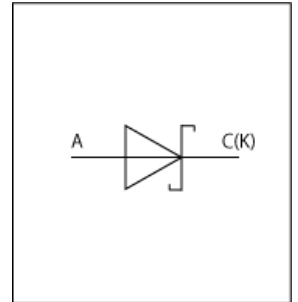


PSpice Model

Schottky Diode

ROHM

RBR1MM30ATF



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_RBR1MM30ATF_PS
Pin Assign 1:C 2:A
File List Model Library MDC_RBR1MM30ATF_PS01.lib
 Model Report MDC_RBR1MM30ATF_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 2019/05/28_Rev.002
- Product name RBR1MM30ATF
- Company name ROHM Co., Ltd.
- Characteristics IfVf[Temp],Irvr[Temp],CjVr,Trrlflr,TrrWaveform,SurgeWaveform(fsine=50Hz),SurgeWaveform(ftp=1ms)

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	30	V
Temperature	-55	to	150	deg C

Diode

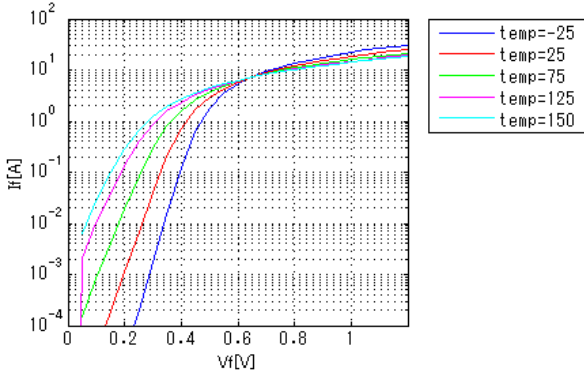
○ : Implemented
 × : Not Implemented
 — : Not applicable

Model Functions Table
RANK=1

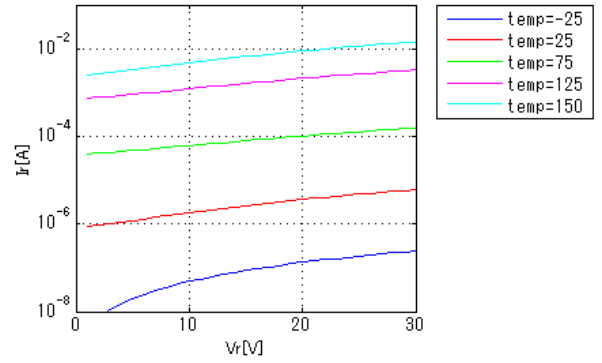
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○
Reverse recovery characteristics	1	○
Zz-Iz	1	—
Rectification characteristics(Bridge)	1	—
Surge-Transient	1	○
tlp	1	—

Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]

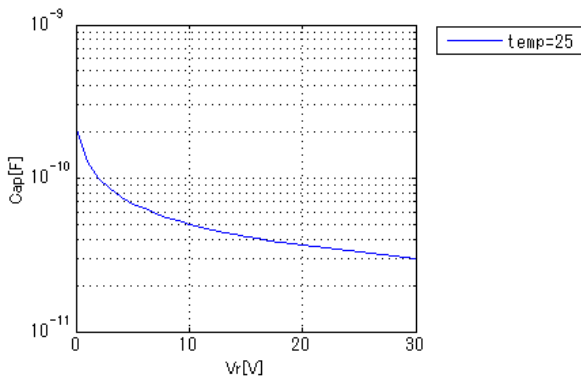


IrVr[Temp]



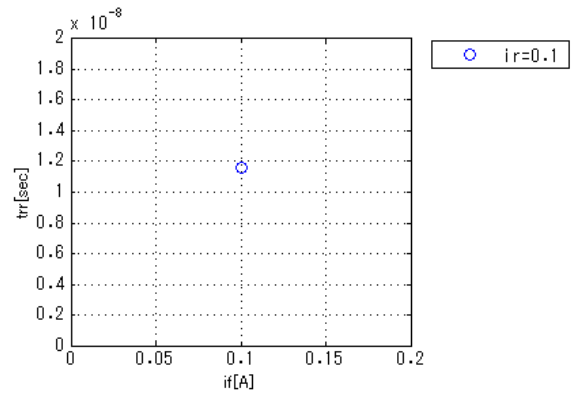
CjVr

Freq = 1000000Hz



TrrIfIr

irr = 0.01A, didt = 25A/us

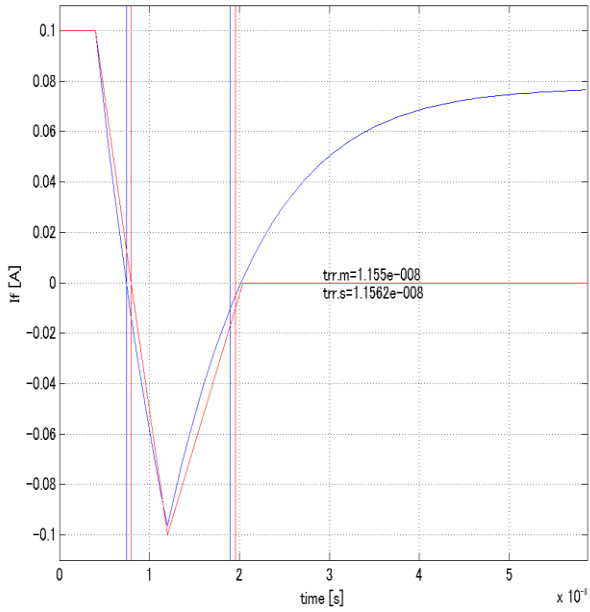


Simulation results are following.

