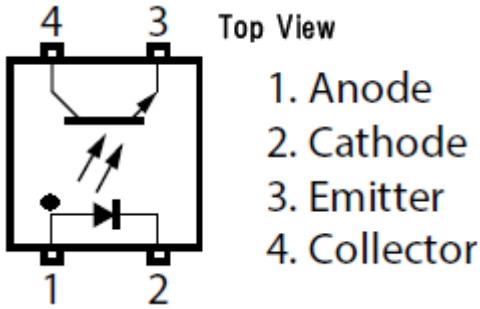
ADS Model
Photocoupler Tr. Output
RENESAS
PS2701A-1



Model Information

Model	An original macro model	
Call Name	MDC_PS2701A_1_AD	
Pin Assign	1:Anode 2:Cathode 3:Emitter 4:Collector	
File List	Model Library	MDC_PS2701A_1_AD.zip
	Model Report	MDC_PS2701A-1_AD.pdf (this file)
Verified Simulator Version		ADS version 2020 Update2
Note		

References

The information which was used for modeling is as follow:

[Data Sheet]

- ●Date/Version: Rev.6.02 May 14, 2020
- ●Product name: PS2701A-1
- ●Company name: Renesas Electronics Corporation
- ●Characteristics: IfVf[Temp],IcVce[If],IcTemp[Vce],IcVce[If]2,NormCTRTemp[If],CTRIf[Vce],SwitchingRL[Tname],SwitchingRL[Tname]2,NormGainFreq[RL],NormGainFreq[RL],SwitchingWaveform

Simulation Range

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

Item	Condition	Unit
Temperature	25	deg C

Photo coupler

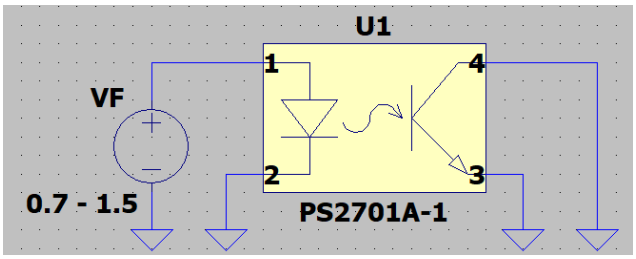
○ : Implemented
× : Not Implemented
— : Not applicable

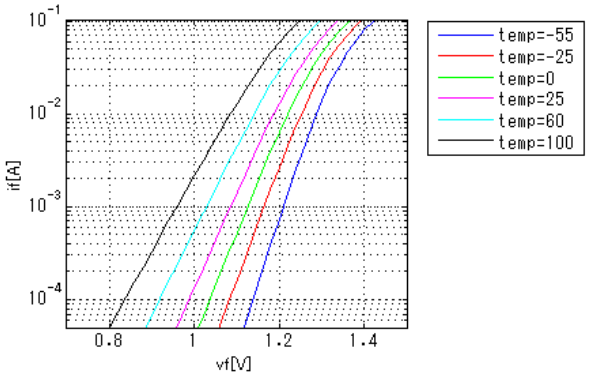
Model Functions Table

	RANK=1	
Functions	RANK	Implemented
IF-VF-Temp	1	○
Iout-Vout-IF	1	○
Iout-IF	1	—
Iout/IF-IF(CTR-IF)	1	○
CJ-VR	1	—
Propagation delay	1	—
Switching（Typ.）	1	○
Gain	1	○

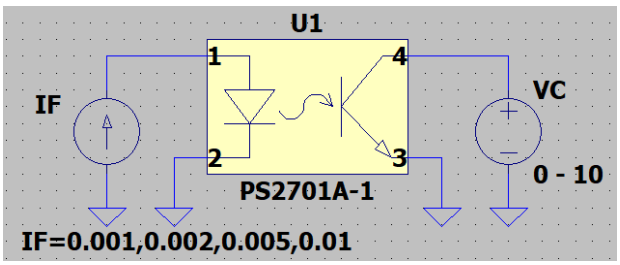
Simulation results are following.
Explanatory notes — : simulated

