

LTspice Model

TVS

SHINDENGEN

ST04-24F1



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_ST04-24F1_LT
Pin Assign 1:C 2:A
File List Model Library MDC_ST04-24F1_LT01.lib
 Model Report MDC_ST04-24F1_LT.pdf (this file)

Verified Simulator Version LTspice version XVII
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

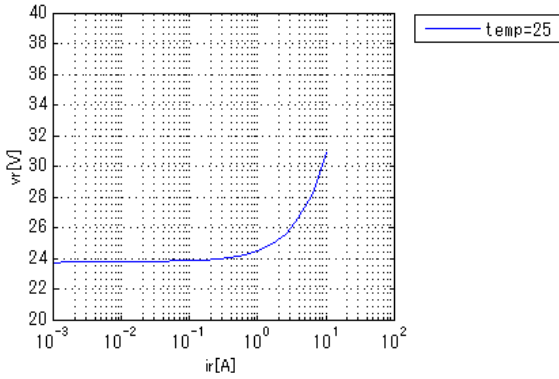
○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table
RANK=1

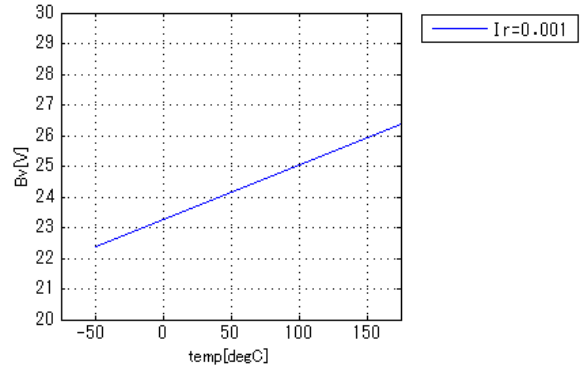
Functions	RANK	Implemented
IF-VF(Temp)	1	—
IR-VR(Temp)	1	○
Capacitance	1	○
Reverse recovery characteristics	1	—
Zz-Iz	1	—
Rectification characteristics(Bridge)	1	—
Surge voltage-Transient	1	○

Simulation results are following.
 Explanatory notes — : simulated

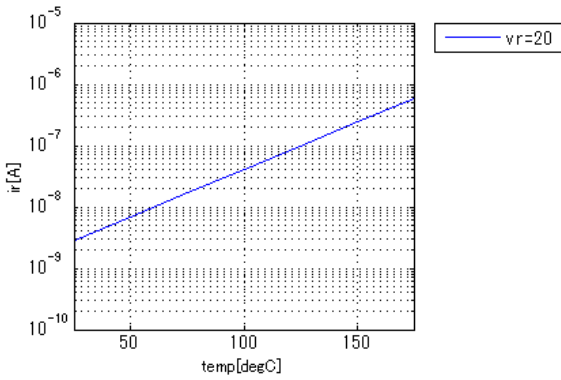
VrIr[Temp]



BvTemp

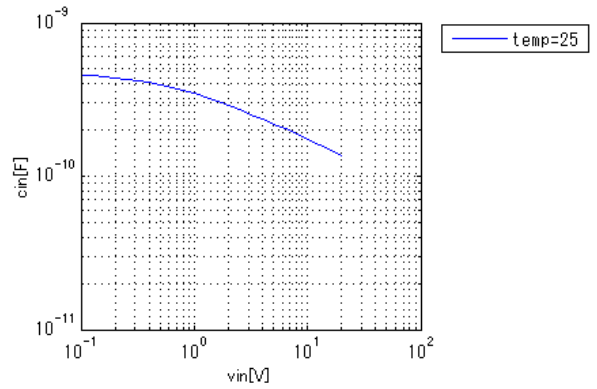


IrTemp[Vr]

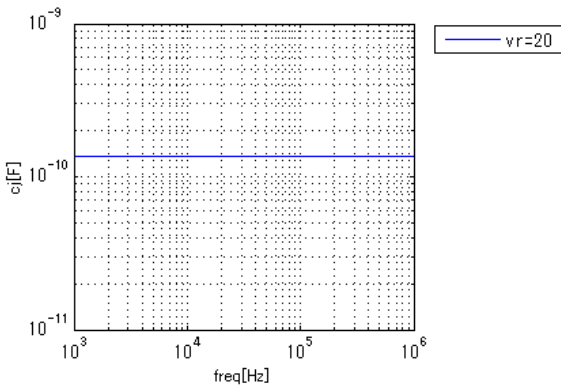


CjVr

Freq = 1000000Hz

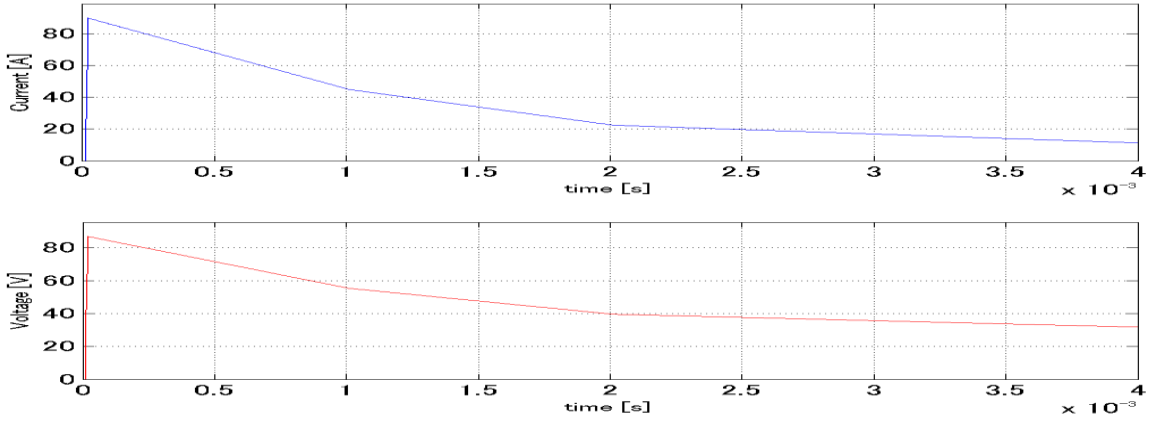


CapacitanceFreq[Vr]



Simulation results are following.
Explanatory notes — : simulated

Surge Waveform



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