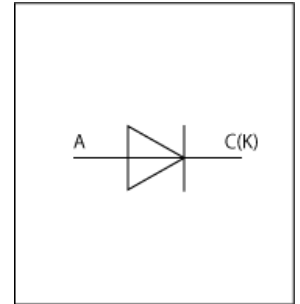


PSpice Model

Switching Diode

SanKen

SARS05VR



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_SARS05VR_PS
Pin Assign 1:C 2:A
File List Model Library MDC_SARS05VR_PS02.lib
 Model Report MDC_SARS05VR_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 Feb. 27, 2018
- Product name SARS05VR
- Company name Sanken Electric Co., Ltd.
- Characteristics IfVf[Temp],Irvr[Temp],TrrIfIrr,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	800	V
Temperature	-40	to	150	deg C

Diode

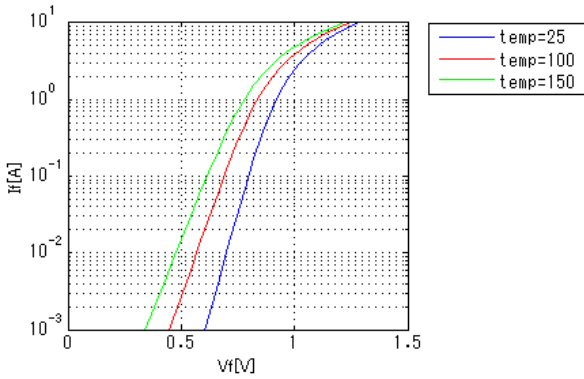
○ : Implemented
 × : Not Implemented
 — : Not applicable

Model Functions Table
RANK=1

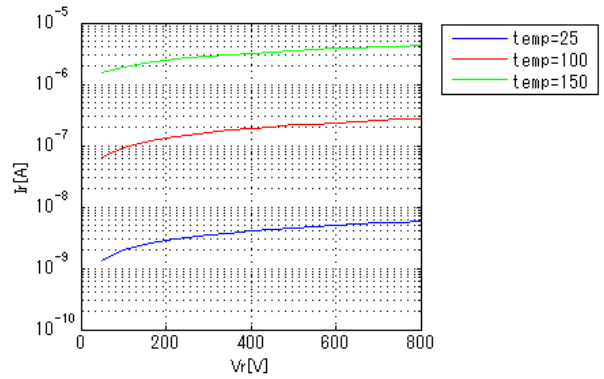
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	—
Reverse recovery characteristics	1	○
Zz-Iz	1	—
Rectification characteristics(Bridge)	1	—
Surge current-Transient	1	○

Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]

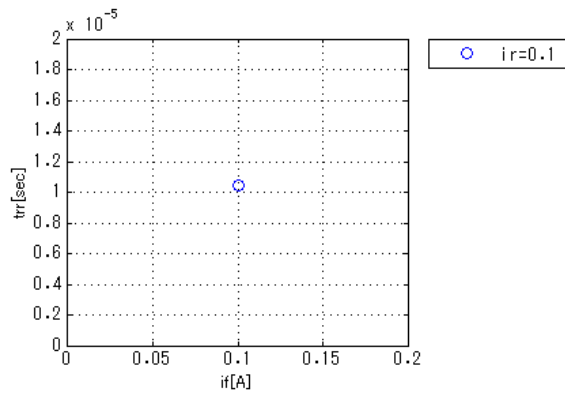


IrVr[Temp]



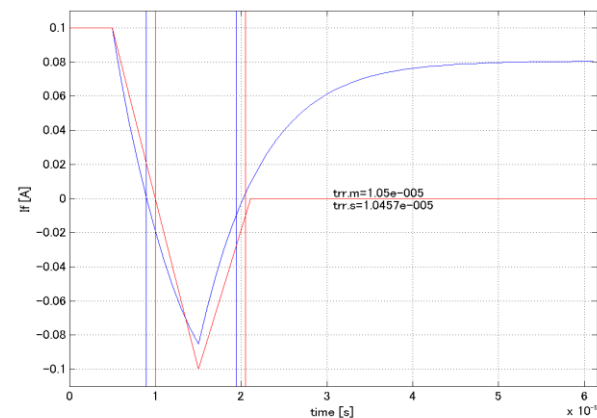
Trrflr

irr = 0.01A, didt = 0.02A/us



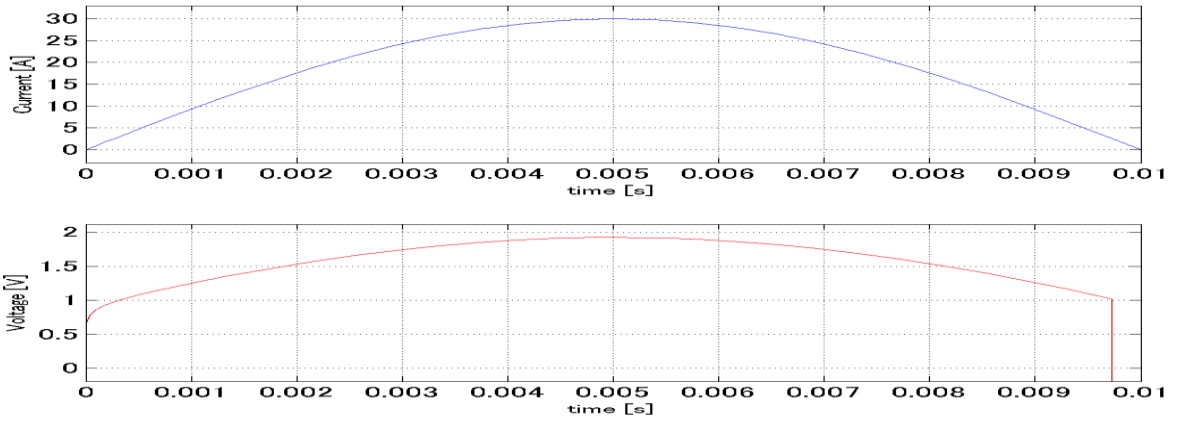
Trr Waveform (Red : Datasheet Blue : Simulation)

If = 0.1A, ir = 0.1A, irr = 0.01A, didt = 0.02A/us



Simulation results are following.
Explanatory notes — : simulated

Surge Current Waveform (Forward Sine Half 50Hz)



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