

LTspice Model

Photocoupler Tr. Output

EVERLIGHT

EL817C-F

Model Information

Model An original macro model
Call Name MDC_EL817C-F_LT
Pin Assign 1:Anode 2:Cathode 3:Emitter 4:Collector
File List Model Library MDC_EL817C-F_LT01.lib
 Model Report MDC_EL817C-F_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 Nov 1,2016 Rev.16
- Product name EL817C-F
- Company name EVERLIGHT ELECTRONICS CO., LTD.
- Characteristics IfVf[Temp],Ic/IfIf[Vce],Ic/IfTemp[If],IdarkTemp[Vce],VcesatIc[If],SwitchingRI[Tname],SwitchingWaveform,CinVin,CioVio

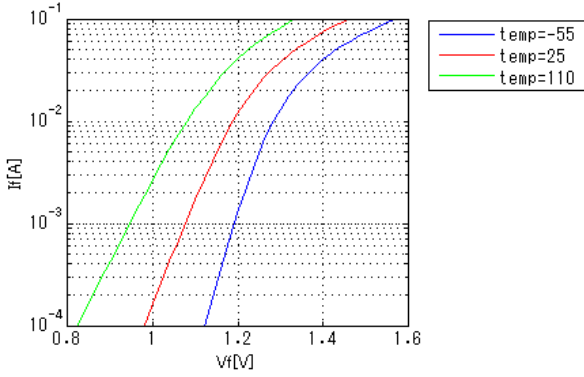
Simulation Range

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	60m	A
Collector-emitter voltage (DC)	0	to	35	V
Temperature	-55	to	125	deg C

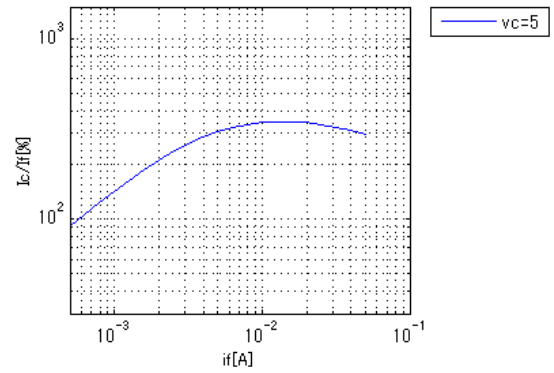
Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]



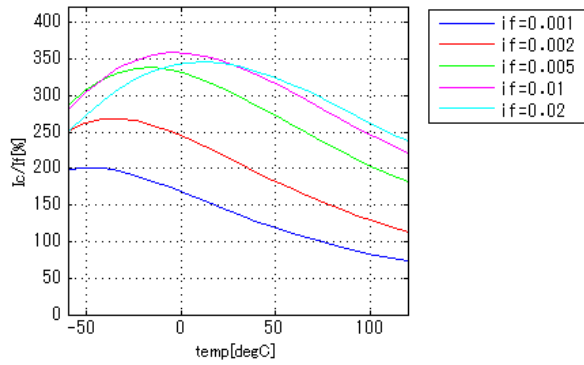
Ic/If [Vce]

vce = 5V



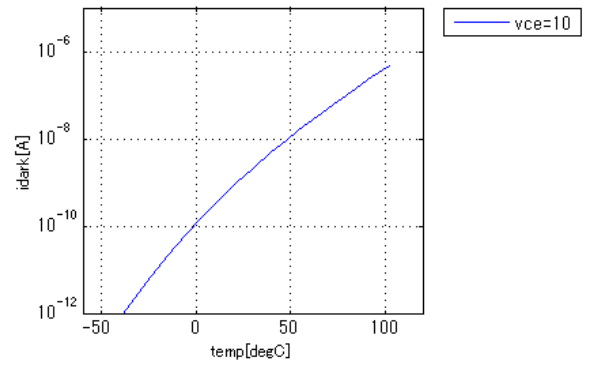
Ic/IfTemp [If]

vce = 5V



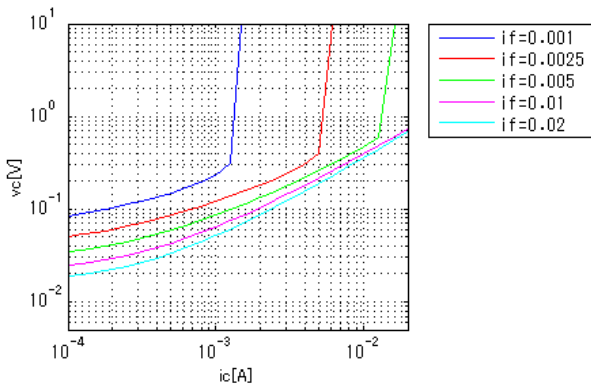
IdarkTemp [Vce]

