

PSpice Model

TVS

Littelfuse

5.0SMDJ13A

Model Information

Model	A macro model based on general SPICE diode model		
Call Name	MDC_5_0SMDJ13A_PS		
Pin Assign	1:C 2:A		
File List	Model Library	MDC_5_0SMDJ13A_PS.lib	
	Model Report	MDC_5_0SMDJ13A_PS.pdf(this file)	
Verified Simulator Version	PSpice version 17.4		

Note

References

The information which was used for modeling is as follow:

[Data Sheet]

●Date/Version	06/29/22
●Product name	5.0SMDJ13A
●Company name	Littelfuse, Inc.

[Characteristics listed]

●Characteristics	IfVf[Temp], IrVr[Temp], CjVr, SurgeReverseCurrentWaveform
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Simulation Range

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

Item	Condition	Unit
Temperature	25	deg C

Diode

○ : Implemented
 × : Not Implemented
 — : Not applicable

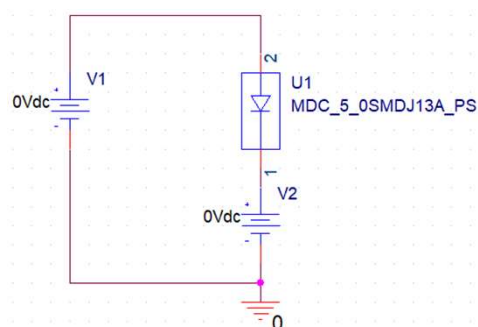
Model Functions Table

RANK=1

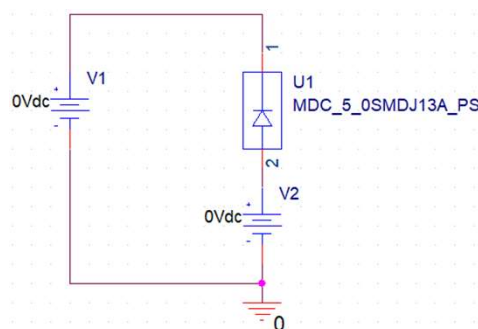
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○
Surge Reverse Current-Transient	1	○

IfVf[Temp], IrVr[Temp] Testbench Referred to Data Sheet

IfVf[Temp]

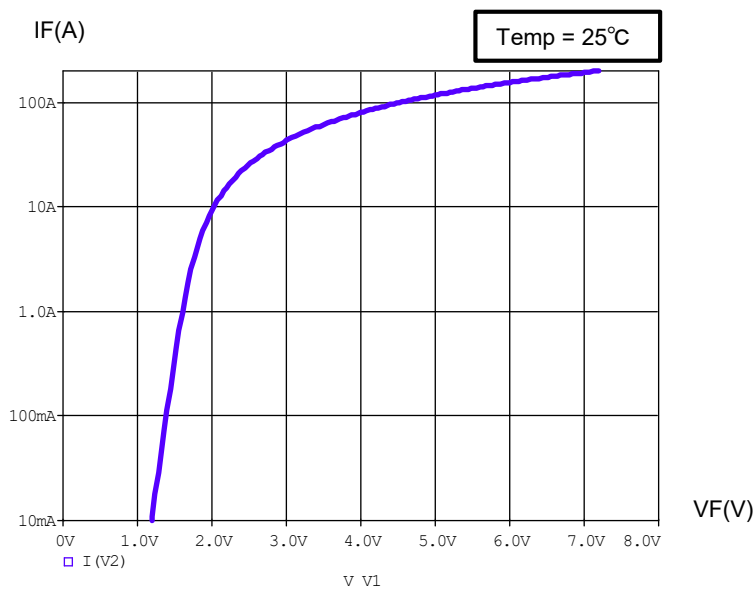


IrVr[Temp]



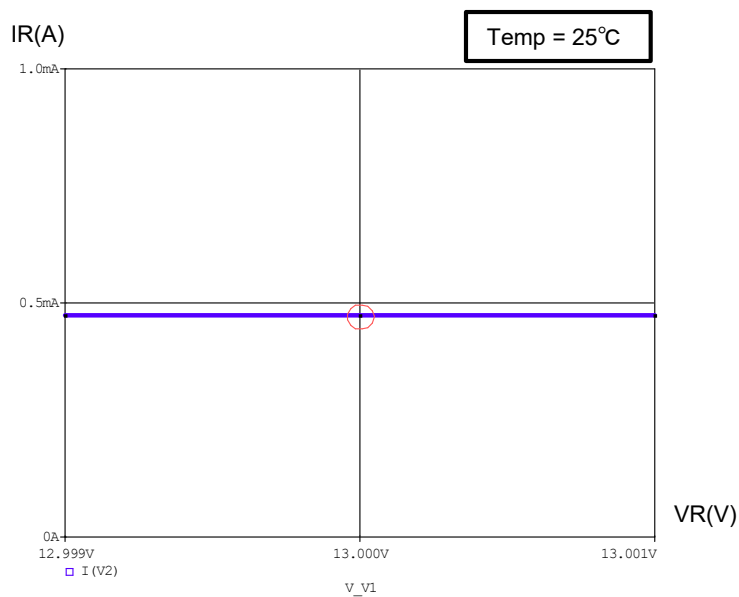
Simulation results are following.
Explanatory notes — : simulated

