

LTspice Model

Photocoupler Tr. Output

TOSHIBA

TLP109

Model Information

Model An original macro model
Call Name MDC_TLP109_LT
Pin Assign 1:Anode 3:Cathode 4:Emitter 5:Collector(Output) 6:Vcc
File List Model Library MDC_TLP109_LT01.lib
 Model Report MDC_TLP109_LT.pdf (this file)

Verified Simulator Version LTspice version XVII
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2015-10-19
- Product name TLP109
- Company name Toshiba Corporation
- Characteristics IfVf[Temp],IoIf[Vcc],IoVo[If],hFEIf[Temp],hFETemp[If]

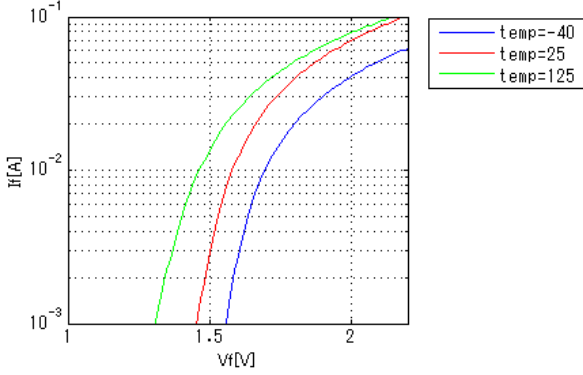
Simulation Range

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

Item	Range			Unit
	Min.		Max.	
Forward current (DC)	0	to	0.02	A
Collector-emitter voltage (DC)	0	to	30	V
Temperature	-55	to	125	deg C

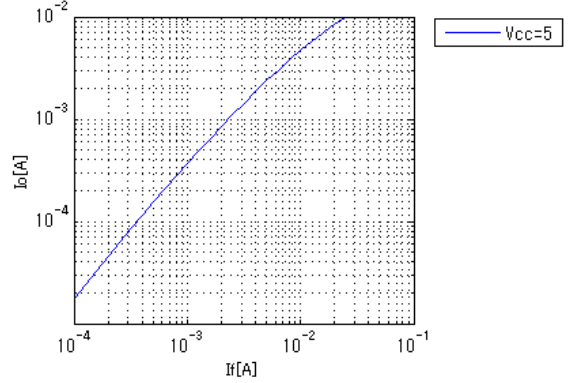
Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]



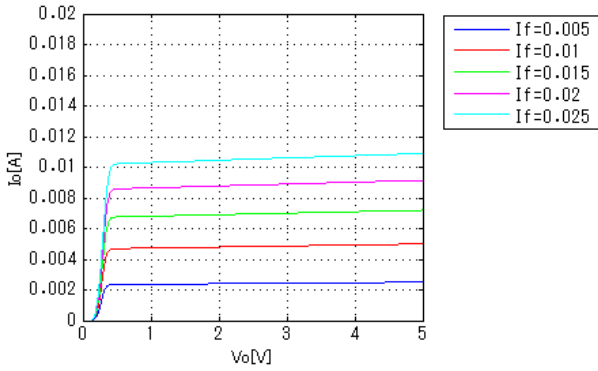
IoIf[Vcc]

Vo = 0.4V



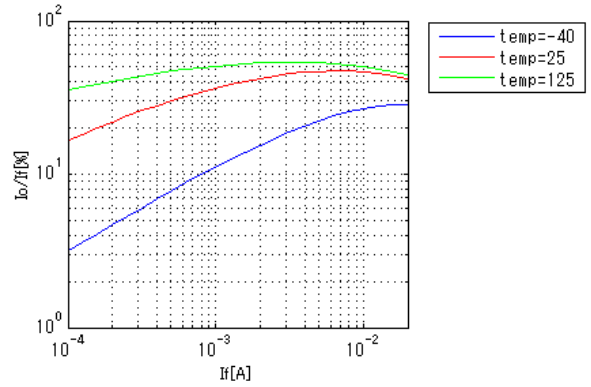
IoVo[If]

Vcc = 5.0V



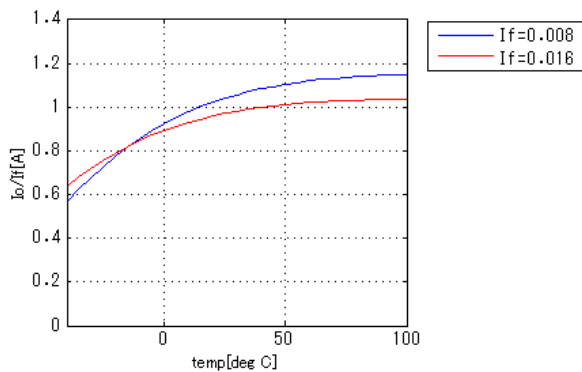
hFEIf[Temp]

Vcc = 5.0V, Vo = 0.4V



hFETemp[If]

Vcc = 4.5V, Vo = 0.4V



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