

PSpice Model Varactor Diode SANYO SVC321B

Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_SVC321B_PS
Pin Assign 1:A 2:C
File List Model Library MDC_SVC321B_PS.lib
Model Report MDC_SVC321B_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
- Product name SVC321B
- Company name SANYO Electric Co.,Ltd.

[Characteristics listed]

- Characteristics CjVr, QfacVr, NormCjTemp[Vr]

Simulation Range

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

Item	Condition	Unit
Temperature	25	deg C

Diode

○ : Implemented
 × : Not Implemented
 — : Not applicable

Model Functions Table

RANK=1

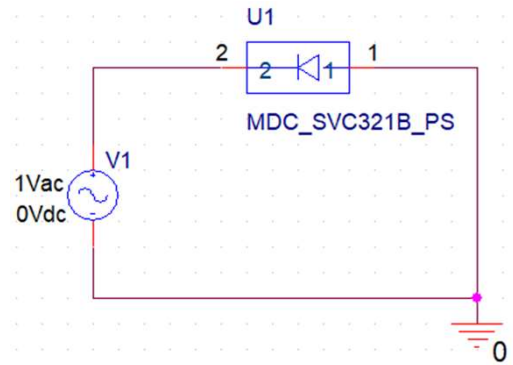
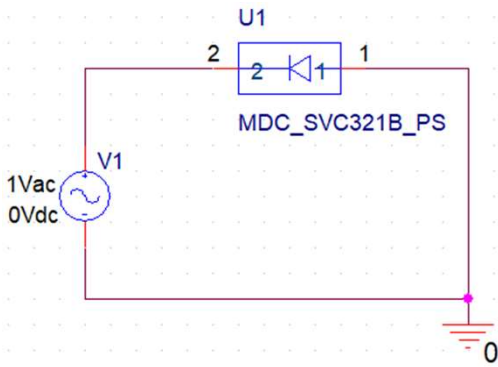
Functions	RANK	Implemented
CJ-VR	1	○
Qfac-VR	1	○
NormCj-Temp(Vr)	1	○

CjVr, QfacVr Testbench

Referred to Data Sheet

CjVr

QfacVr



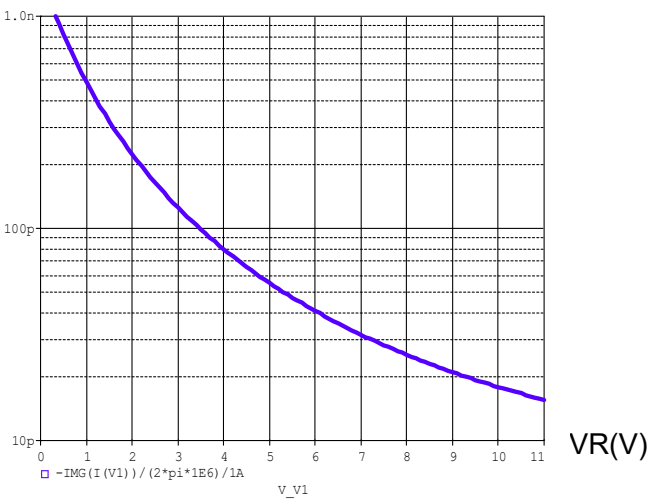
Simulation results are following.
Explanatory notes — : simulated

CjVr

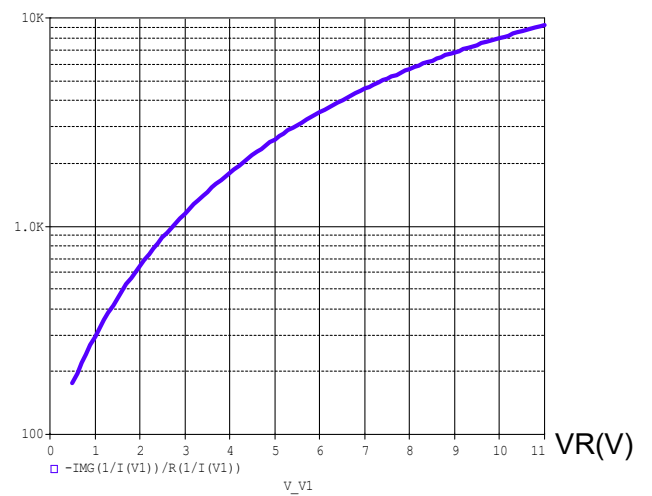
QfacVr

CJ(F)

Freq. = 1 MHz



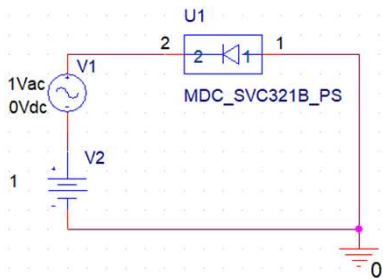
Q



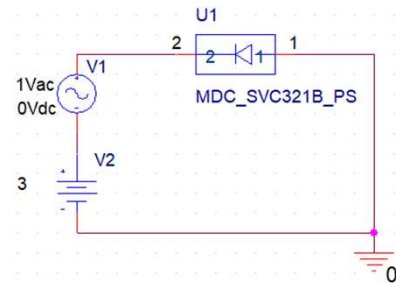
**NormCjTemp[Vr] Testbench
Referred to Data Sheet**

