LTspice Model
Rectifier Diode
Taiwan Semiconductor
HS1G-TR

Model Information

Model	A macro model
Call Name	MDC_HS1G-TR_LT
Pin Assign	1:Port1 2:Port2
File List	Model Library MDC_HS1G-TR_LT.lib
	Model Report MDC_HS1G-TR_LT.pdf(this file)
Verified Simulator Version	LTspice XVII
Note	

References

The information which was used for modeling is as follow:

[Data Sheet]

- ●Date/Version Version: L2102
- ●Product name HS1G-TR
- ●Company name Taiwan Semiconductor

[Characteristics listed]

●Characteristics

Junction Capacitor – Reverse Voltage
Reverse Current – Reverse Voltage
Forward Current – Forward Voltage
Reverse Recovery Time

Simulation Condition

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

Item	Condition	Unit
Temperature	25,125	deg C

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○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

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

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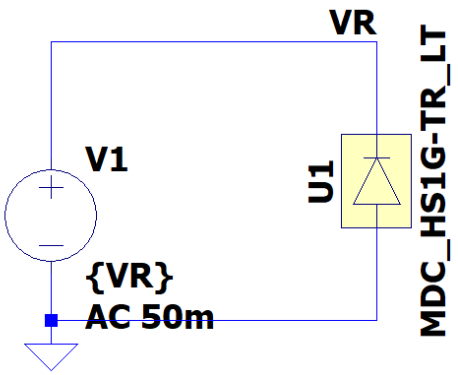
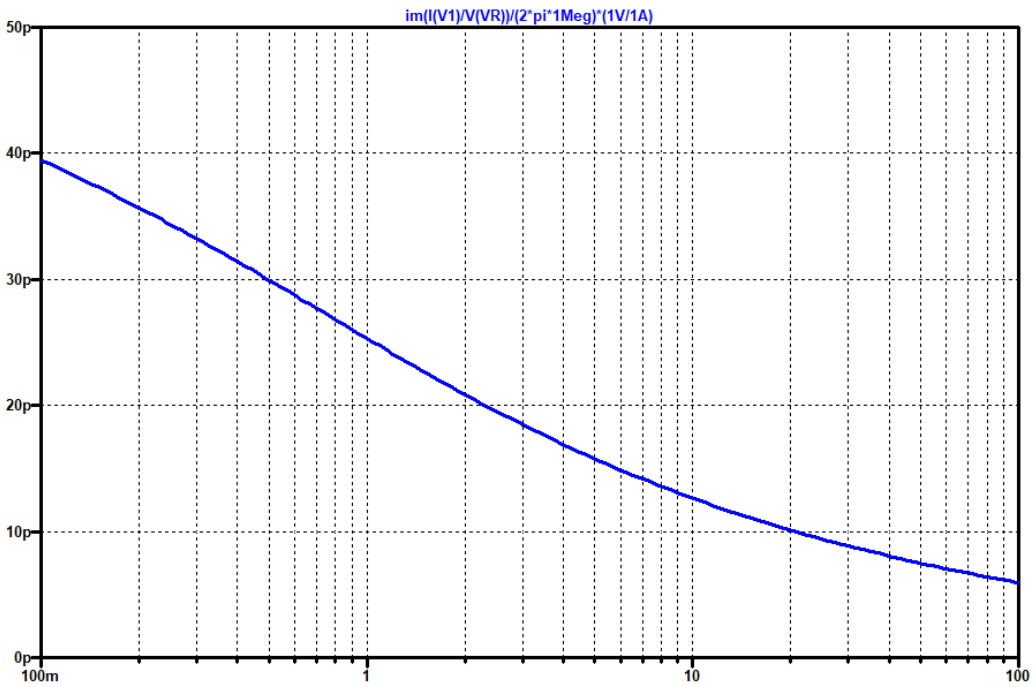
Junction Capacitor – Reverse Voltage

TestBench

```
.step dec param VR 0.1 100 10
.ac lin 1 1Meg 1Meg
.OPTION TNOM=25 GMIN=1e-15
.TEMP  25
```



Simulation results are following.
Explanatory notes — : simulated



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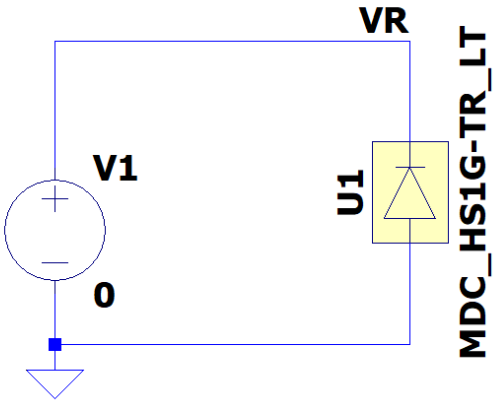
Reverse Current – Reverse Voltage

