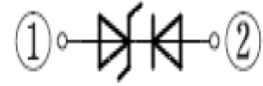


ADS Model

Power Clamper

SHINDENGEN

ST03D-170



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_ST03D-170_AD
Pin Assign 1:① 2:②
File List Model Library MDC_ST03D_170_AD.zip
 Model Report MDC_ST03D-170_AD.pdf (this file)

Verified Simulator Version ADS version 2020 Update 2
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.01(2020.01)
- Product name ST03D-170
- Company name Shindengen Electric Manufacturing Co., Ltd.
- Characteristics BvTemp,CjFreq[Vf],CjFreq[Vr],CjFreq[Vf],CjVr,CjVf,IrVr[Temp],TrrIrf,TrrWaveform,SurgeWaveform

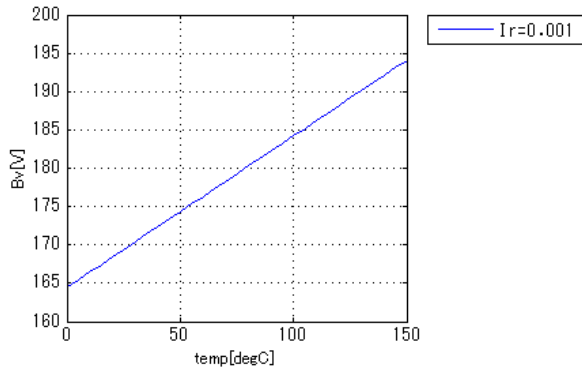
Simulation Range

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

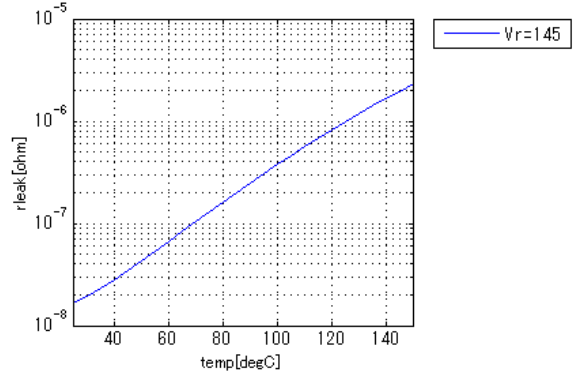
| Item | Range | | | Unit |
|-----------------|-------|----|------|-------|
| | Min. | | Max. | |
| Reverse Voltage | 0 | to | 145 | V |
| Forward Voltage | 0 | to | 600 | V |
| Temperature | -40 | to | 150 | deg C |

Simulation results are following.
 Explanatory notes — : simulated

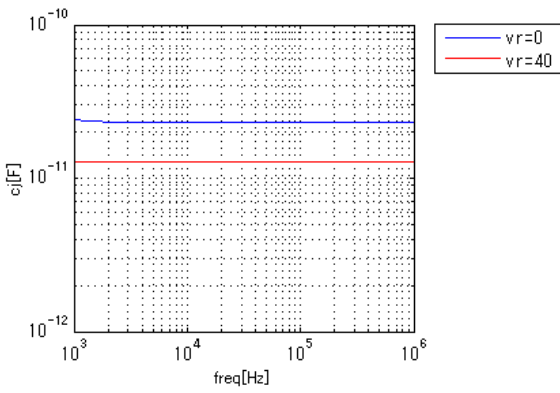
BvTemp



CjFreq[Vf]

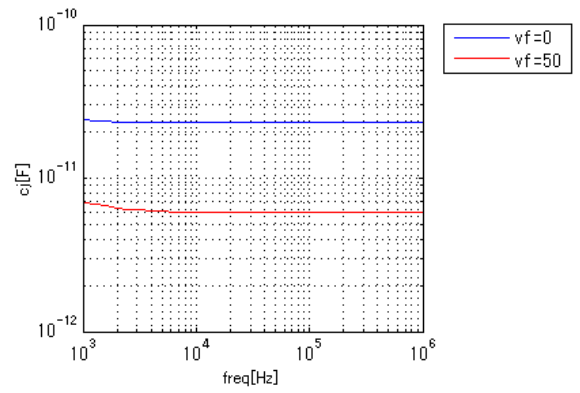


CjFreq[Vr]



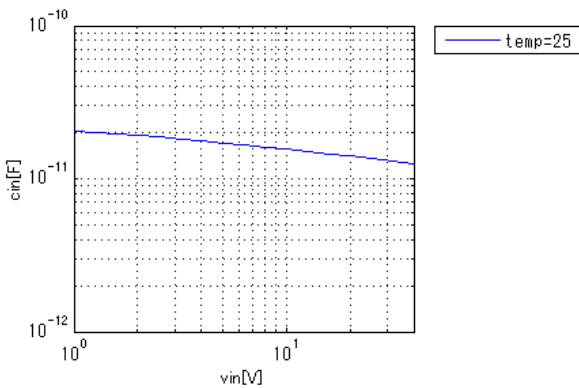
CjFreq[Vf]