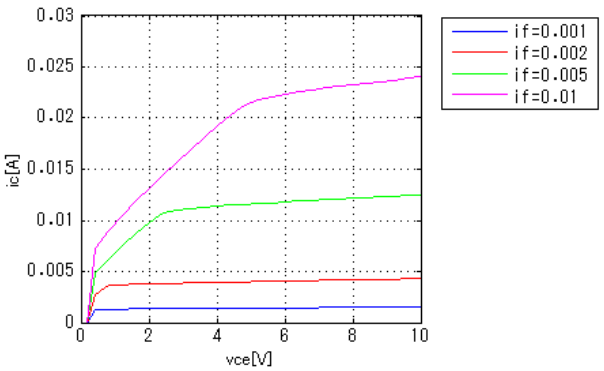
IfVf[Temp]



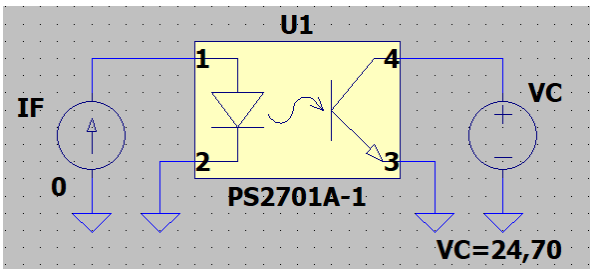


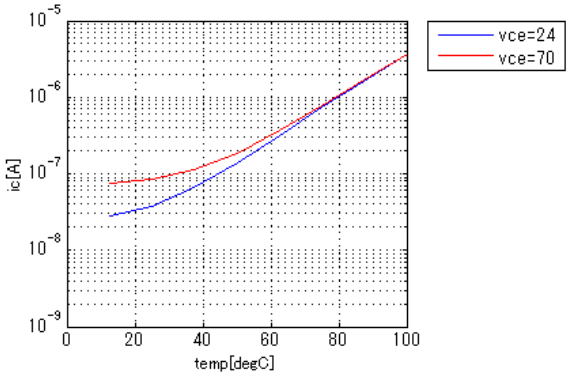
IcVce[If]
temp = 25degC





IcTemp[Vce]
IF = 0A

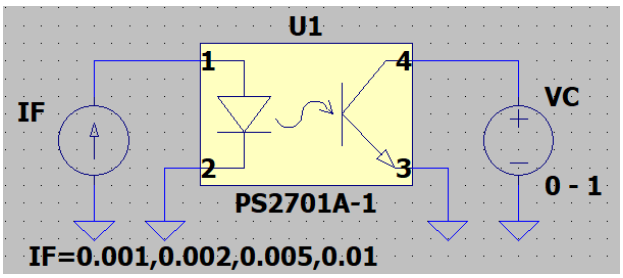


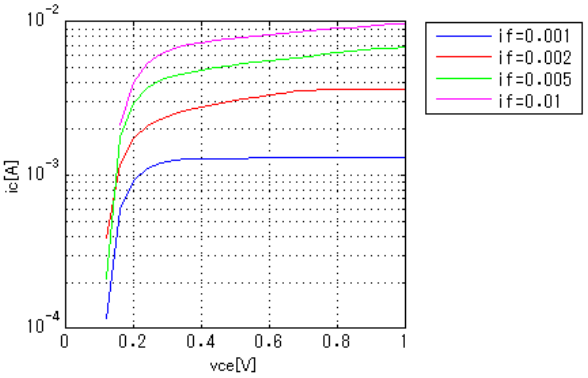


Simulation results are following.
Explanatory notes — : simulated

IcVce[If]2

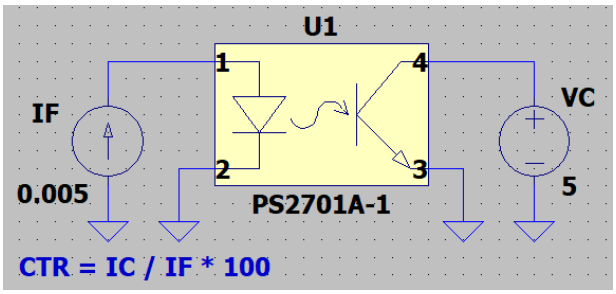
