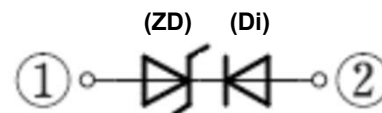


LTspice Model Power Clamper SHINDENGEN ST03D-82



Model Information

Model	A macro model based on general SPICE diode model		
Call Name	MDC_ST03D-82_LT		
Pin Assign	1:1 2:2		
File List	Model Library	MDC_ST03D-82_LT.lib	
	Model Report	MDC_ST03D-82_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 Rev.01(2020.01)
- Product name ST03D-82
- Company name Shindengen Electric Manufacturing Co., Ltd.

[Characteristics listed]

- Characteristics BvTemp, IrTemp(ZD), IrTemp(Di), CjFreq[VR](ZD), CjFreq[VR](Di), CjVr(ZD), CjVf(Di),

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	0	to	150	deg C

Diode

○ : Implemented
 × : Not Implemented
 — : Not applicable

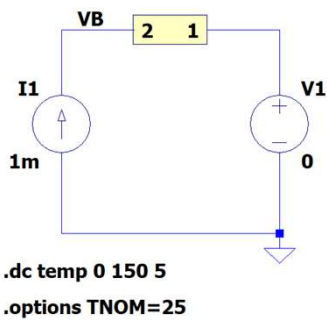
Model Functions Table

RANK=1

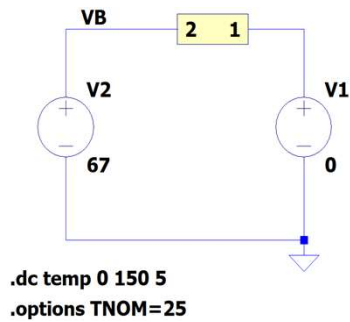
Functions	RANK	Implemented
BV-Temp	1	○
IR-Temp	1	○
Capacitance-Frequency	1	○
Capacitance-VR	1	○

**BvTemp, IrTemp(ZD) Testbench
Referred to Data Sheet**

BvTemp

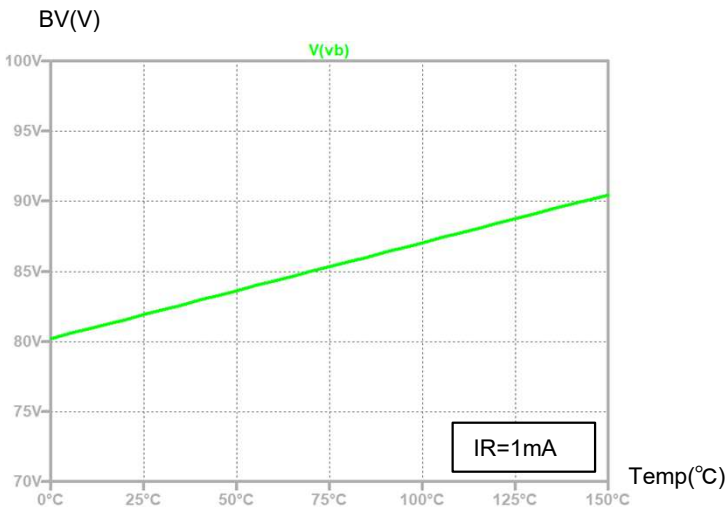


IrTemp(ZD)

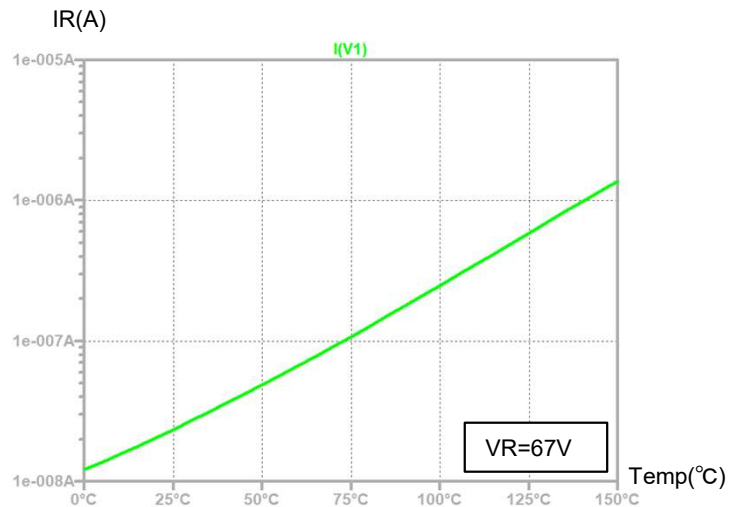


Simulation results are following.
Explanatory notes — : simulated

BvTemp

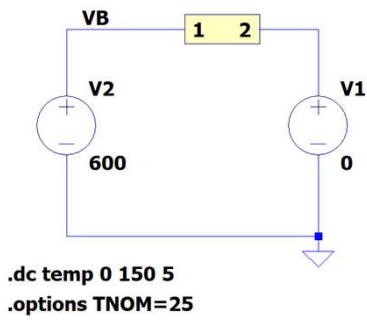


IrTemp(ZD)

