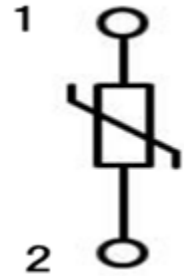


# LTspice Model

## Surge Absorber

### OKAYA

### R5K-900P45U



### Model Information

**Model** An original macro model  
**Call Name** MDC\_R5K-900P45U\_LT  
**Pin Assign** 1:1 2:2  
**File List** Model Library MDC\_R5K-900P45U\_LT01.lib  
 Model Report MDC\_R5K-900P45U\_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 Unknown
- Product name R5K-900P45U
- Company name OKAYA ELECTRIC INDUSTRIES CO.,LTD.
- Characteristics IfVf[Temp],Irvr[Temp],CjVr,DcFiringPotential,SurgeCurrent,SurgeVoltage

### 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.	
DC firing potential	90	to	90	V
Temperature	-20	to	80	deg C

## Surge Absorber

○ : Implemented  
 × : Not Implemented  
 — : Not applicable

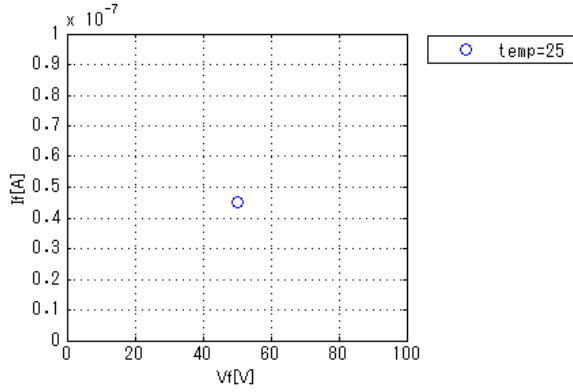
**Model Functions Table**
**RANK=1**

Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○
DC firing potential	1	○
Surge voltage-Transient	1	○

