PSpice Model
Fast Recovery Diode
KYOCERA
UCU20D30

Model Information

Model	A macro model based on general SPICE diode model
Call Name	MDC_UCU20D30_PS
Pin Assign	1:Anode1 2:Cathode 3:Anode2
File List	Model Library MDC_UCU20D30_PS.lib
	Model Report MDC_UCU20D30_PS.pdf(this file)
Verified Simulator Version	PSpice version 17.4

Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- ●Date/Version August 2016 v01.1
- ●Product name UCU20D30
- ●Company name KYOCERA Corporation

[Characteristics listed]

- ●Characteristics IfVf[Temp], IrVr, trrIfIr, CjVr

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.	
Temperature	25	to	175	deg C

Diode

○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

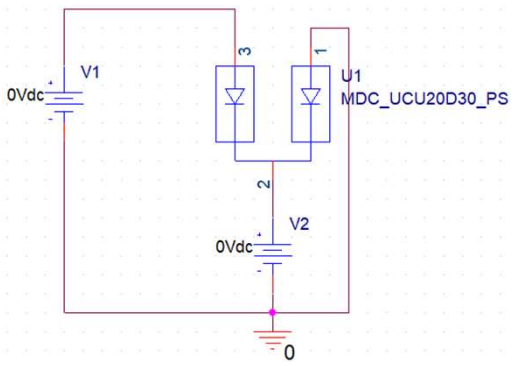
RANK=1

Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR	1	○
Capacitance	1	○
Reverse recovery characteristics	1	○
Rectification characteristics(Bridge)	1	–
Surge voltage-Transient	2	–

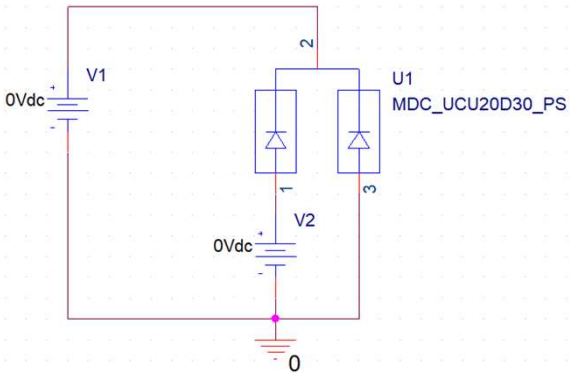
IfVf[Temp], IrVr Testbench

Referred to Data Sheet

IfVf[Temp]

