

LTspice Model

Fast Recovery Diode

LITE-ON

UD7G



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_UD7G_LT
Pin Assign 1:A 2:C
File List Model Library MDC_UD7G_LT02.lib
 Model Report MDC_UD7G_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.-0, Oct-2019
- Product name UD7G
- Company name LITE-ON JAPAN LTD.
- Characteristics CjVr,IfVf[Temp],IrVr[Temp],IrVr[Temp]2,TrrIflr,TrrWaveform, SurgeWaveform

Simulation Range

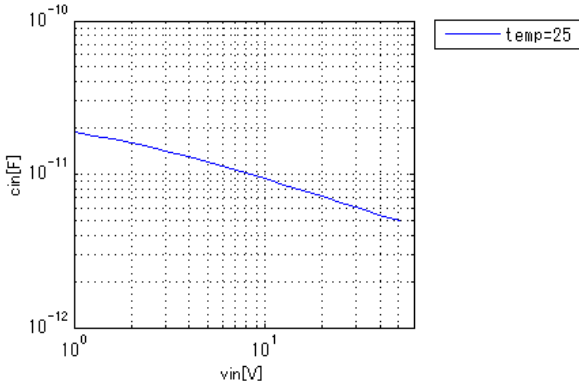
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Reverse Voltage	0	to	1,000	V
Temperature	-55	to	150	deg C

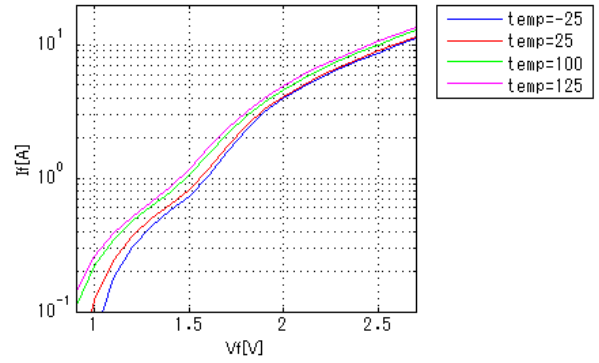
Simulation results are following.
 Explanatory notes — : simulated

CjVr

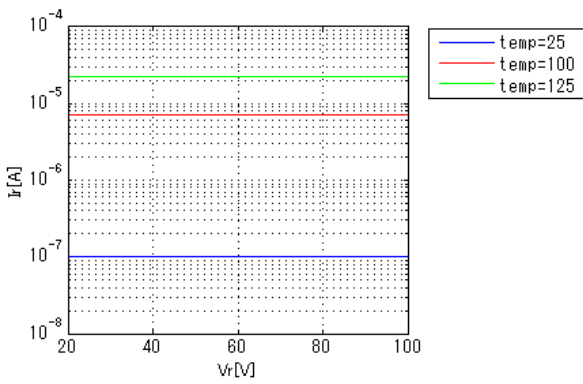
Freq. = 1MHz



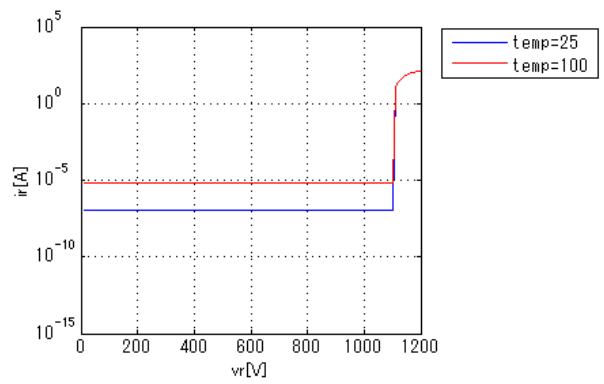
IfVf[Temp]



IrVr[Temp]

