

PSpice Model Photocoupler RENESAS PS2802-1

Model Information

Model A macro model
Call Name MDC_PS2802-1_PS
Pin Assign 1:Anode 2:Cathode 3:Emitter 4:Collector
File List Model Library MDC_PS2802-1_PS01.lib
Model Report MDC_PS2802-1_PS.pdf (this file)
Verified Simulator Version OrCAD Ver17.2
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Aug 22, 2022/ R08DS0156EJ0102 Rev.1.02
- Product name PS2802-1
- Company name RENESAS

[Characteristics listed]

- Characteristics IFVF, IcVce, IcVce(sat),CTR, Switching

Simulation Condition

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

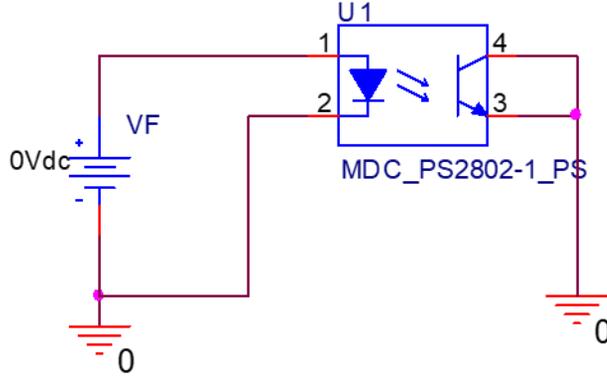
○ : Implemented
 × : Not Implemented
 — : Not applicable

Model Functions Table

RANK=1

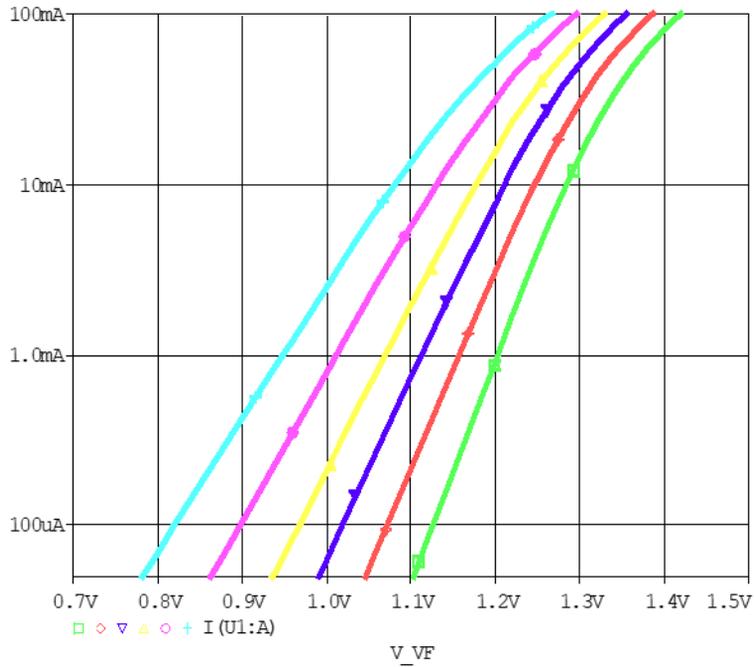
Functions	RANK	Implemented
IF-VF-Temp	1	○
Ic-Vce-IF	1	○
Iout-IF	1	—
CTR-IF	1	○
CJ-VR	1	—
Propagation delay	1	—
Switching (Typ.)	1	○

