

LTspice Model

Fast Recovery Diode

SHINDENGEN

D1NL20U



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_D1NL20U_LT
Pin Assign 1:C 2:A
File List Model Library MDC_D1NL20U_LT01.lib
 Model Report MDC_D1NL20U_LT.pdf (this file)

Verified Simulator Version LTspice version XVII
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev.01(2020.01)
- Product name D1NL20U
- Company name Shindengen Electric Manufacturing Co., Ltd.
- Characteristics IfVf[Temp],CjVr,IrVr[Temp],TrrIfIr,TrrWaveform,SurgeForward

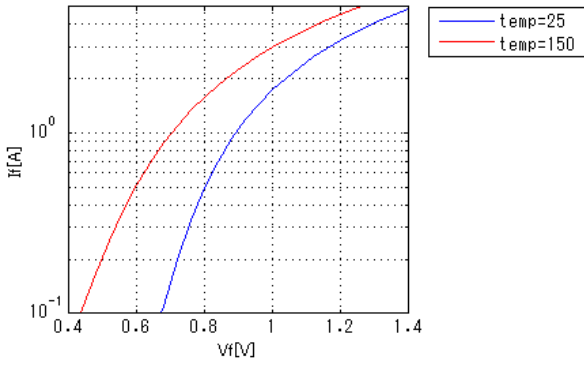
Simulation Range

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	200	V
Temperature	-55	to	150	deg C

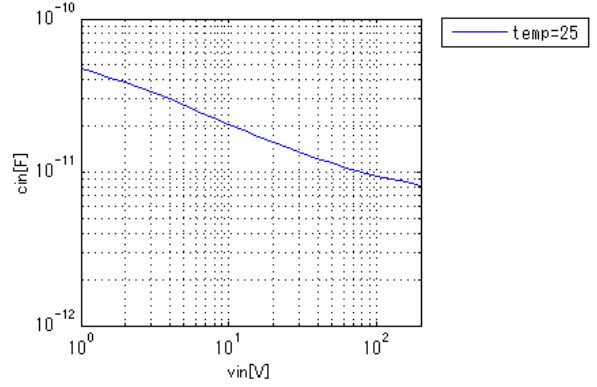
Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]

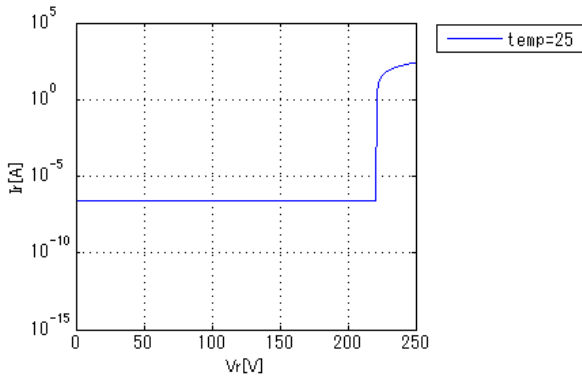


CjVr

Freq. = 1MHz

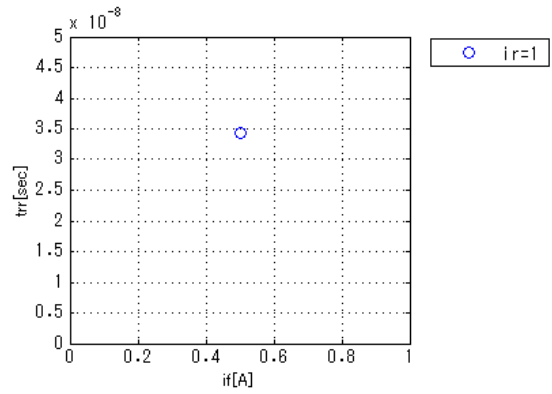


IrVr[Temp]