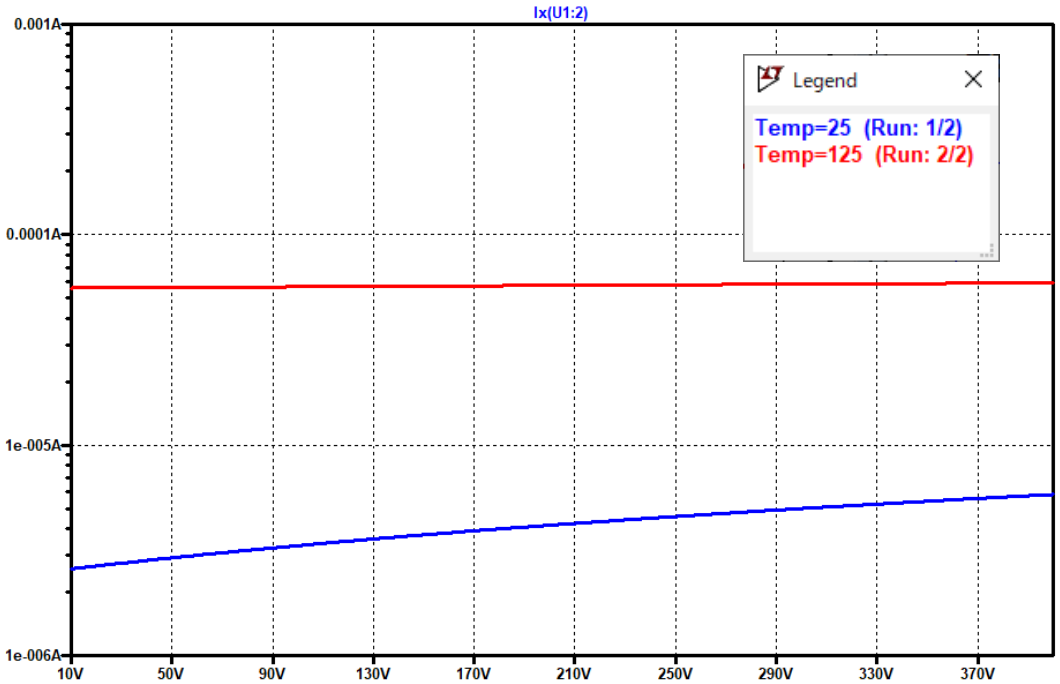
TestBench

```
.dc V1 0 400 1
.OPTION TNOM=25 GMIN=1e-15
.TEMP  25 125
```



Simulation results are following.

Explanatory notes — : simulated



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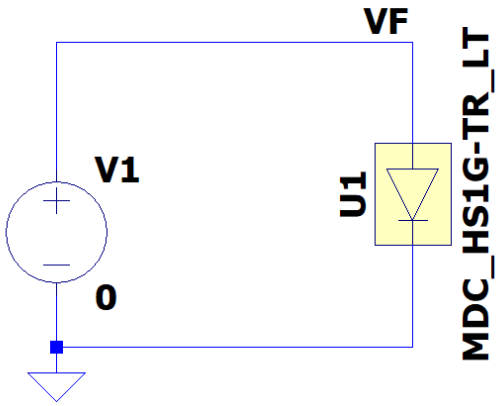
Forward Current – Forward Voltage

TestBench

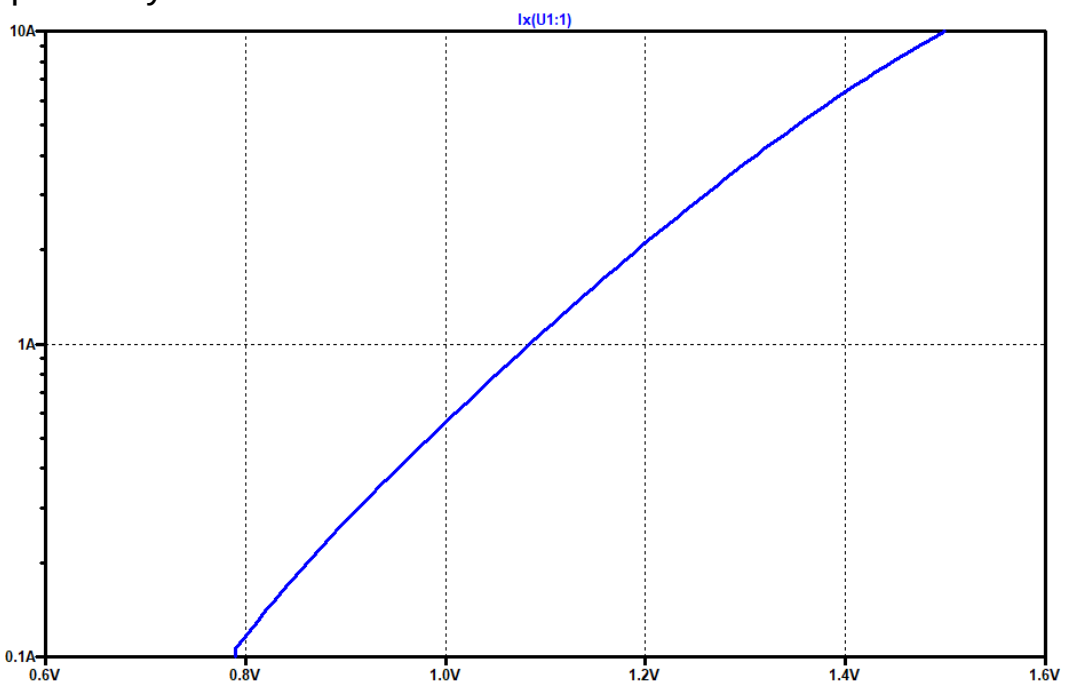
.dc V1 0.6 1.6 0.01
.OPTION TNOM=25 GMIN=1e-15
.TEMP 25



