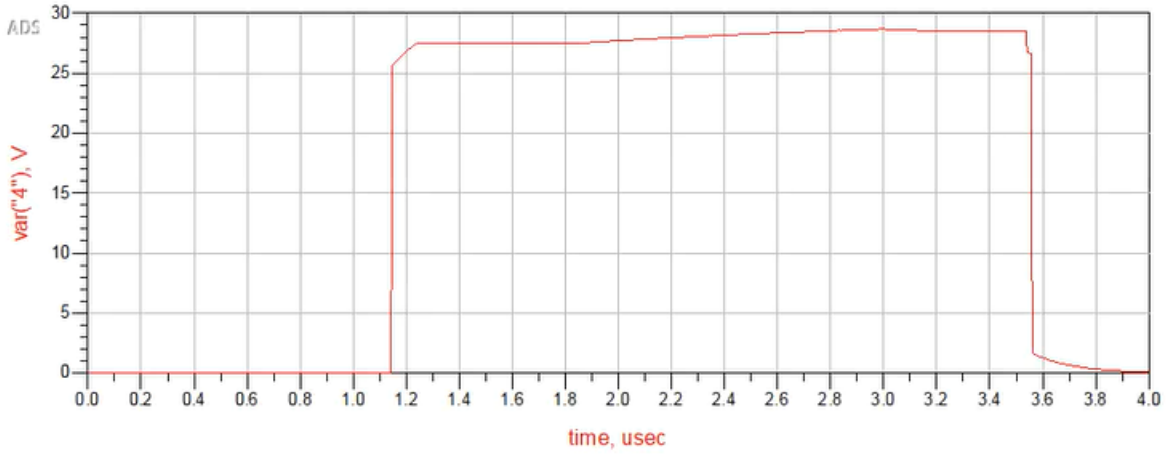
if = 0.005A, io = -0.001A



Simulation results are following.
Explanatory notes — : simulated

Switching Waveform (Up : OUTPUT Down : INPUT)

if = 0.005A, vcc = 30V, temp = 25degC Rg=47ohm



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