

# PSpice Model

## Photocoupler IC Output

### TOSHIBA

### TLP350HF

#### Model Information

**Model** An original macro model  
**Call Name** MDC\_TLP350HF\_PS  
**Pin Assign** 1:Anode 3:Cathode 4:GND 5:VO 6:VCC  
**File List** Model Library MDC\_TLP350HF\_PS01.lib  
 Model Report MDC\_TLP350HF\_PS.pdf (this file)

**Verified Simulator Version** PSpice version 16.6  
**Note**

#### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.8.0
- Product name TLP350HF
- Company name Toshiba Corporation
- Characteristics IfVf[Temp],IfIhTemp[Vcc],IcclTemp[Vcc],IcchTemp[Vcc],Vollopl[Temp],Vohvccloph[Temp],SwitchingTemp,SwitchingIf,SwitchingVcc

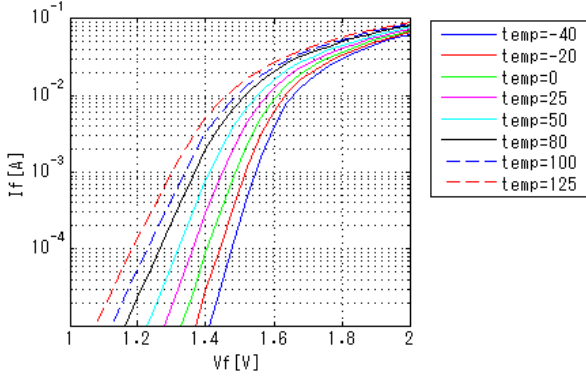
#### Simulation Range

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	-40	to	125	deg C

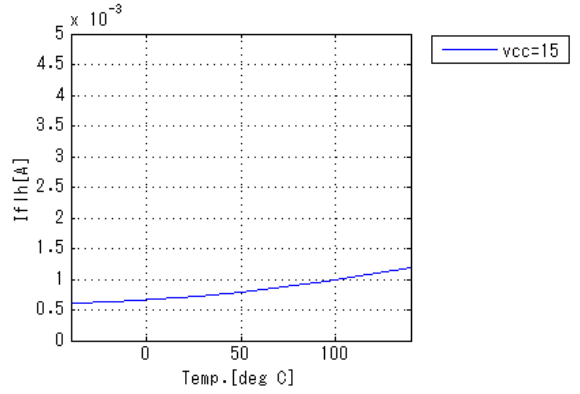
Simulation results are following.  
 Explanatory notes — : simulated

