

# LTspice Model

## PTC Thermistor

### COPAL

### PRCP-NSMF075-2E



### Model Information

**Model** An original macro model  
**Call Name** MDC\_PRCP-NSMF075-2E\_LT  
**Pin Assign** 1:1 2:2  
**File List** Model Library MDC\_PRCP-NSMF075-2E\_LT01.lib  
 Model Report MDC\_PRCP-NSMF075-2E\_LT.pdf (this file)

**Verified Simulator Version** LTspice version XVII  
**Note**

### References

The information which was used for modeling is as follows:

[Data Sheet]

- Date/Version Unknown
- Product name PRCP-NSMF075-2E
- 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**

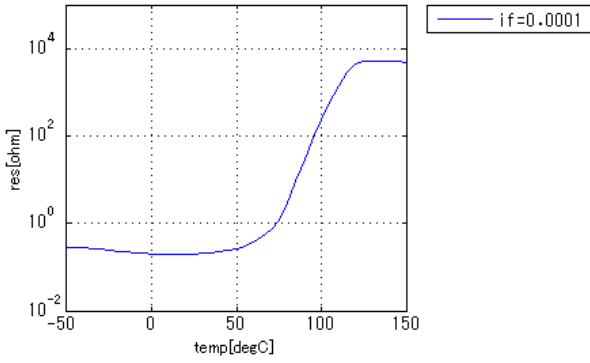
**RANK=1**

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

Simulation results are following.  
 Explanatory notes — : simulated

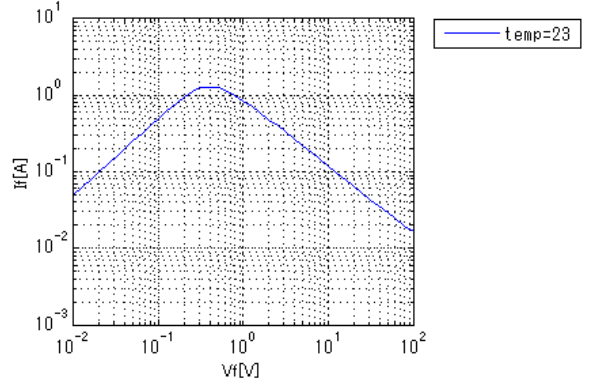
**ResTemp[If]**

(Rmin=0.10ohm Rmax1=0.40ohm at Temp=23degC)



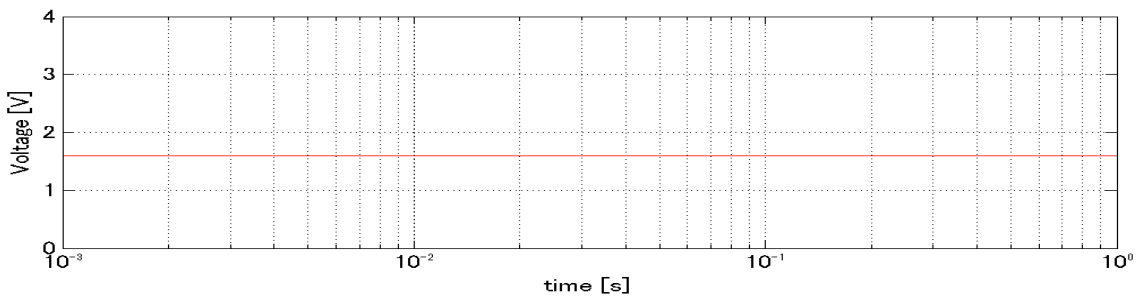
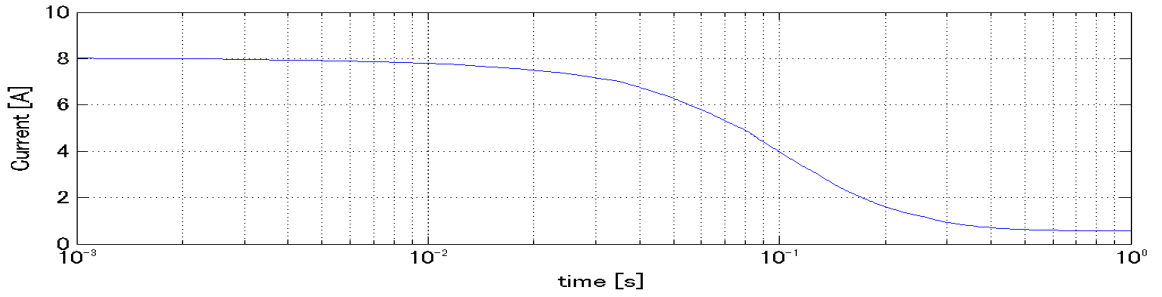
**IfVf[Temp]**

(Trip Current=1.50A)



**Trip Current Waveform**

Current=8.0A, Trip Time = 0.10sec (at Current\*1/2)



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