Simulation results are following.  
 Explanatory notes — : simulated

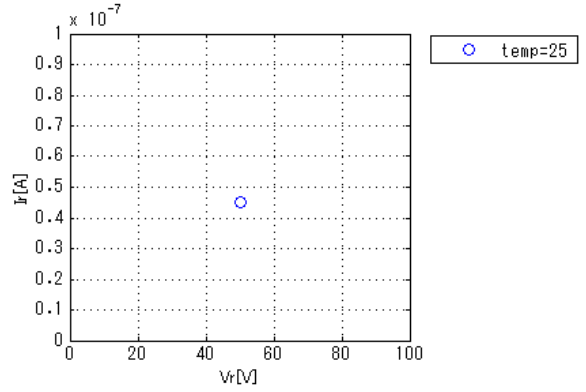
**IfVf[Temp]**

GMIN = 1E-15



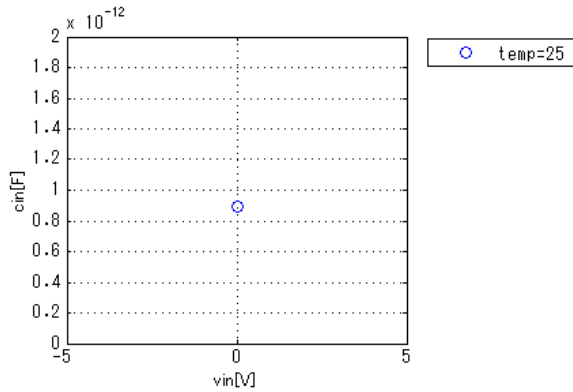
**IrVr[Temp]**

GMIN = 1E-15



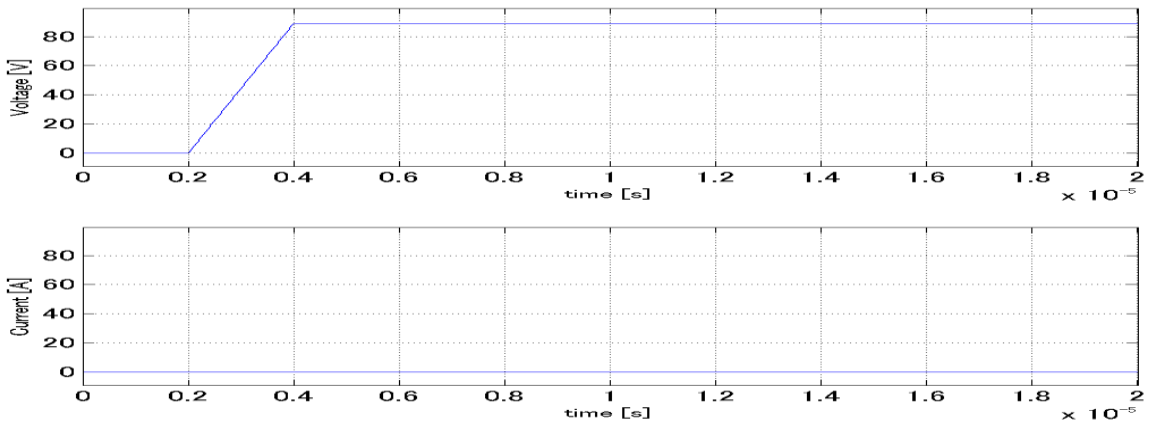
**CjVr**

Freq = 1000000Hz



**DC Firing Potential ( not reached at 90\*0.99V )**

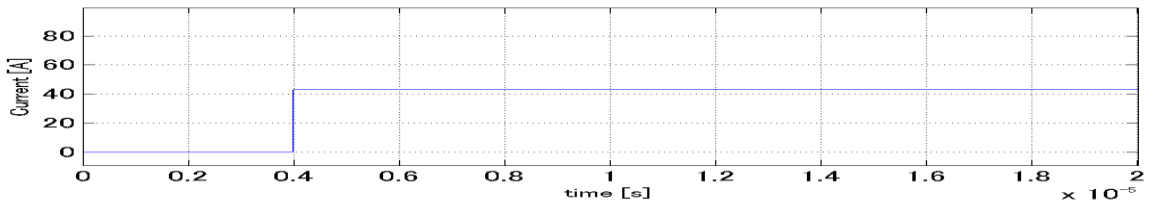
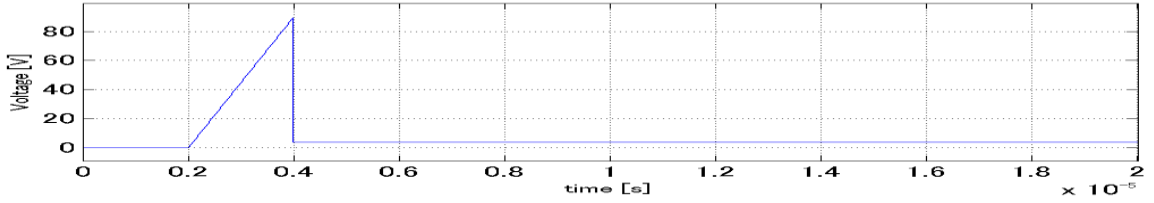
Road = 2 ohm



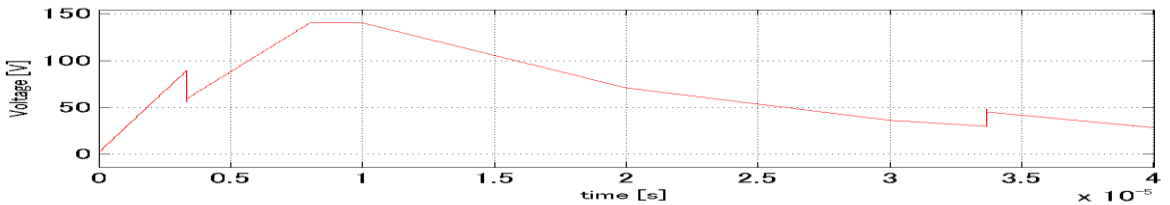
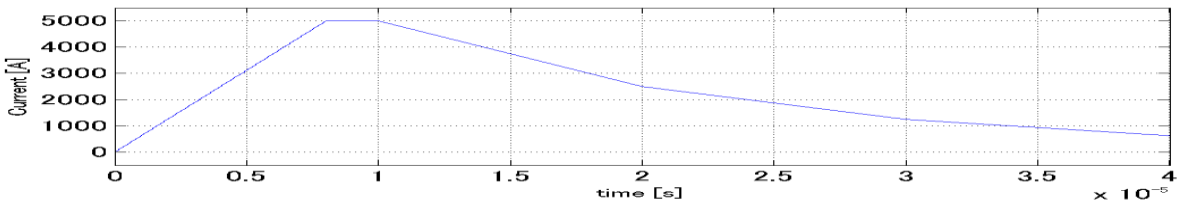
Simulation results are following.  
 Explanatory notes — : simulated

**DC Firing Potential ( reached at 90V )**

Road = 2 ohm

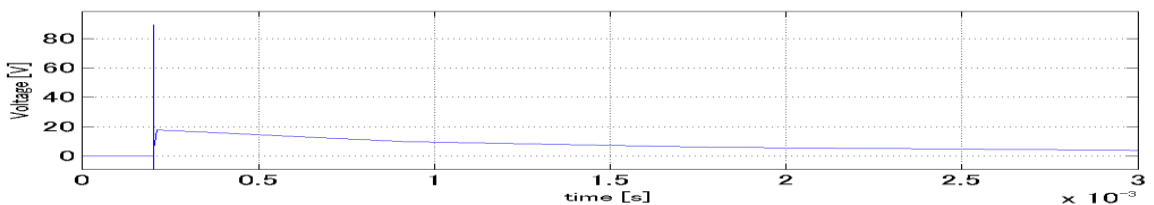
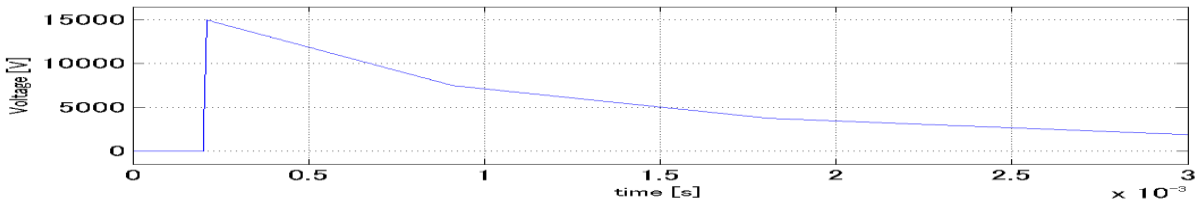


**Surge Voltage**



**Surge Voltage**

UP R=1Gohm DOWN DUT



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