

# PSpice Model

## Switching Diode

### ON Semiconductor

#### 1N4148

### Model Information

**Model** A macro model  
**Call Name** MDC\_1N4148\_PS  
**Pin Assign** 1:A 2:C  
**File List** Model Library MDC\_1N4148\_PS.lib  
Model Report MDC\_1N4148\_PS.pdf

### Verified Simulator Version

### Note

### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version October 2017
- Product name 1N4148
- Company name ON Semiconductor

[Characteristics listed]

- Characteristics IfVf,IrVr,CjVr,Trr

### Simulation Condition

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

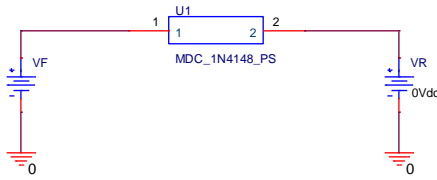
**Model Functions Table**

RANK=1

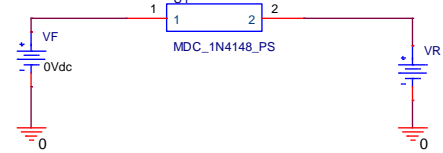
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	○
Reverse recovery characteristics	1	○
Rectification characteristics(Bridge)	1	—
Surge voltage-Transient	2	—

Simulation results are following.  
 Explanatory notes — : simulated

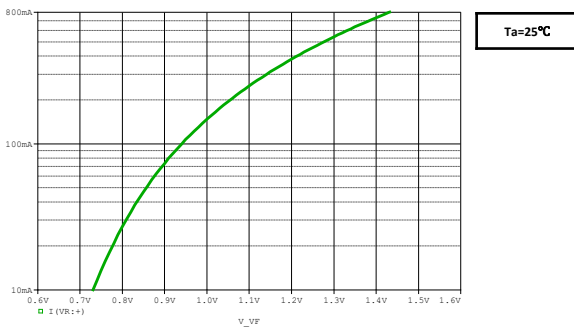
**IfVf Testbench**



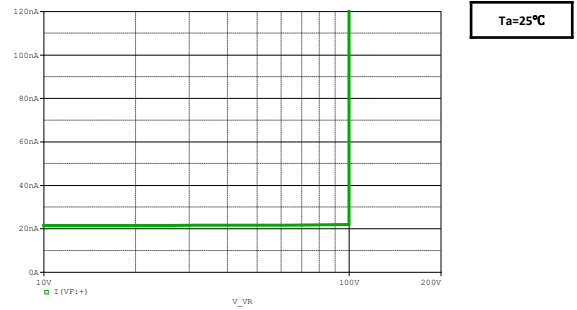
**IrVr Testbench**



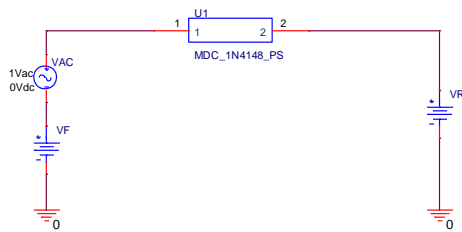
**IfVf Data Sheet**



**IrVr Data sheet**

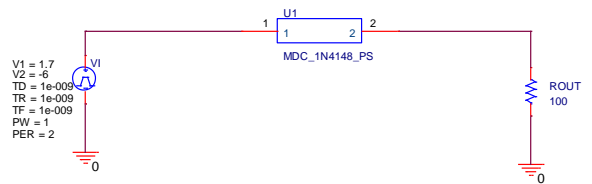


**CjVr Testbench**

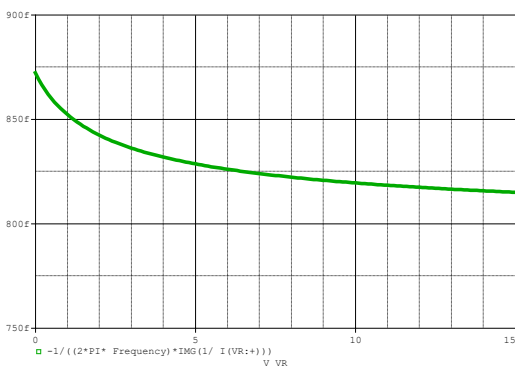


**Trr Testbench**

Characteristic	Symbol	MIN.	MAX.	UNIT
Reverse Recovery Time (If=10mA, Irr=1.0mA, Vr=6.0V, RL=100Ω)	trr	-	4.0	ns

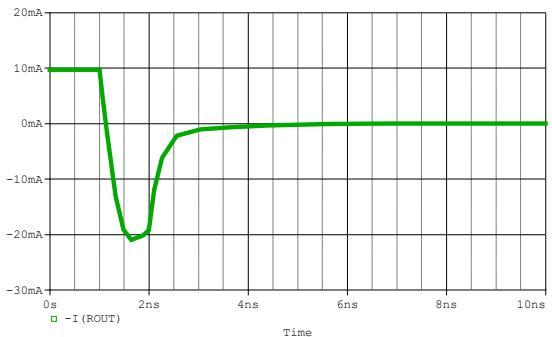


**CjVr Data Sheet**



**Trr Data Sheet**

Measurement	Value
XatNth Y(-I(ROUT),-1 m,2)-XstNth Y(-I(ROUT),0,1)	2.04157n



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