

# LTspice Model

## Varistor

### Panasonic

### ERZVA9V391



### Model Information

**Model** A macro model  
**Call Name** MDC\_ERZVA9V391\_LT  
**Pin Assign** 1:1 2:2  
**File List** Model Library MDC\_ERZVA9V391\_LT01.lib  
 Model Report MDC\_ERZVA9V391\_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 2021/12/23
- Product name ERZVA9V391
- Company name Panasonic Corporation
- Characteristics V<sub>l</sub> IfTemp, VaristorVoltage, CapacitanceV<sub>r</sub>, ClampingCurrentW  
aveform, SurgeCurrentWaveform

### 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.	
VaristorVoltage(typ)	390(at 1mA)	to	390(at 1mA)	V
ClampingVoltage(max)	650(at 25A)	to	650(at 25A)	V
Temperature	-40	to	125	deg C

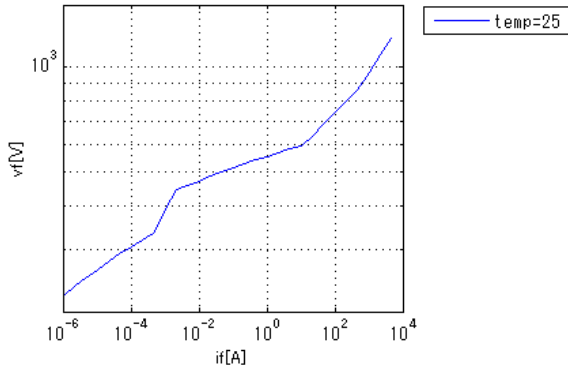
○ : Implemented  
 × : Not Implemented  
 — : Not applicable

**Model Functions Table**
**RANK=1**

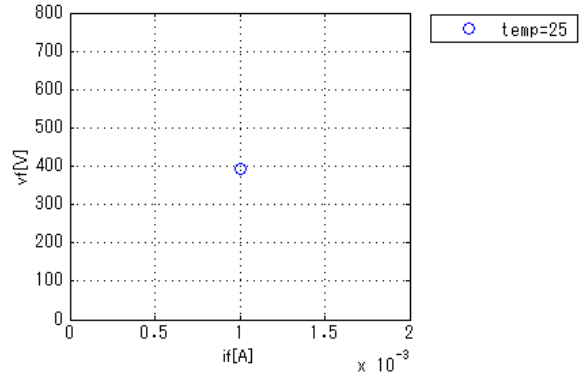
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○

Simulation results are following.  
 Explanatory notes — : simulated

**VfIf[Temp] (same VrIr[Temp])**

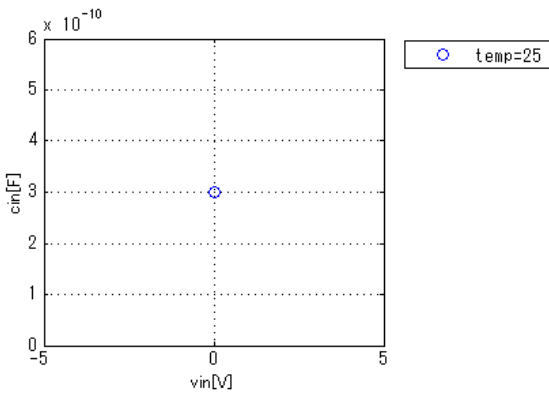


**Varistor Voltage**

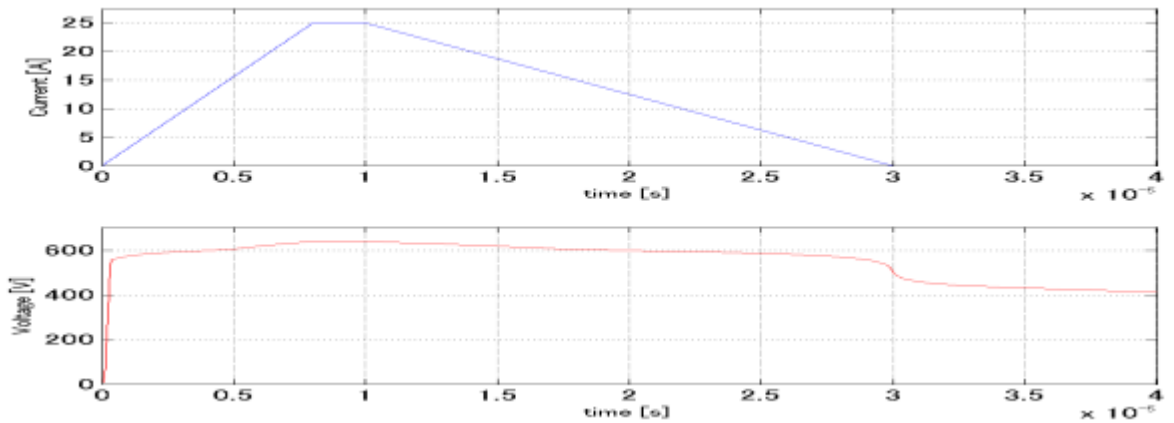


**CapacitanceVr**

Freq = 1000Hz



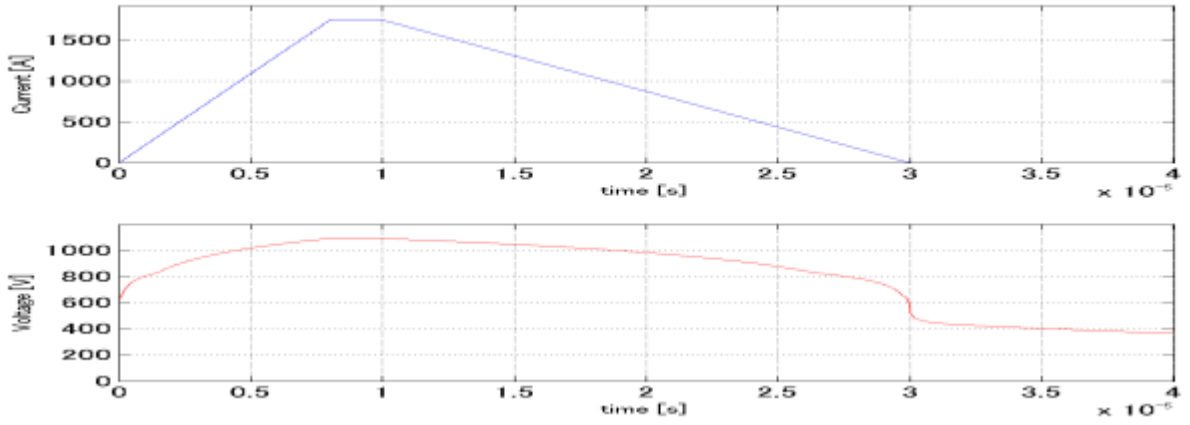
**Clamping Current Waveform**



Simulation results are following.

Explanatory notes — : simulated

### Surge Current Waveform



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