IF-VF-Temp Testbench

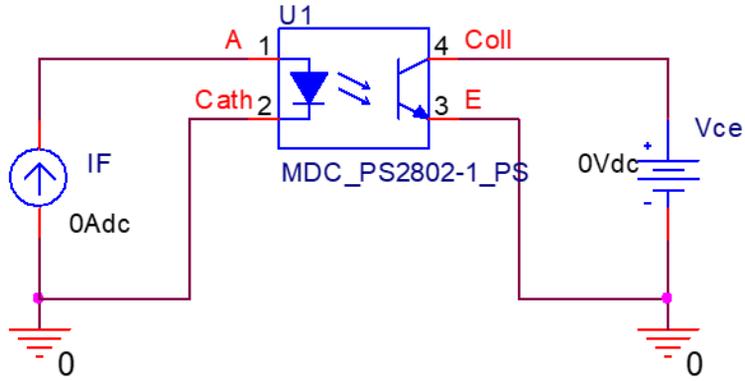


Simulation results are following.
 Explanatory notes — : simulated

IF-VF-Temp

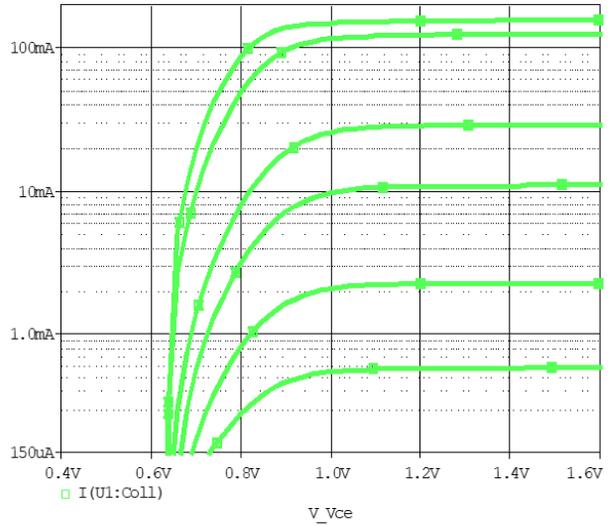
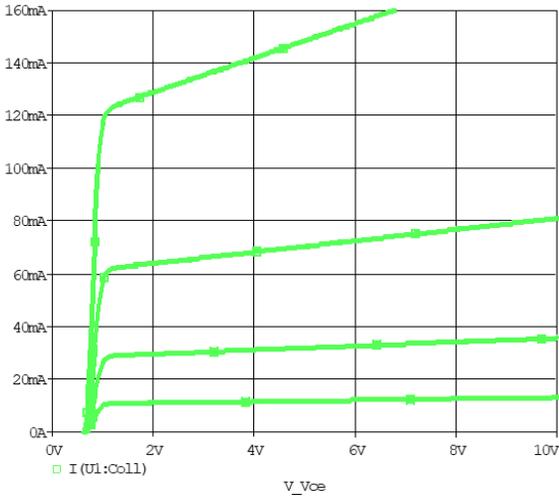


