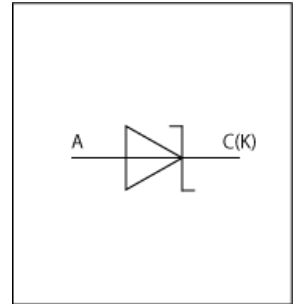


LTspice Model

Zener Diode

VISHAY INTERTECH

3KASMC24A



Model Information

Model A macro model based on general SPICE diode model
Call Name MDC_3KASMC24A_LT
Pin Assign 1:A 2:C
File List Model Library MDC_3KASMC24A_LT01.lib
 Model Report MDC_3KASMC24A_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 21-Oct-08
- Product name 3KASMC24A
- Company name Vishay Intertechnology, Inc.
- Characteristics $I_f V_f[Temp], V_{rI} I_r[Temp], I_r V_r[Temp], V_{rI} I_r[Temp]^2, C_j V_r, Surge Reverse Current Waveform, Surge Forwarded Current Waveform$

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.	
Zener Voltage	26.7(at 1mA)	to	29.5(at 1mA)	V
Clamping Voltage(max)	38.9(at 77.1A)	to	38.9(at 77.1A)	V
Temperature	-65	to	185	deg C

Diode

○ : Implemented
× : Not Implemented
— : Not applicable

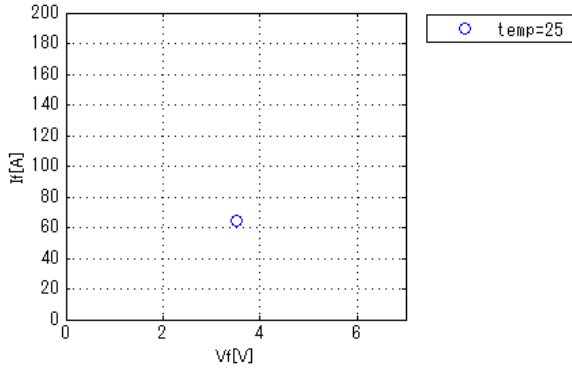
Model Functions Table

RANK=1

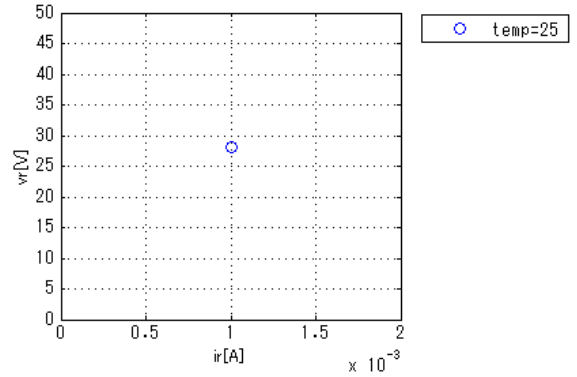
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○
Reverse recovery characteristics	1	—
Rectification characteristics(Bridge)	1	—

Simulation results are following.
 Explanatory notes — : simulated

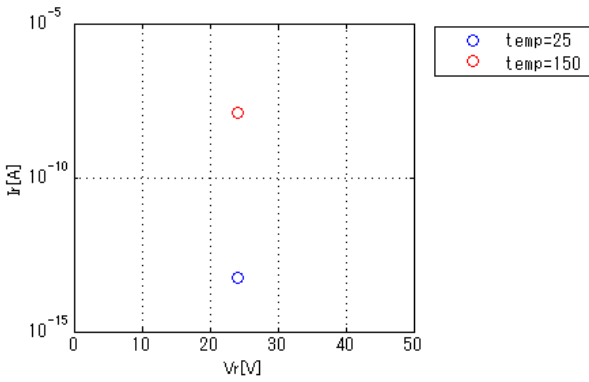
IfVf[Temp]



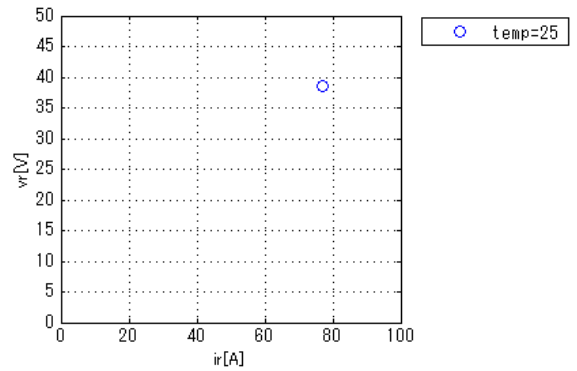
VrIr[Temp] (Zener Voltage)