IfVf[Temp]



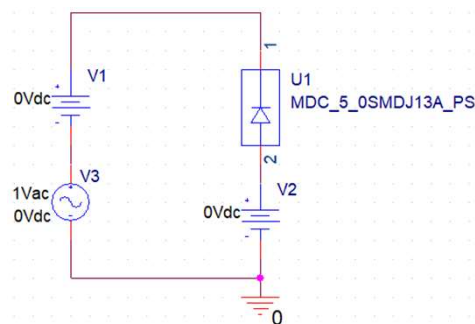
IrVr[Temp]

When VR=13V, IR<500μA

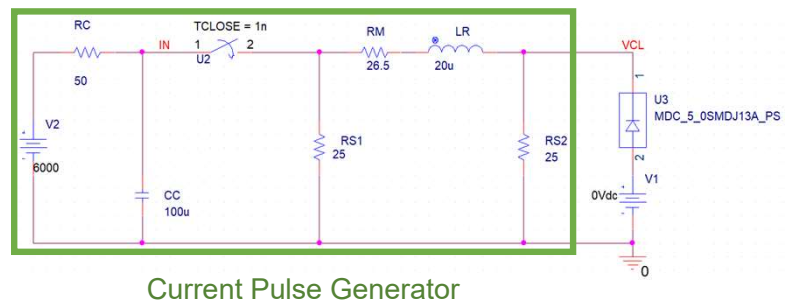


CjVr, Surge Reverse Current Waveform Testbench Referred to Data Sheet

CjVr



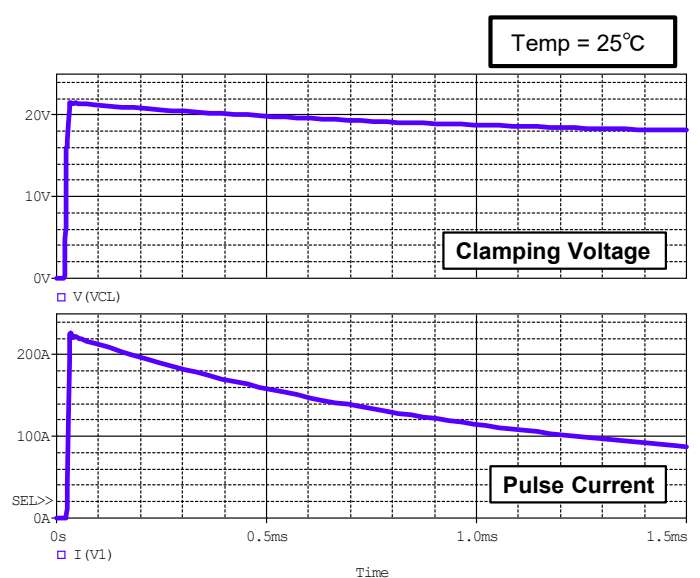
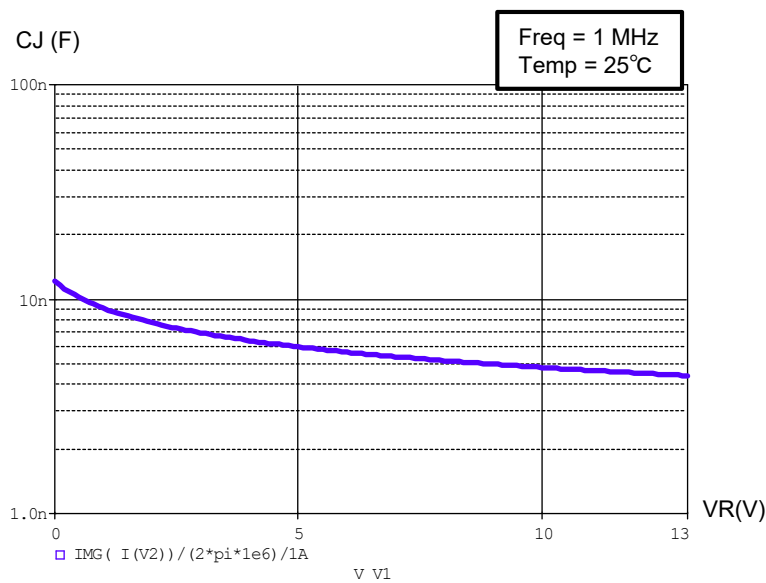
Surge Reverse Current Waveform



Simulation results are following.
Explanatory notes — : simulated

CjVr

Surge Reverse Current Waveform



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