Reverse Recovery Time

Simulation results are following.

Explanatory notes — : simulated



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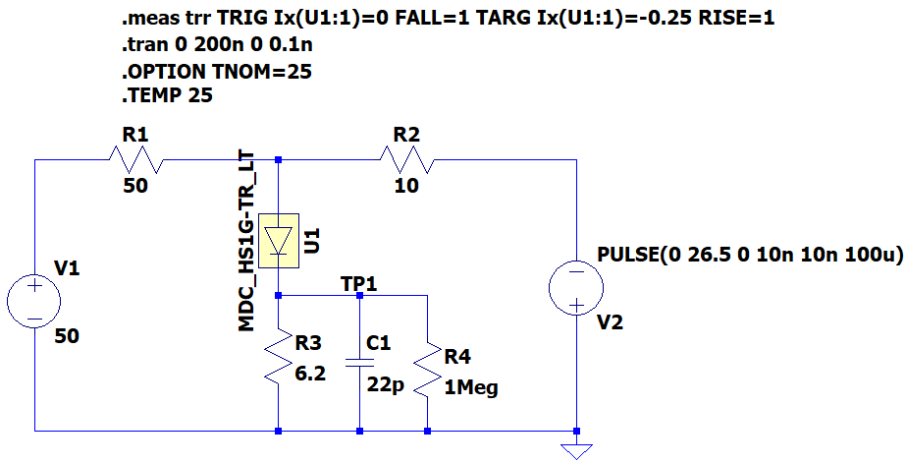
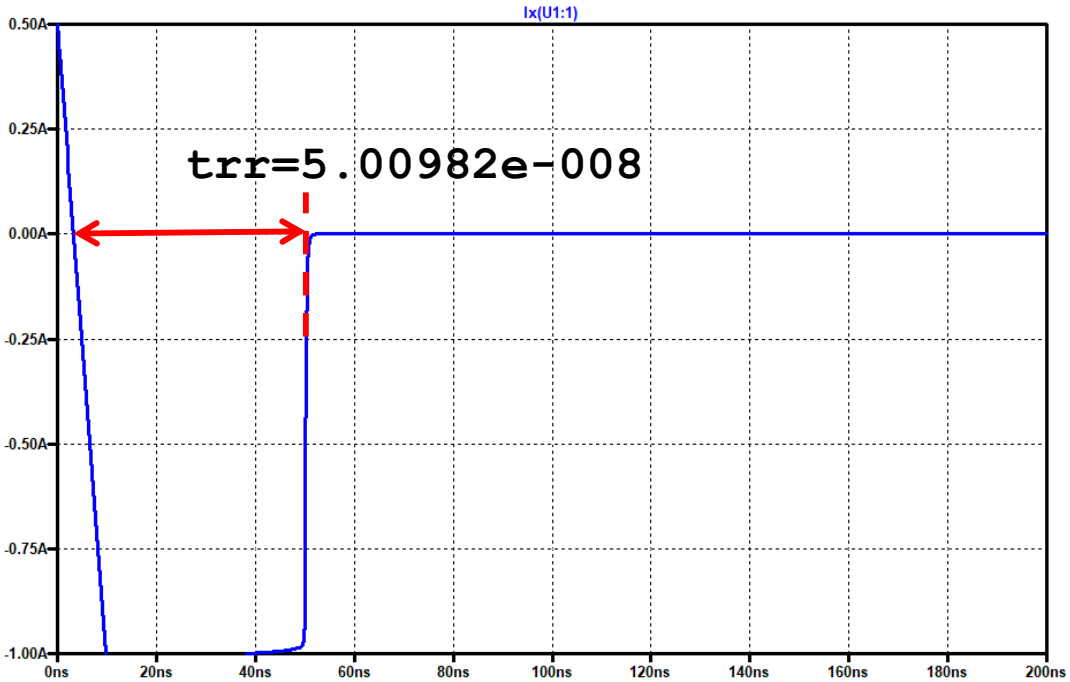
Reverse Recovery Time

TestBench



Simulation results are following.

Explanatory notes — : simulated



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Modeling Design Technology

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