Explanatory notes — : simulated

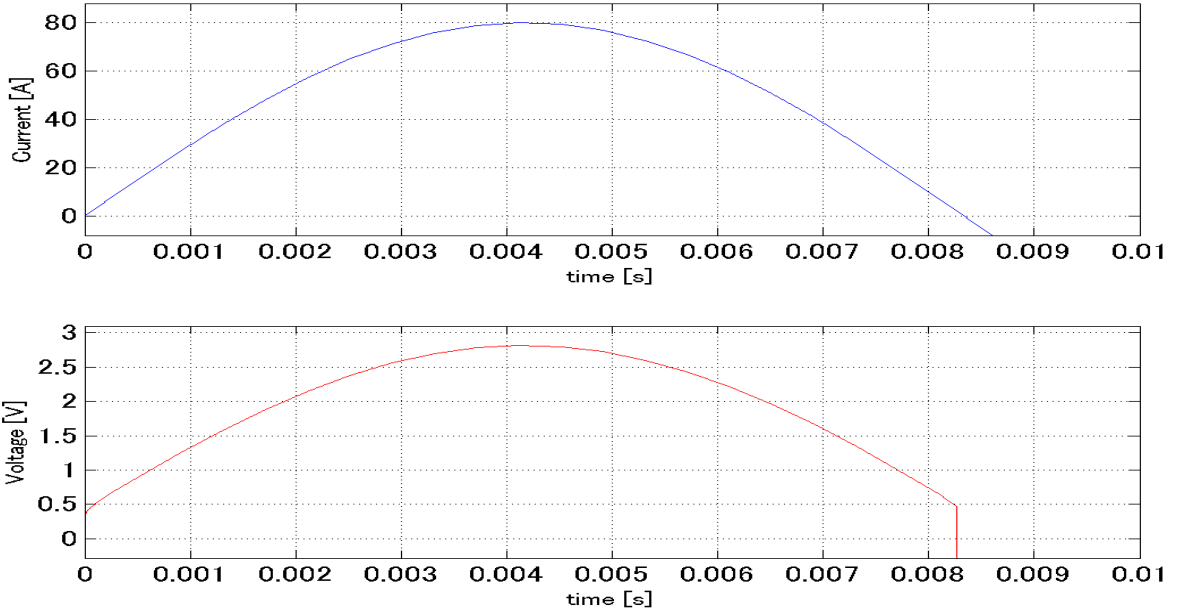
Trr Waveform (Red : Datasheet Blue : Simulation)

didt = 25A/us, if = 0.1A, ir = 0.1A, irr = 0.01A

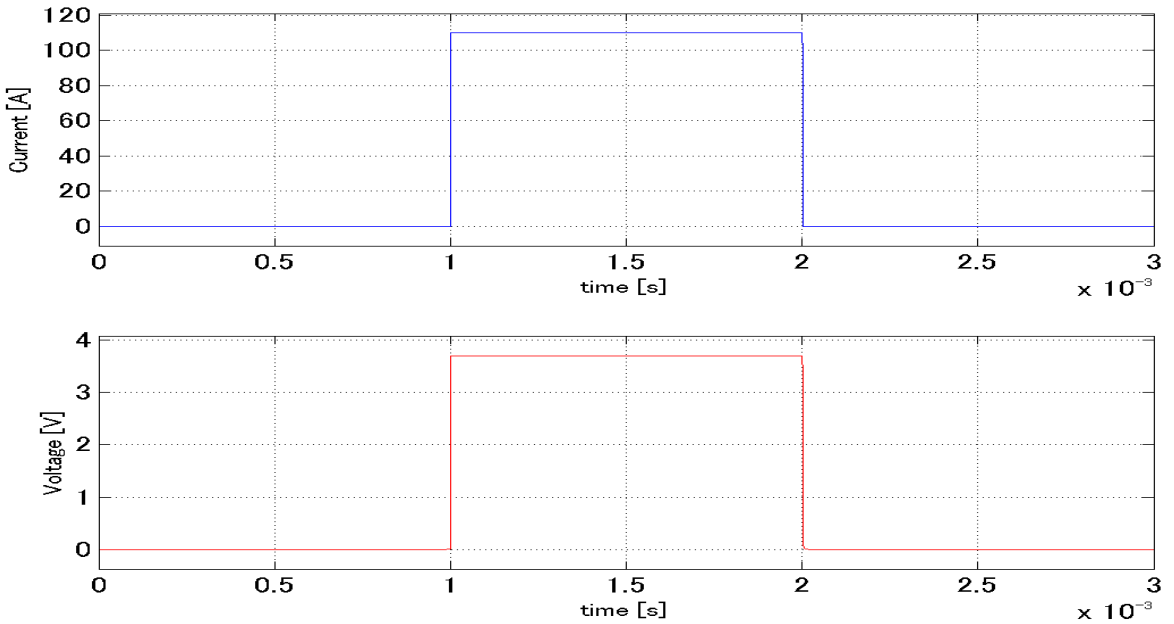


Simulation results are following.
Explanatory notes — : simulated

Surge Current Waveform (Forward Sine Half 60Hz)



Surge Current Waveform (Forward tp=1ms)



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