Temp = 25degC



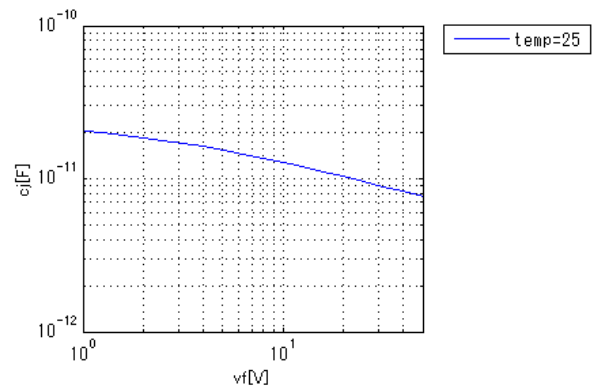
CjVr

Freq. = 0.1MHz



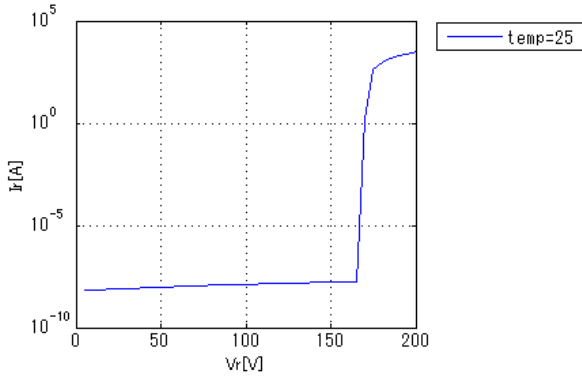
CjVf

Freq. = 0.1MHz

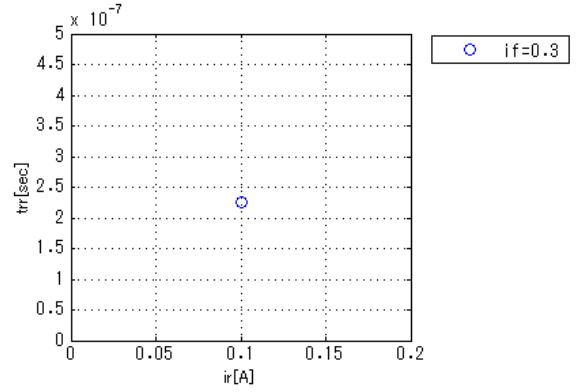


Simulation results are following.
 Explanatory notes — : simulated

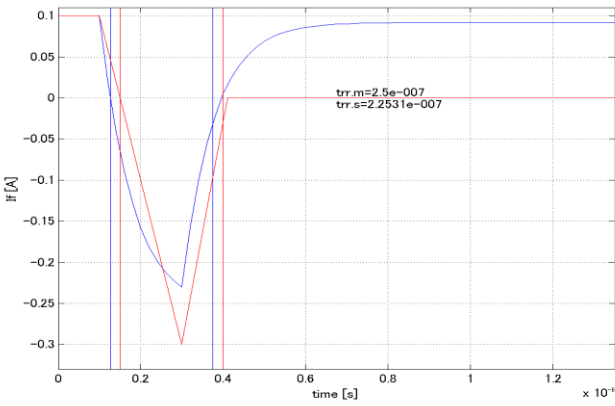
IrVr[Temp]



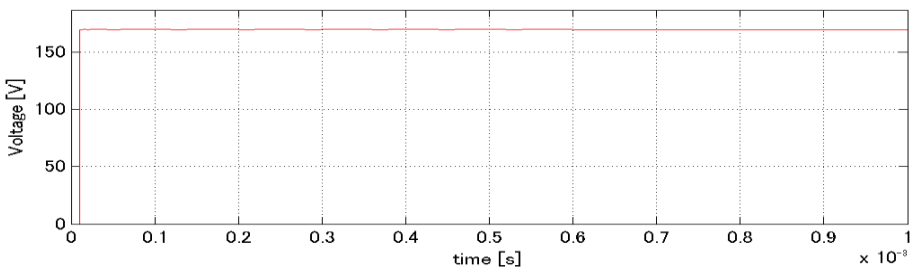
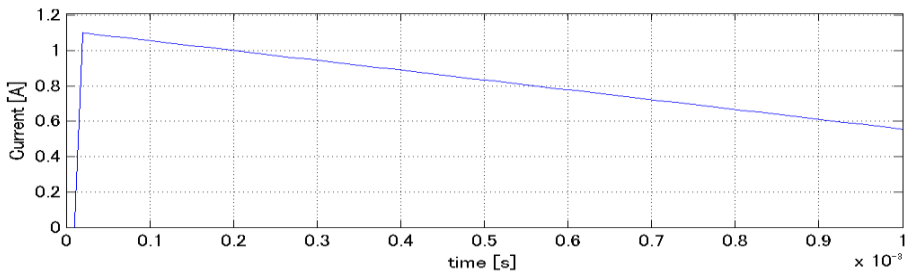
TrrIrf



Trr Waveform



Surge Waveform (10us/1000us)



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