Ic-Vce-IF Testbench

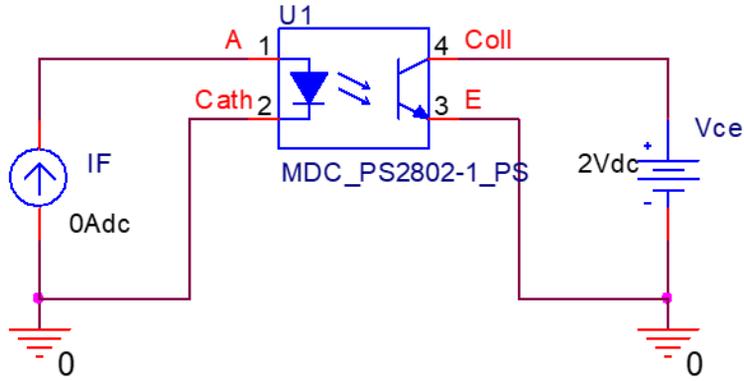


Simulation results are following.
 Explanatory notes — : simulated

Ic-Vce-IF

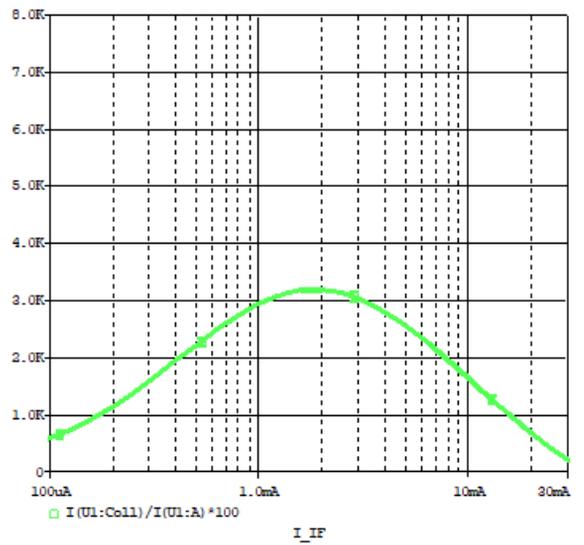
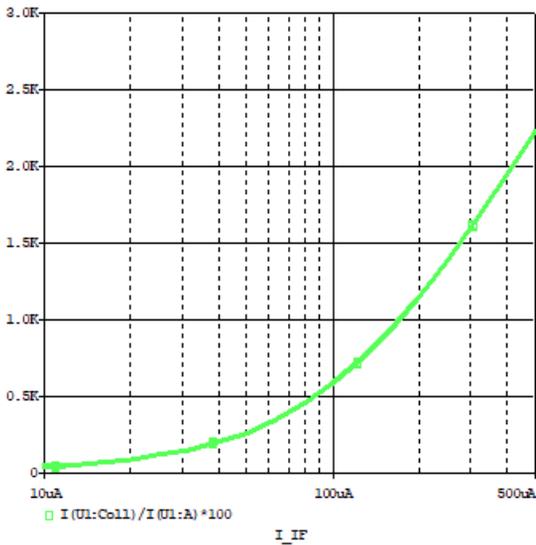


CTR-IF Testbench

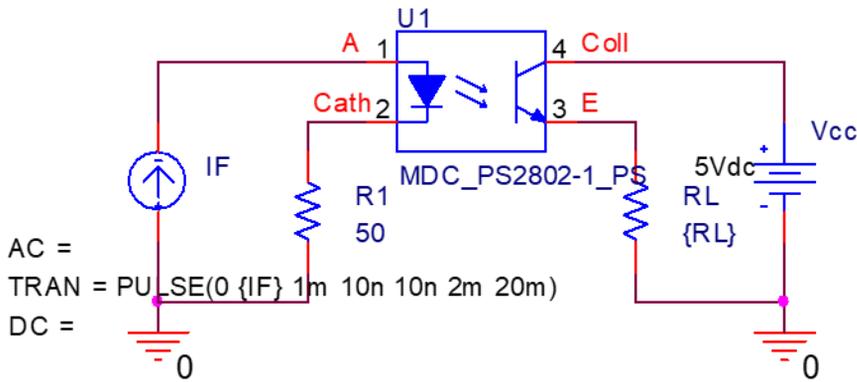


Simulation results are following.
 Explanatory notes — : simulated

CTR-IF



Switching Testbench



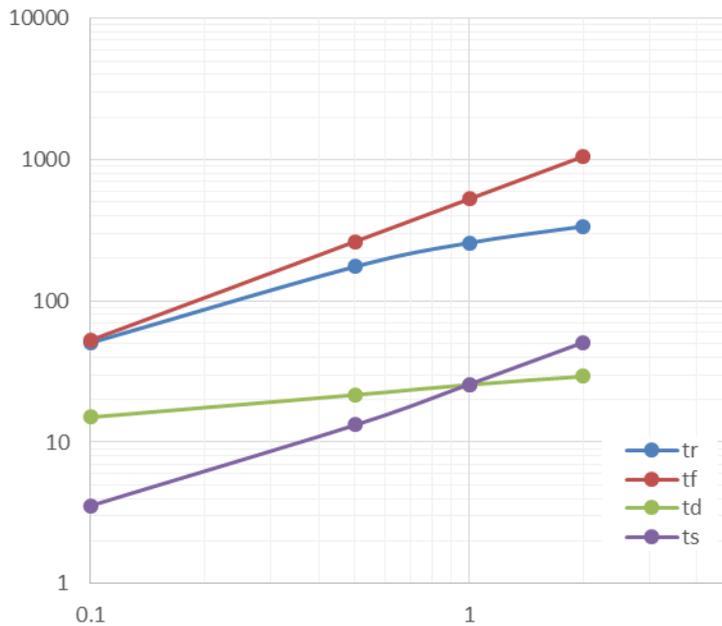
PARAMETERS:

RL = 100
IF = 0.182m

RL (Ω)	IF (mA)
100	0.182
500	0.185
1k	0.187
2k	0.189

Simulation results are following.
Explanatory notes — : simulated

Switching



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MoDeCH Inc.

Head Office

Location: 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail:model-on-support@modech.co.jp

URL:<http://www.modech.com/en/>