TrrIfIr

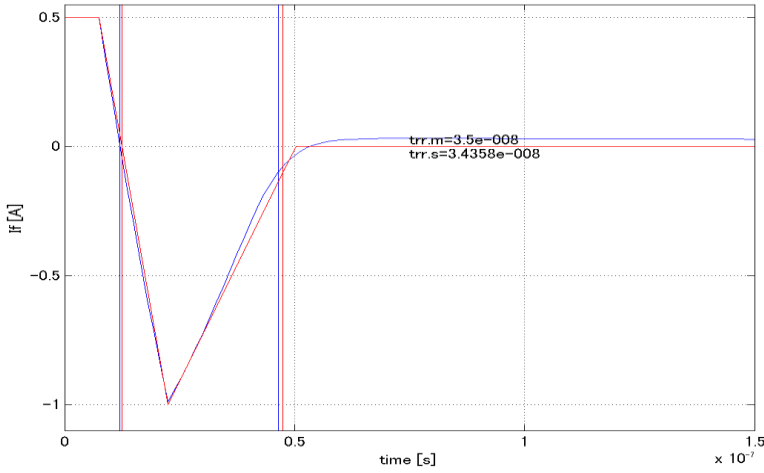
Irr. = 0.1A, didt. = 100A/us



Simulation results are following.
Explanatory notes — : simulated

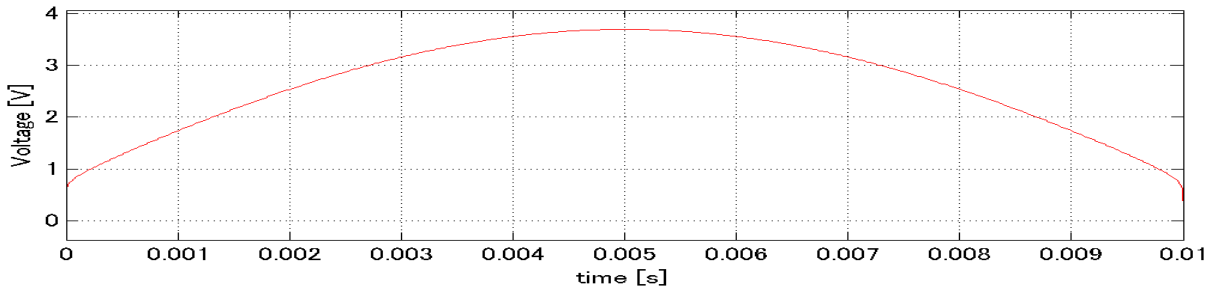
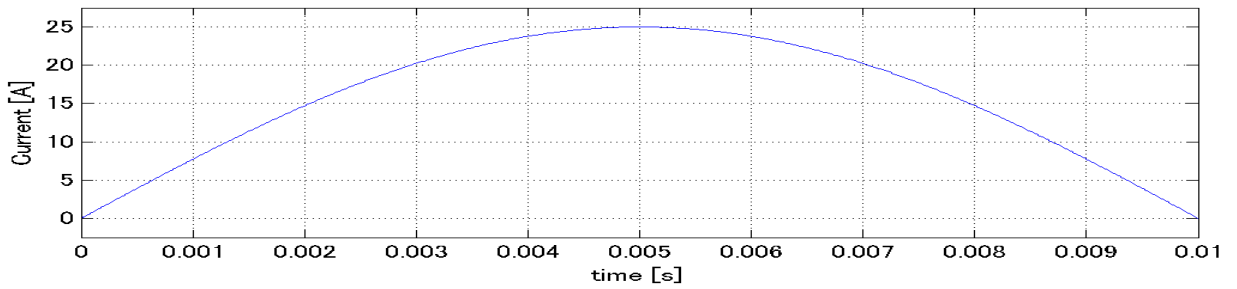
Trr Waveform (Red : Datasheet Blue : Simulation)

Irr. = 0.1A, didt. = 100A/us



Surge Forward

50Hz Half Sine Waveform



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