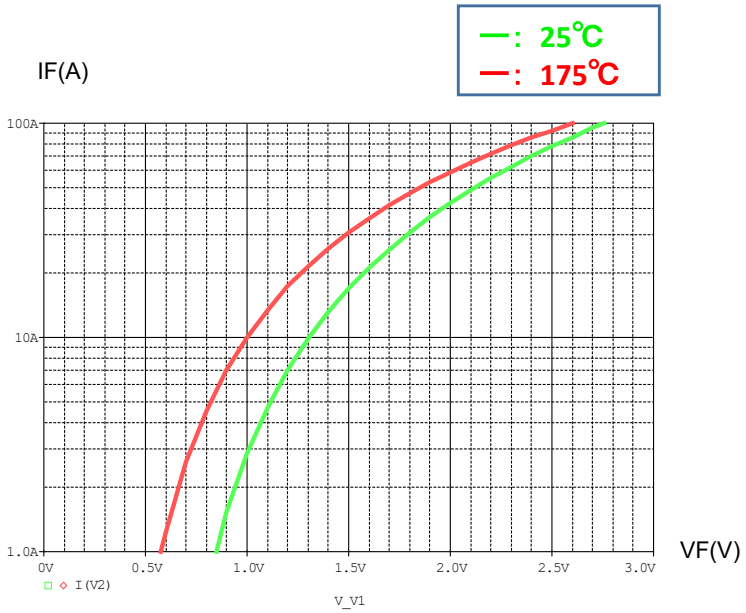


IrVr



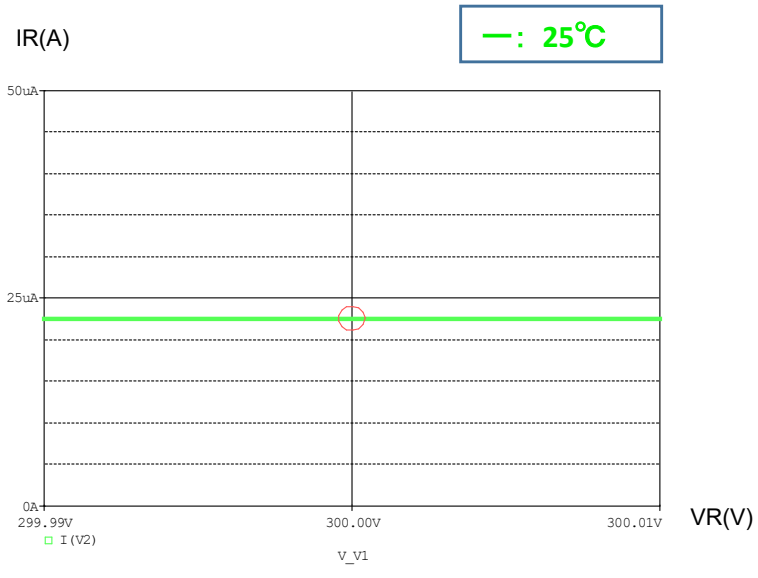
Simulation results are following.
Explanatory notes — : simulated

IfVf[Temp]