vce = 10V



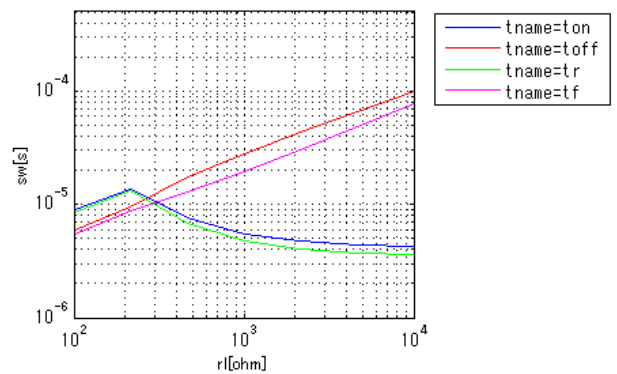
VcesatIc [If]

temp = 25degC



SwitchingRI [Tname]

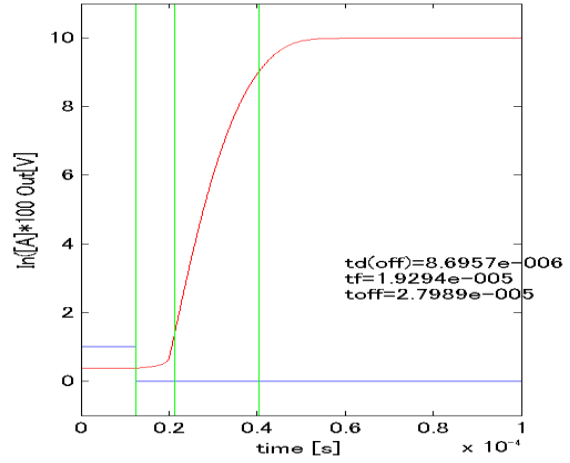
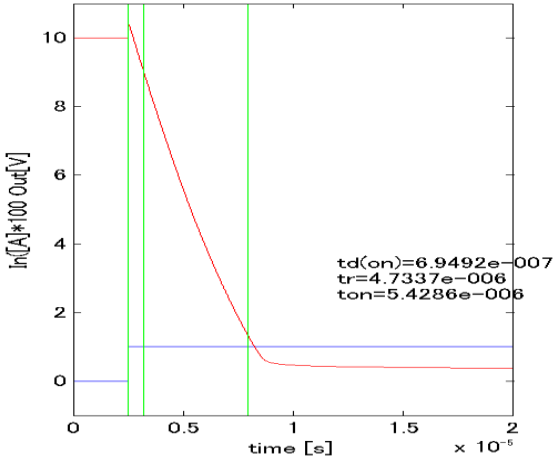
if = 0.01A, vcc = 10V



Simulation results are following.
 Explanatory notes — : simulated

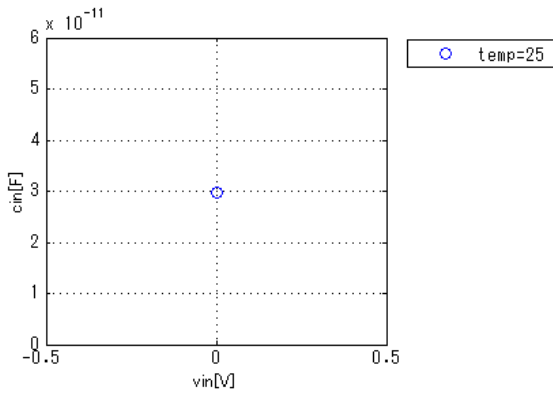
SwitchingWaveform

Blue : INPUT Red : OUTPUT RLOAD = 1000



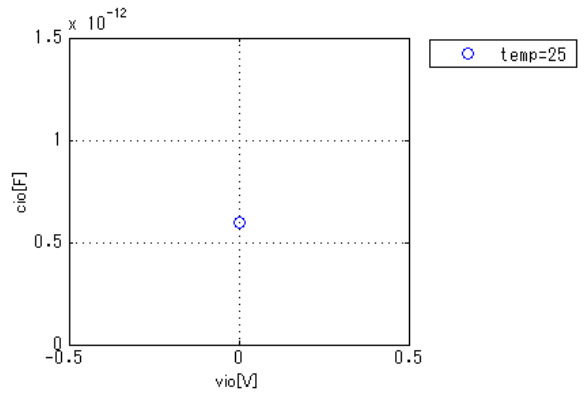
CinVin

freq = 1000000Hz



CioVio

freq = 1000000Hz



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