NormCjTemp[Vr]

VR=1



VR=3



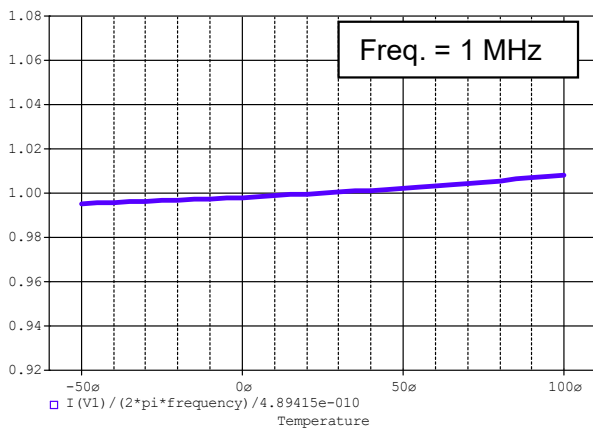
Simulation results are following.
Explanatory notes — : simulated

NormCjTemp[Vr]

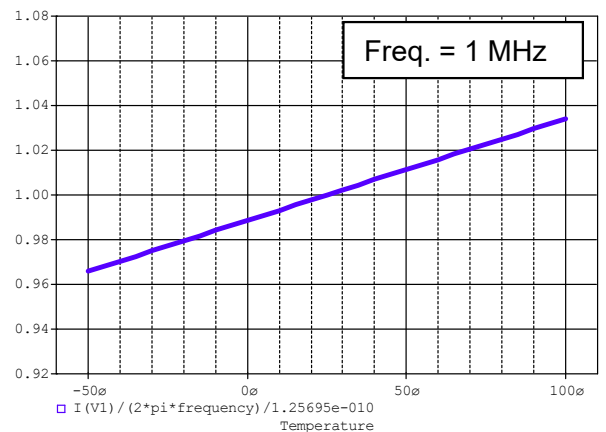
When VR=1 & Temp.=25°C,
then CJ=489.415pF

When VR=3 & Temp.=25°C,
then CJ=125.695pF

VR=1



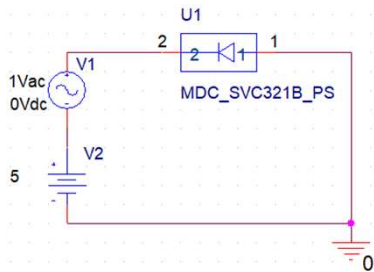
VR=3



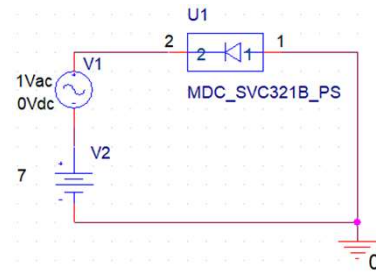
**NormCjTemp[Vr] Testbench
Referred to Data Sheet**

NormCjTemp[Vr]

VR=5



VR=7



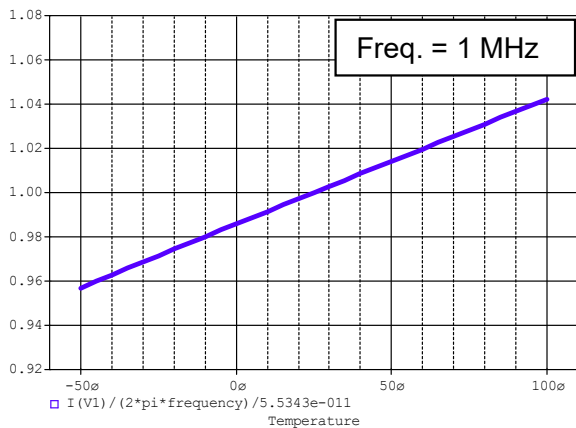
Simulation results are following.
Explanatory notes — : simulated

NormCjTemp[Vr]

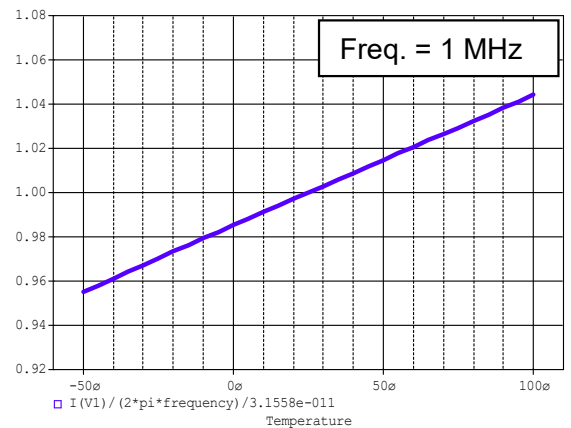
When VR=5 & Temp.=25°C,
then CJ=55.343pF

When VR=7 & Temp.=25°C,
then CJ=31.558pF

VR=5



VR=7



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