temp = 25degC

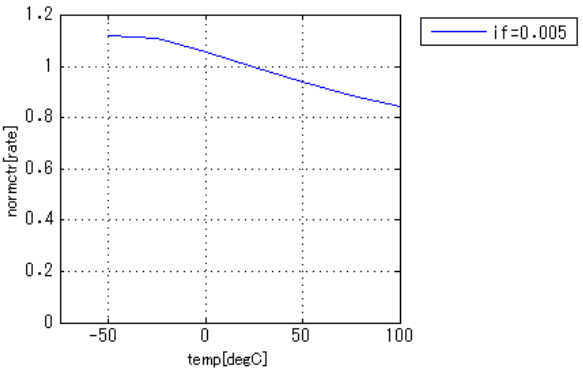




NormCTRTemp[If]

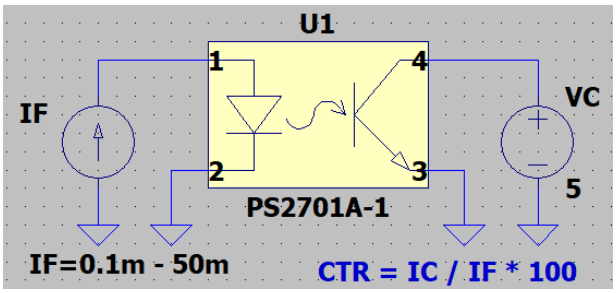
Vce = 5V

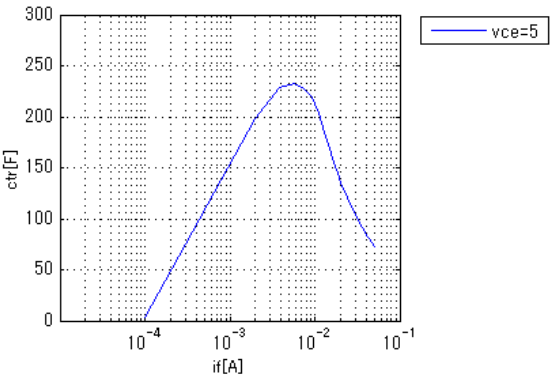




CTRIf[Vce]

Vce = 5V

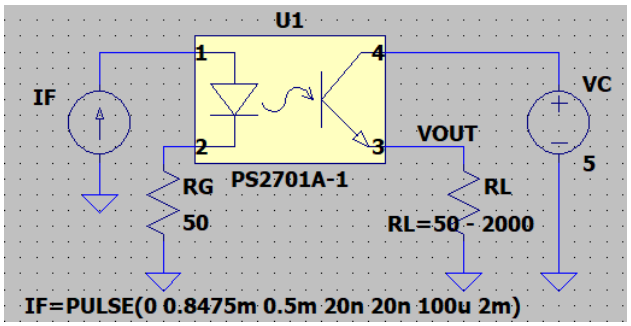


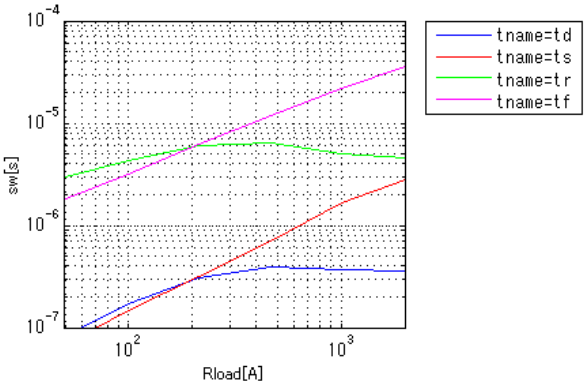


Simulation results are following.
Explanatory notes — : simulated

SwitchingRL[Tname]