**IfVf[Temp]**



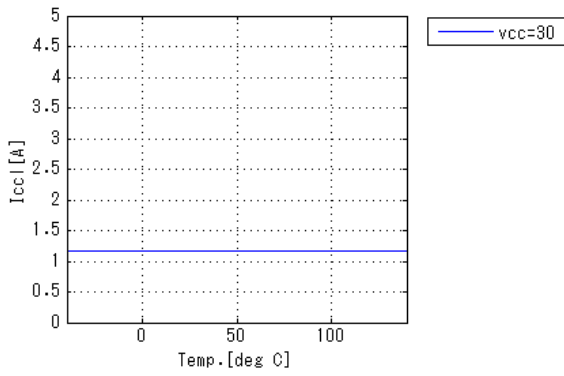
**IfIhTemp[Vcc]**

$V_o = 1V$



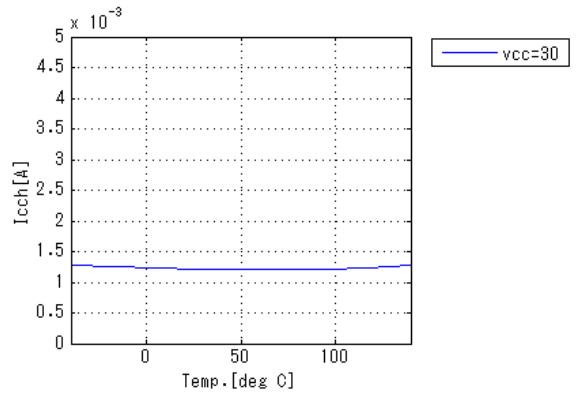
**IccITemp[Vcc]**

$I_f = 0A$



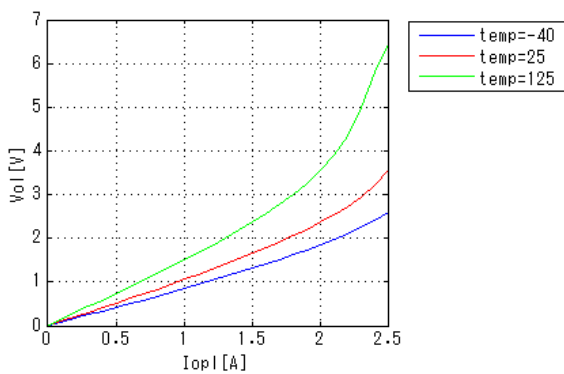
**IcchTemp[Vcc]**

$I_f = 0.01A$



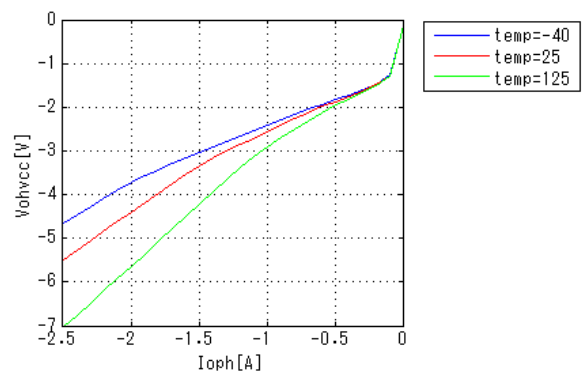
**VolIopI[Temp]**

$V_{cc} = 15V, I_f = 0A$



**VohvccIoph[Temp]**

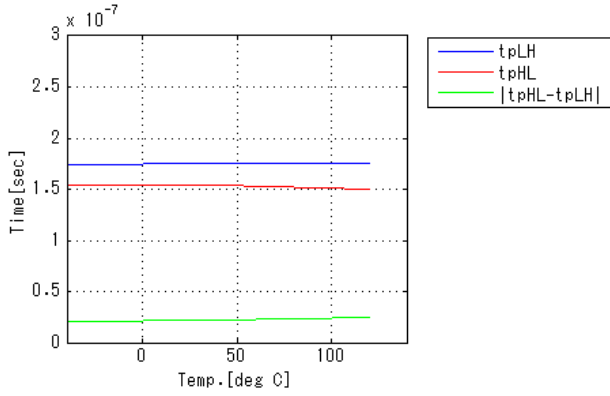
$V_{cc} = 15V, I_f = 0.005A$



Simulation results are following.  
 Explanatory notes — : simulated

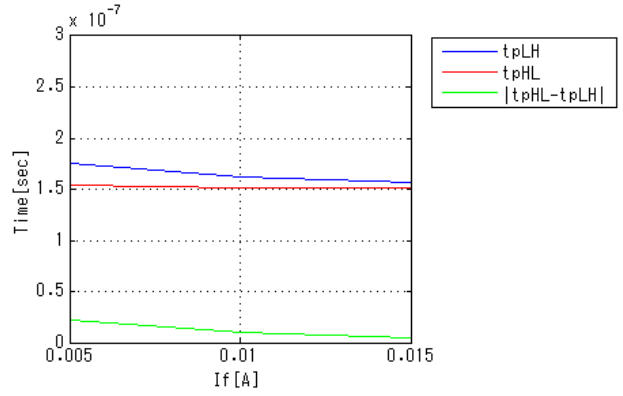
**SwitchingTemp**

Freq. = 25000Hz, Duty = 50%, If = 0.005A, Vcc = 30V



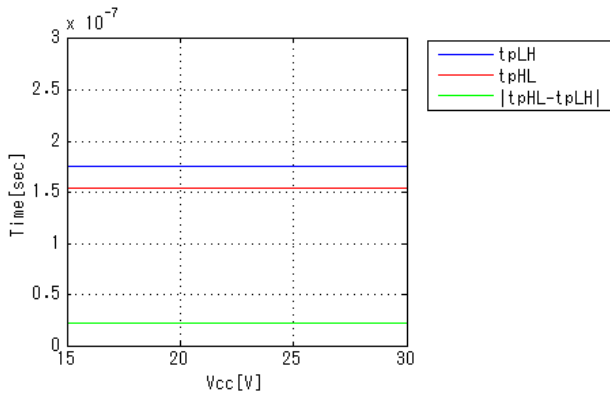
**SwitchingIf**

Freq. = 25000Hz, Duty = 50%, Vcc = 30V



**SwitchingVcc**

Freq. = 25000Hz, Duty = 50%, If = 0.005A



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