IrVr[Temp] (Leak Current)

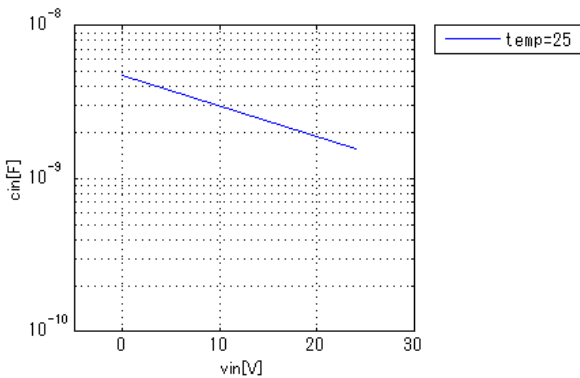


VrIr[Temp]2 (Clamping Voltage)



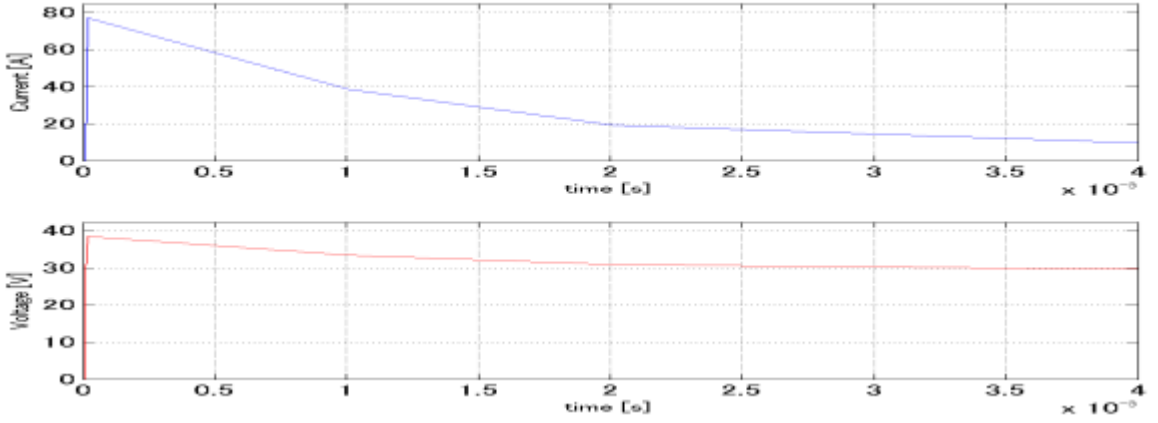
CjVr

Freq = 1000000Hz

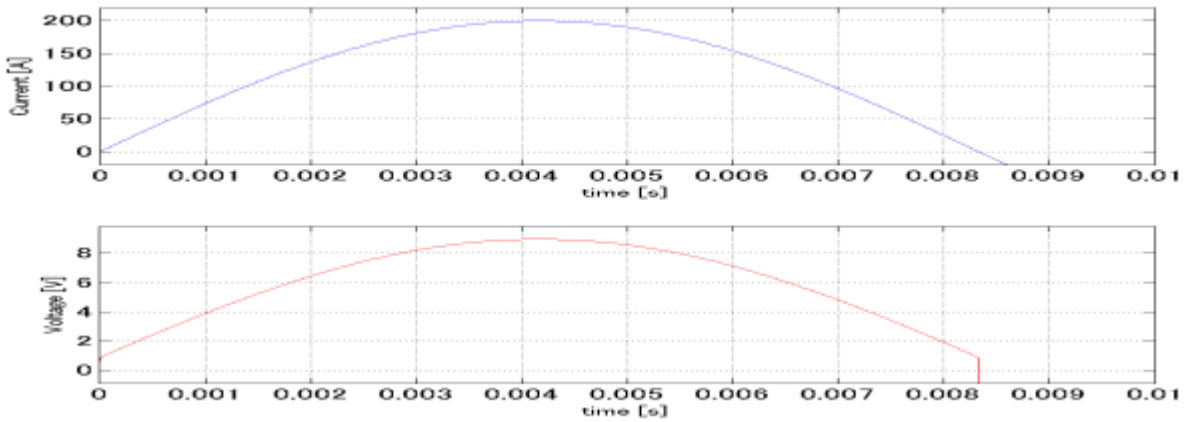


Simulation results are following.
Explanatory notes — : simulated

Surge Reverse Current Waveform



Surge Forward Current Waveform



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