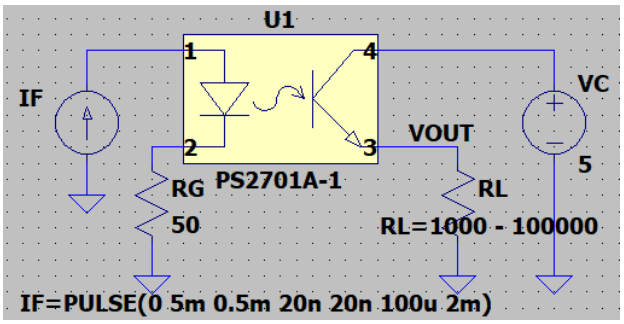
if = 0.0008475A, vcc = 5V, temp = 25degC

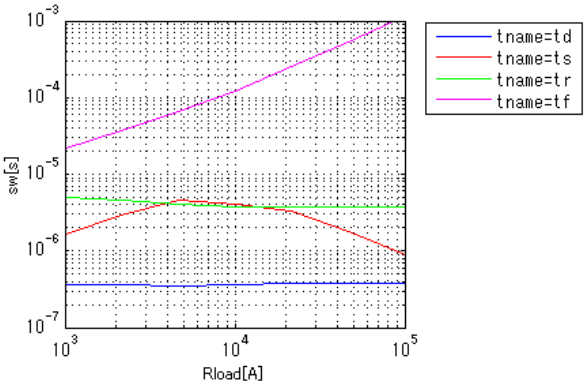




SwitchingRL[Tname]2

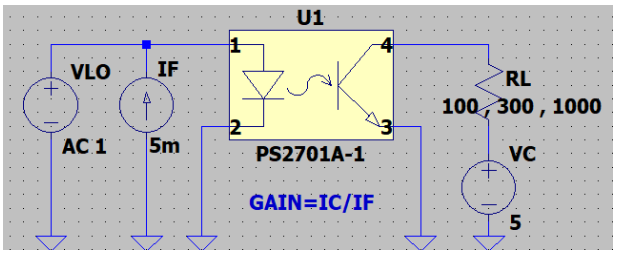
if = 0.005A, vcc = 5V, temp = 25degC

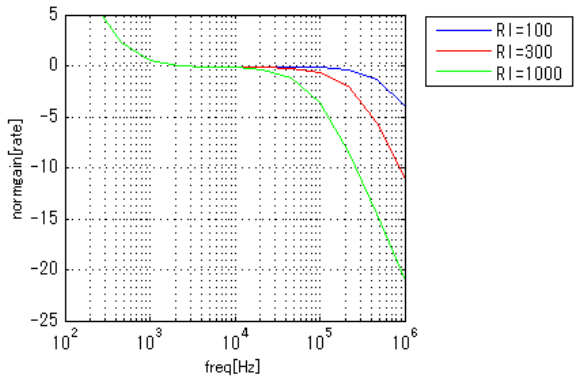




NormGainFreq[RL]

if = 0.005A, vce = 5V

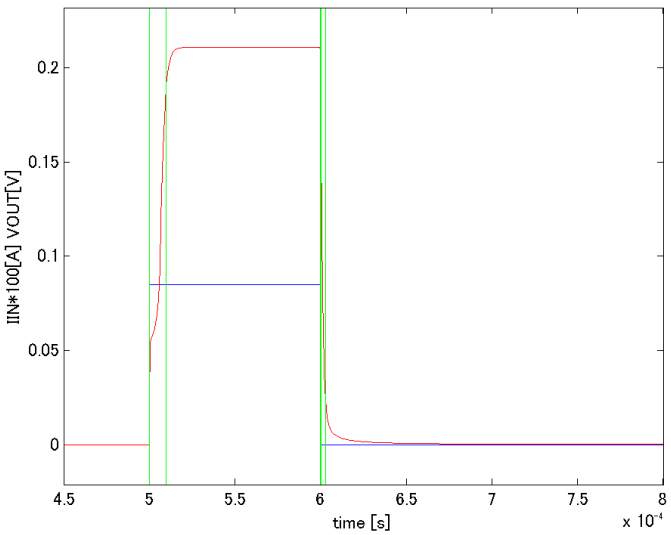




Simulation results are following.
Explanatory notes — : simulated

SwitchingWaveformn (INPUT : Blue OUTPUT : Red)

if = 0.0008475A, vcc = 5V, temp = 25degC, RL = 100 ohm



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