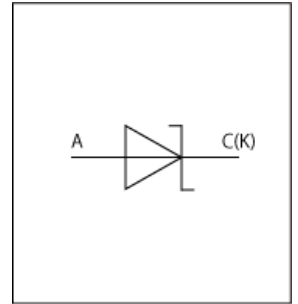


# PSpice Model

## TVS

### SHINDENGEN

### ST04-24F1



### Model Information

**Model** A macro model based on general SPICE diode model  
**Call Name** MDC\_ST04-24F1\_PS  
**Pin Assign** 1:C 2:A  
**File List** Model Library MDC\_ST04-24F1\_PS01.lib  
 Model Report MDC\_ST04-24F1\_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 Rev.01(2020.01)
- Product name ST04-24F1
- Company name Shindengen Electric Manufacturing Co., Ltd.
- Characteristics VrIr[Temp],BvTemp,IrTemp[Vr],CjVr,CapacitanceFreq[Vr],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.		Max.	
Breakdown voltage	24	to	24	V
Temperature	-55	to	175	deg C

**Diode**

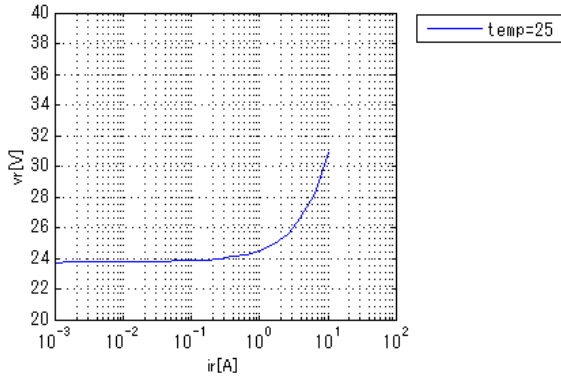
○ : Implemented  
× : Not Implemented  
— : Not applicable

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

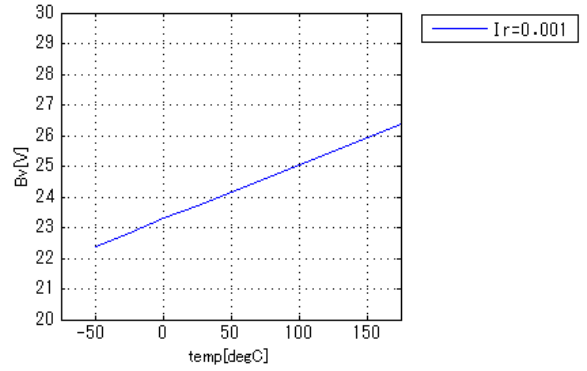
Functions	RANK	Implemented
IF-VF(Temp)	1	—
IR-VR(Temp)	1	○
Capacitance	1	○
Reverse recovery characteristics	1	—
Zz-Iz	1	—
Rectification characteristics(Bridge)	1	—
Surge voltage-Transient	1	○

Simulation results are following.  
 Explanatory notes — : simulated

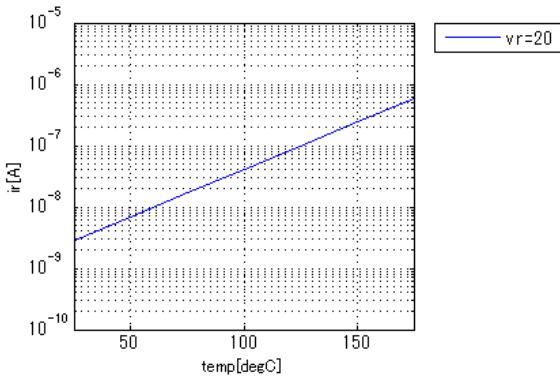
**VrIr[Temp]**



**BvTemp**

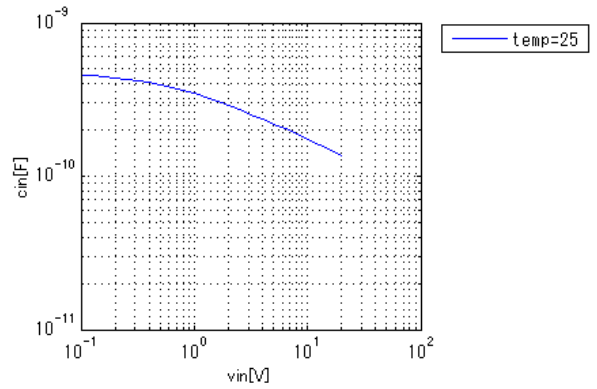


**IrTemp[Vr]**

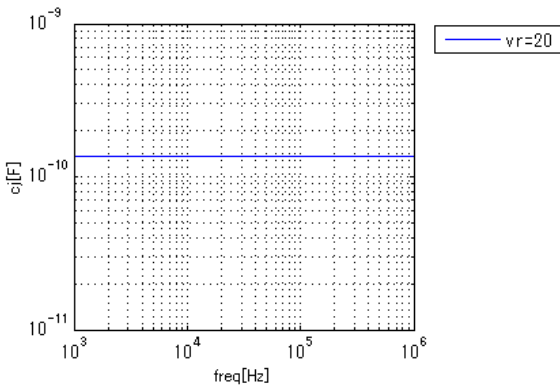


**CjVr**

Freq = 1000000Hz



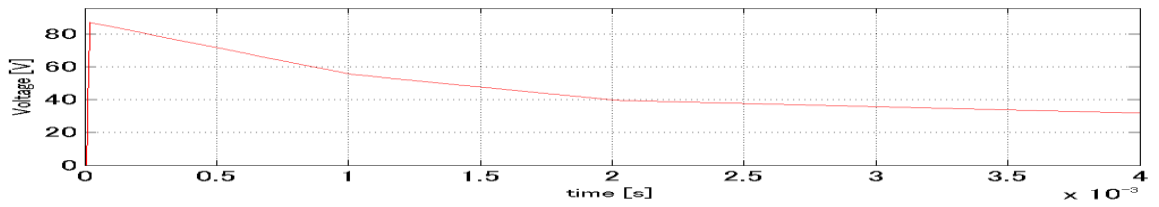
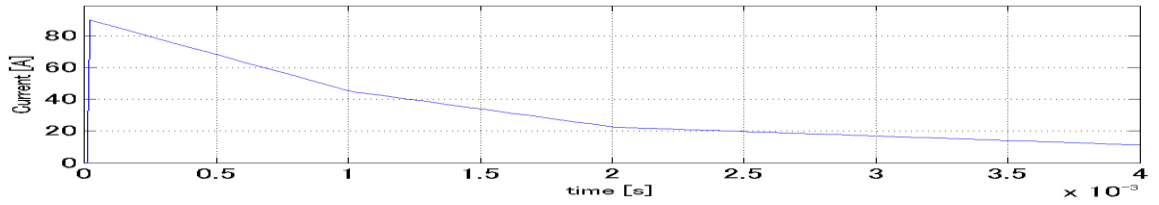
**CapacitanceFreq[Vr]**



Simulation results are following.

Explanatory notes — : simulated

### Surge Waveform



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