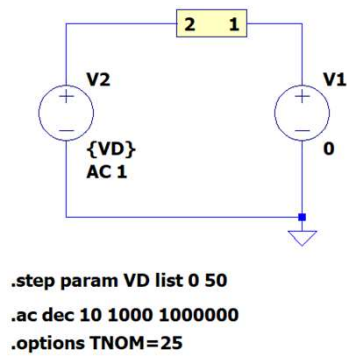


IrTemp(Di), CjFreq[VR](ZD) Testbench
 Referred to Data Sheet

IrTemp(Di)

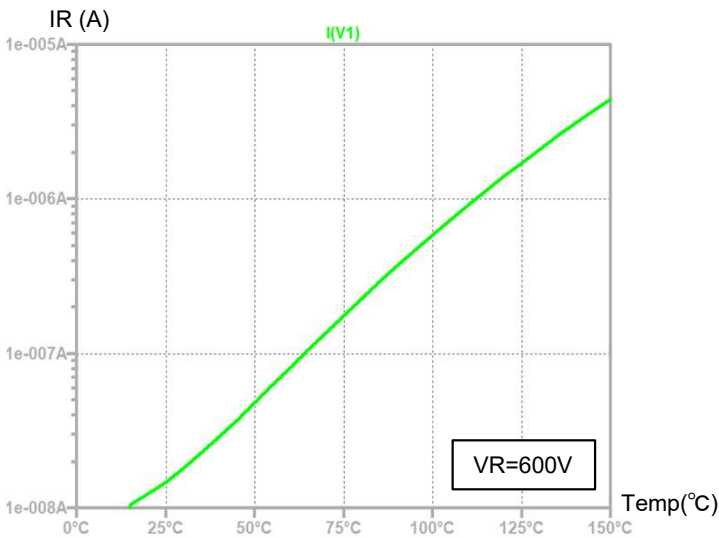


CjFreq[VR](ZD)

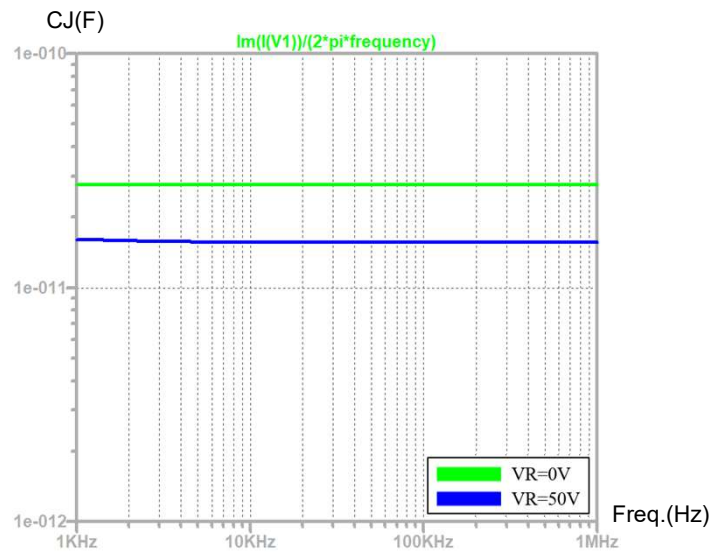


Simulation results are following.
 Explanatory notes — : simulated

IrTemp(Di)



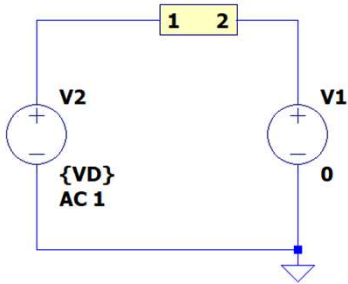
CjFreq[VR](ZD)



CjFreq[VR](Di), CjVr(ZD) Testbench

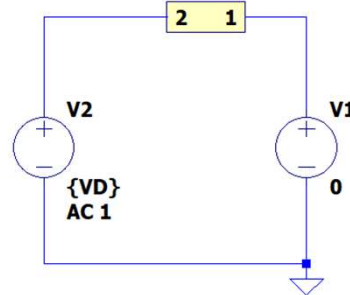
Referred to Data Sheet

CjFreq[VR](Di)



```
.step param VD list 0 50
.ac dec 10 1000 1000000
.options TNOM=25
```