IrVr

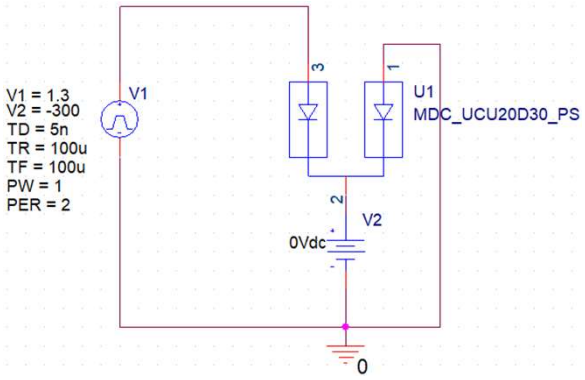
When VR=300V, IR<25μA



trrIflr Testbench

Referred to Data Sheet

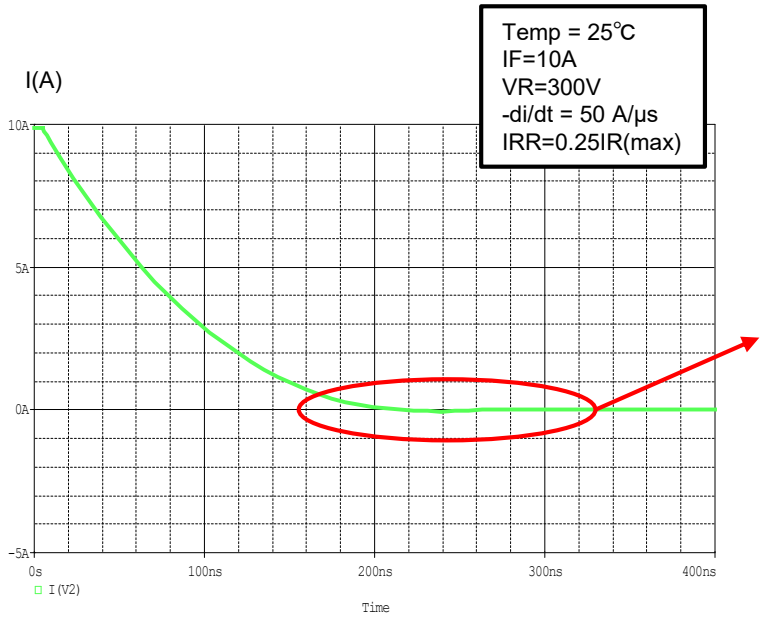
trrIflr

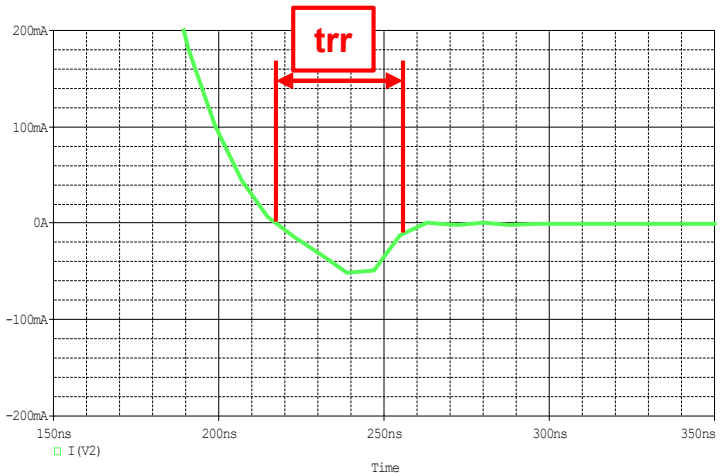


Simulation results are following.
Explanatory notes — : simulated

trrIflr

trr=37.9 ns

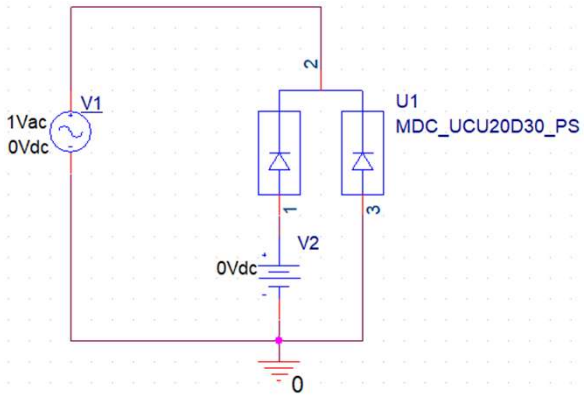




CjVr Testbench

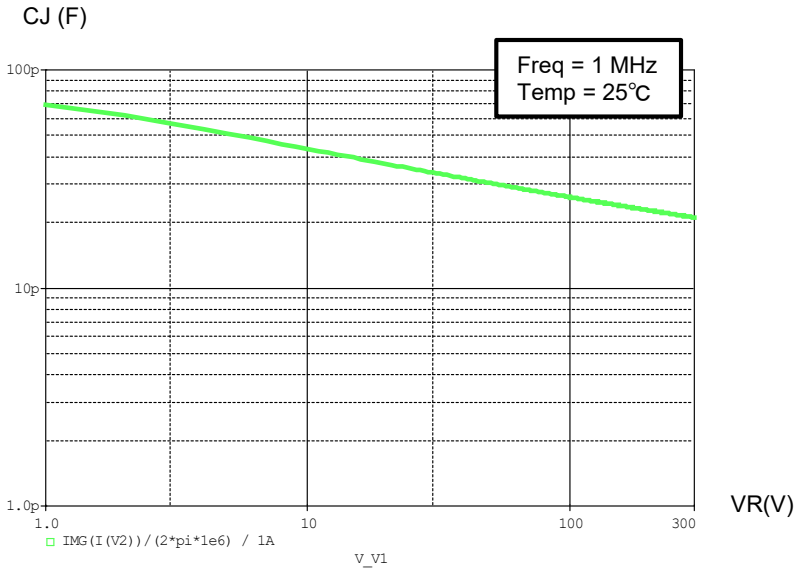
Referred to Data Sheet

CjVr



Simulation results are following.
Explanatory notes — : simulated

CjVr



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