

# PSpice Model

## Other Device

### COPAL

### PRCP-NSMF012-2E



### Model Information

**Model** An original macro model  
**Call Name** MDC\_PRCP-NSMF012-2E\_PS  
**Pin Assign** 1:1 2:2  
**File List** Model Library MDC\_PRCP-NSMF012-2E\_PS01.lib  
 Model Report MDC\_PRCP-NSMF012-2E\_PS.pdf (this file)

**Verified Simulator Version** PSpice version 17.2  
**Note**

### References

The information which was used for modeling is as follow :

[Data Sheet]

- Date/Version Unknown
- Product name PRCP-NSMF012-2E
- Company name NIDEC COPAL CORPORATION
- Characteristics ResTemp[I<sub>f</sub>], I<sub>f</sub>V<sub>f</sub>[Temp], TripTimeWaveform

### Simulation Range

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

Item	Range			Unit
	Min.		Max.	
Temperature	-40	to	85	deg C

## Thermistor

○ : Implemented  
 × : Not Implemented  
 — : Not applicable

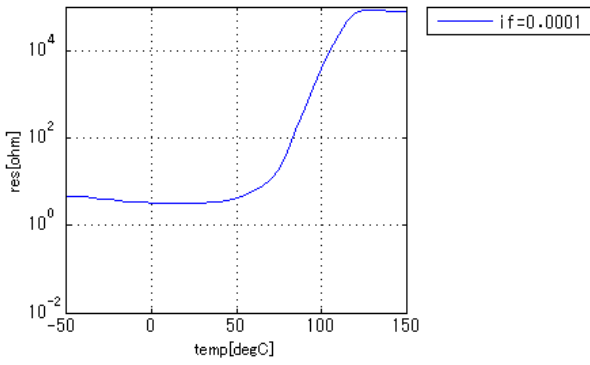
**Model Functions Table**
**RANK=1**

Functions	RANK	Implemented
Resistance-Temperature	1	○
Current-Voltage	1	○
Thermal time constant	1	○

Simulation results are following.  
 Explanatory notes — : simulated

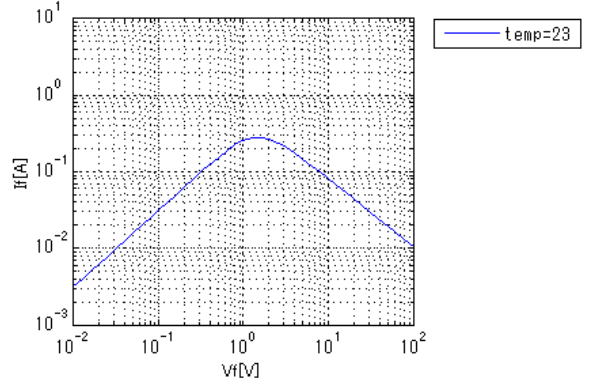
**ResTemp[If]**

(Rmin=1.35ohm Rmax1=8.50ohm at Temp=23degC)



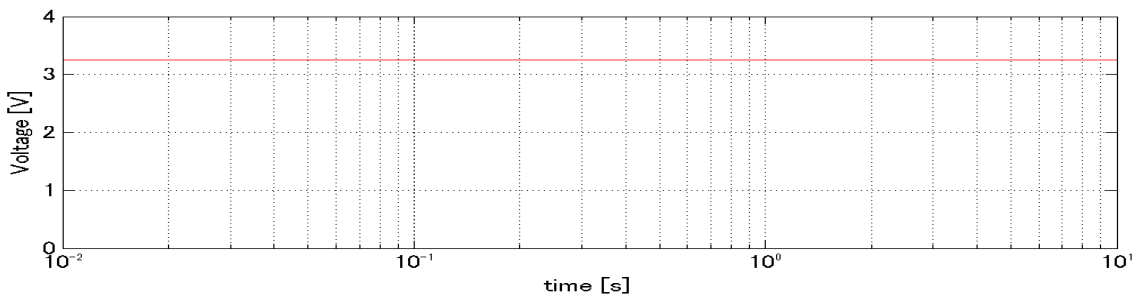
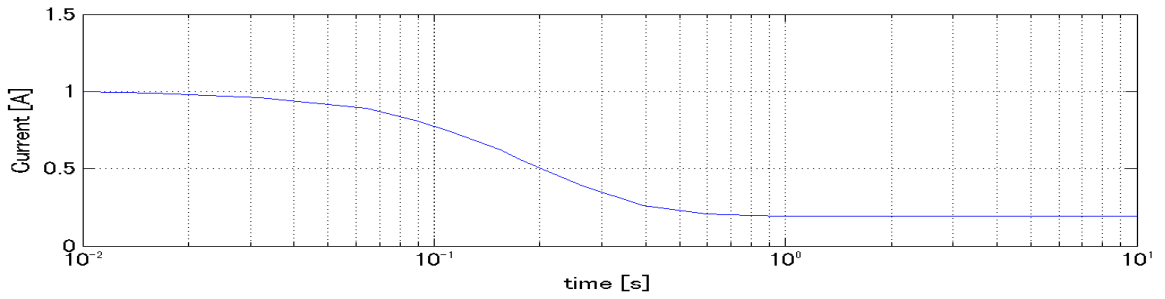
**IfVf[Temp]**

(Trip Current=0.29A)



**Trip Current Waveform**

Current=1.0A, Trip Time = 0.20sec (at Current\*1/2)



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