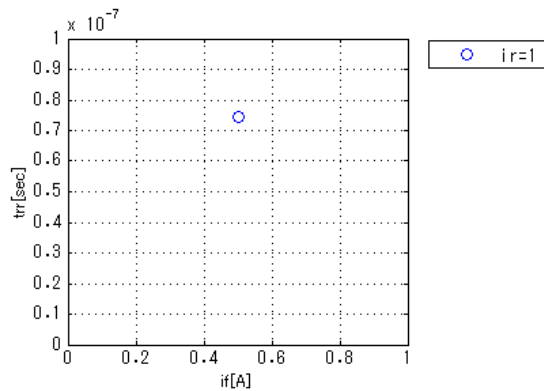


IrVr[Temp]2



Trrlfir

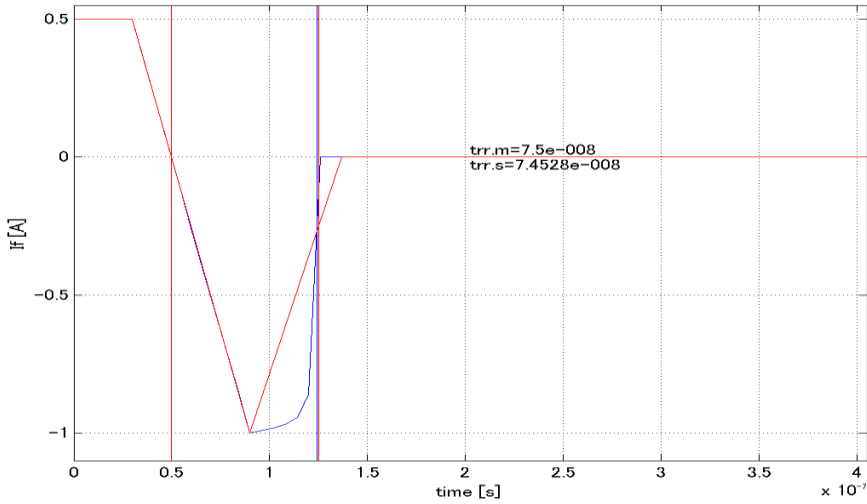
Irr. = 0.25A, didt. = 25A/us



Simulation results are following.
 Explanatory notes — : simulated

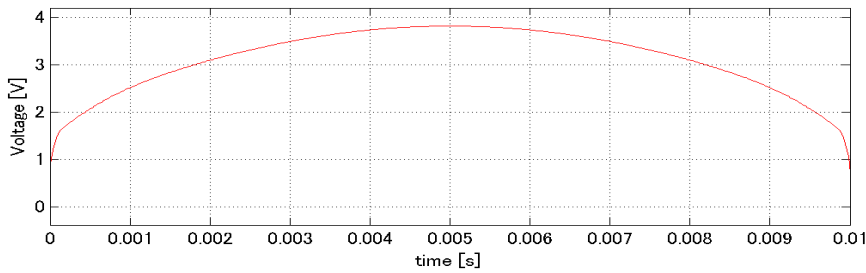
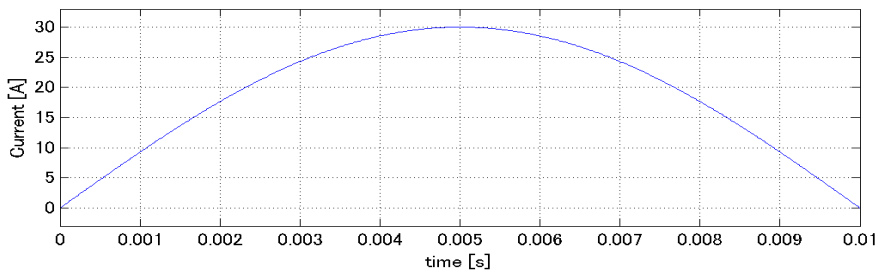
Trr Waveform red : datasheet (Trr=75ns) blue : simulation

If = 0.5A Ir = 1A I_{rr} = 0.25A, didt. = 25A/us



Surge Waveform

50Hz Sine Half IFSM = 30A



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