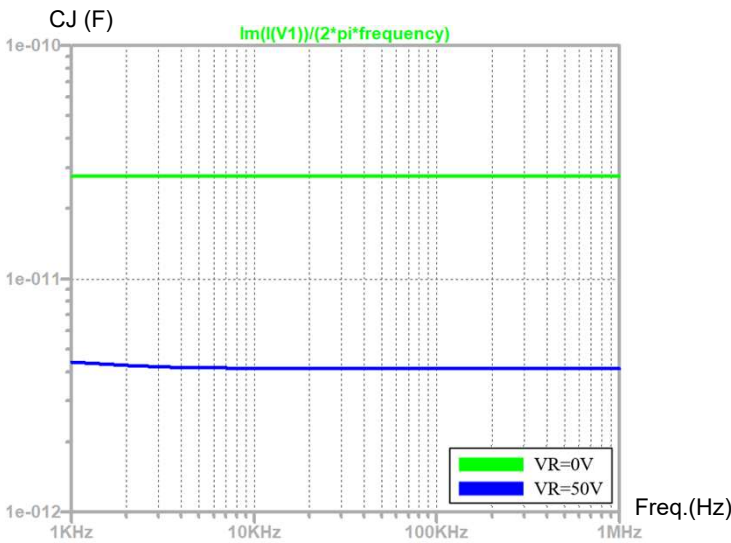
CjVr(ZD)



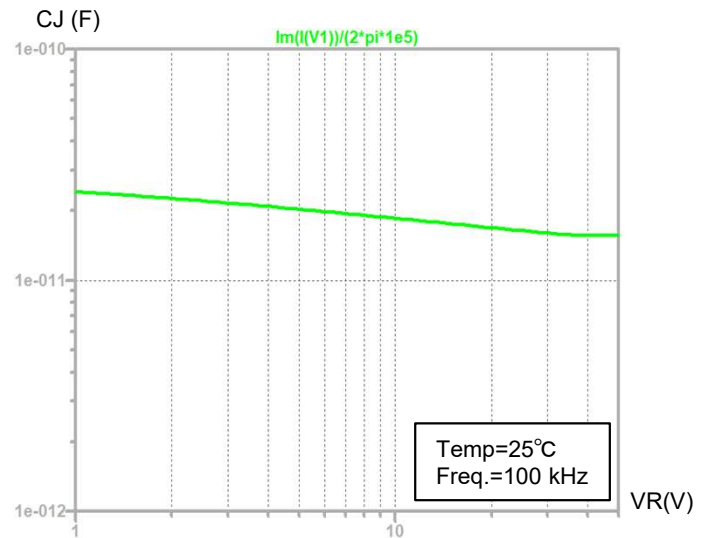
```
.step dec param VD 1 50 10
.ac lin 1 100000 100000
.options TNOM=25
```

Simulation results are following.
Explanatory notes — : simulated

CjFreq[VR](Di)



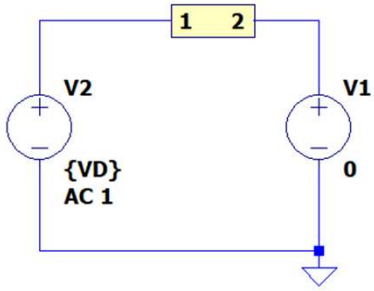
CjVr(ZD)



CjVr, trrlflr Testbench

Referred to Data Sheet

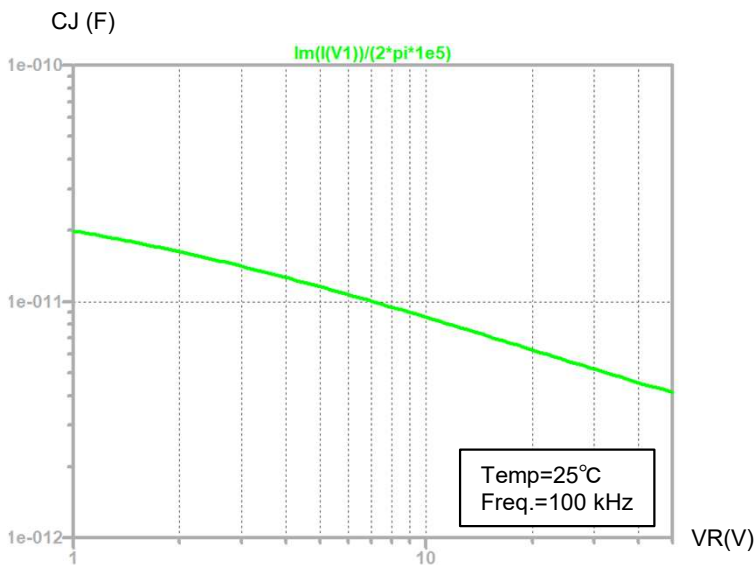
CjVr(Di)



```
.step dec param VD 1 50 10
.ac lin 1 100000 100000
.options TNOM=25
```

Simulation results are following.
 Explanatory notes — : simulated

CjVr(Di)



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