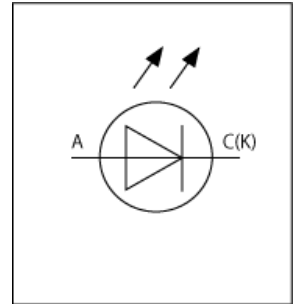


# PSpice Model

## Light Emitting Diode

### NICHIA

### NSSA146AT



### Model Information

**Model** A macro model based on general SPICE diode model  
**Call Name** MDC\_NSSA146AT\_PS  
**Pin Assign** 1:A 2:C  
**File List** Model Library MDC\_NSSA146AT\_PS01.lib  
 Model Report MDC\_NSSA146AT\_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 NSSA146AT
- Company name NICHIA CORPORATION
- Characteristics  $I_f[V(Temp)], V_f[V(Temp)], I_r[V(Temp)], SurgeWaveform$

### 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.	to	Max.	
Temperature	-40	to	110	deg C

## Diode

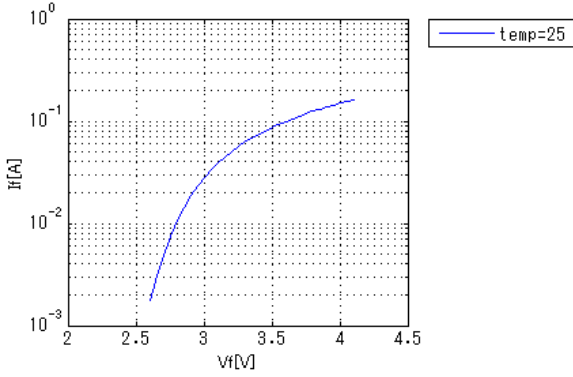
○ : Implemented  
× : Not Implemented  
— : Not applicable

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

Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	—
Reverse recovery characteristics	1	—
Zz-Iz	1	—
Rectification characteristics(Bridge)	1	—
Surge-Transient	1	○
tlp	1	—

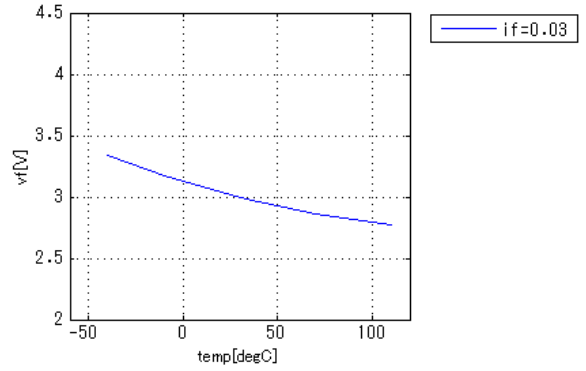
Simulation results are following.  
 Explanatory notes — : simulated

**IfVf[Temp]**

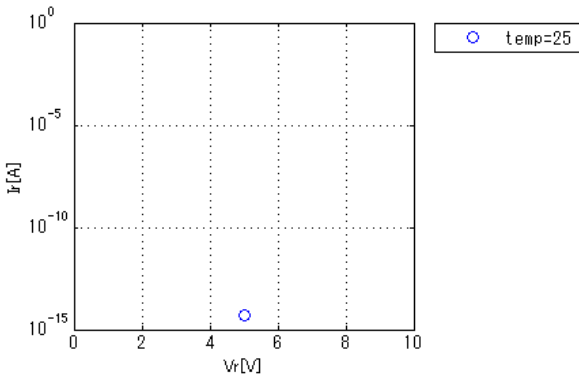


**VfTemp[If]**

if = 0.03



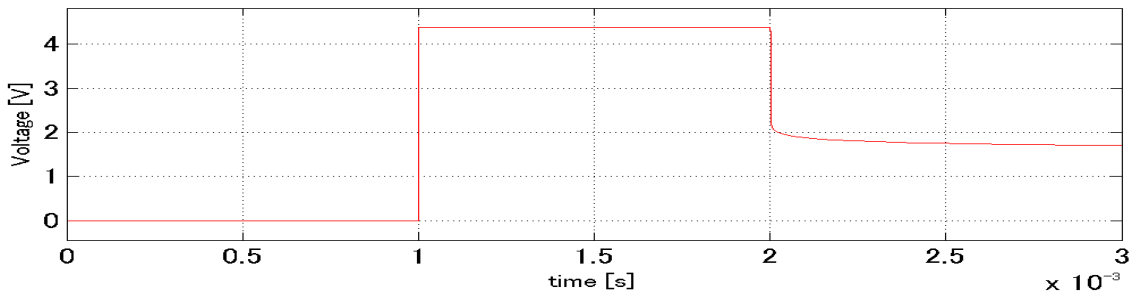
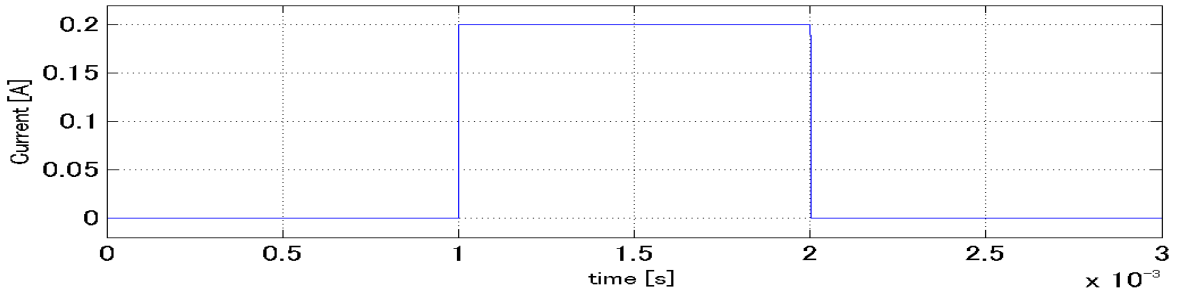
**IrVr[Temp]**



Simulation results are following.

Explanatory notes — : simulated

### Surge Current Waveform ( Forward $t_p=1\text{ms}$ )



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