

# PSpice Model

## Photocoupler IC Output

### Broadcom

### ACPL-K34T

#### Model Information

**Model** An original macro model  
**Call Name** MDC\_ACPL-K34T\_PS  
**Pin Assign** 1:Anode 3:Cathode 4:GND 5:VO 6:VCC  
**File List** Model Library MDC\_ACPL-K34T\_PS01.lib  
 Model Report MDC\_ACPL-K34T\_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 September 16, 2013
- Product name ACPL-K34T
- Company name Broadcom Ltd.
- Characteristics IfVf[Temp],IcchTemp[Vcc],IcclTemp[Vcc],VollopI[Temp],Voh vccloph[Temp],SwitchingTemp

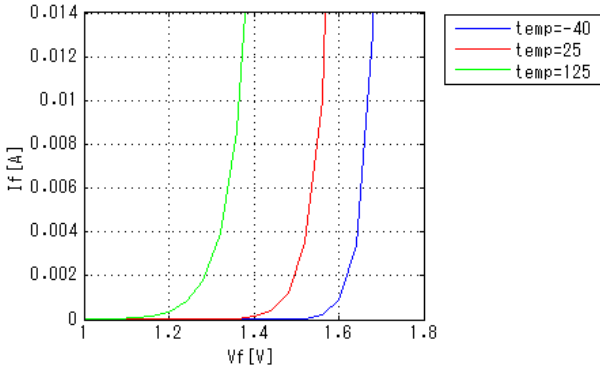
#### Simulation Range

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

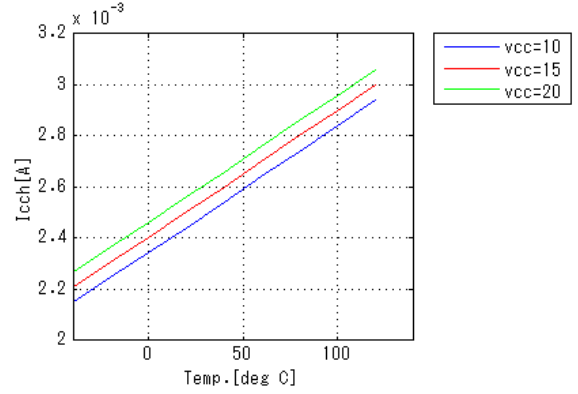
Simulation results are following.  
 Explanatory notes — : simulated

**IfVf[Temp]**



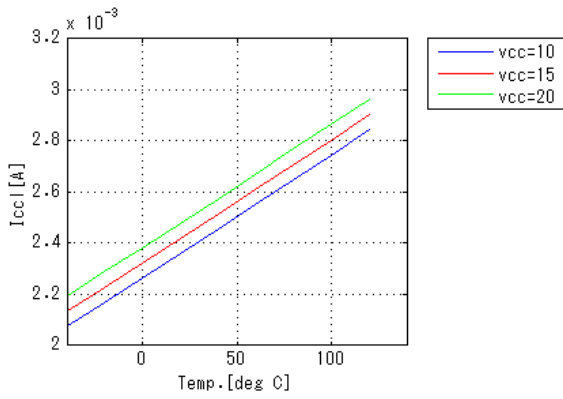
**IcchTemp[Vcc]**

$I_f = 0.01A$



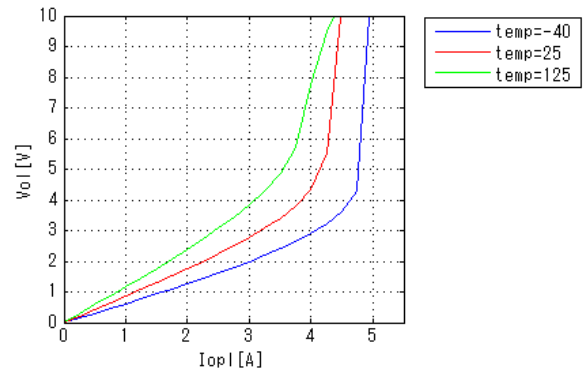
**IcciTemp[Vcc]**

$I_f = 0A$



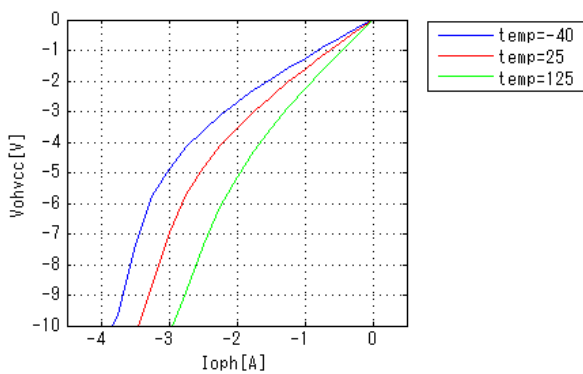
**Vollop[Temp]**

$V_{cc} = 10V, I_f = 0A$



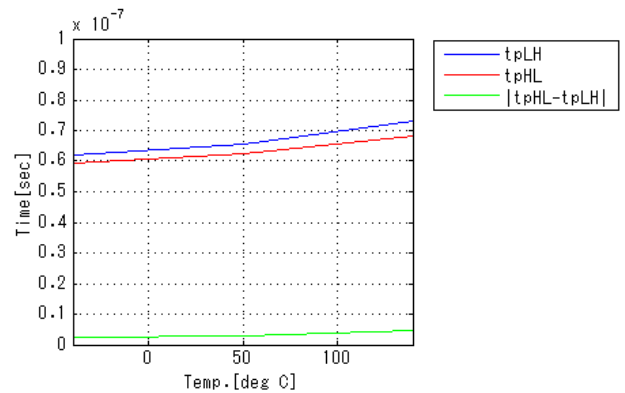
**Vohvccloph[Temp]**

$V_{cc} = 10V, I_f = 0.01A$



**SwitchingTemp**

Freq. = 200000Hz, Duty = 50%,  $I_f = 0.0142A, V_{cc} = 10V$



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