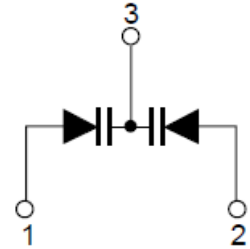


# PSpice Model

## Variable Capacitance Diode

### TOKO

### KV1400



### Model Information

**Model** A macro model based on general SPICE diode model  
**Call Name** MDC\_KV1400\_PS  
**Pin Assign** 1:A1 2:A2 3:C(both)  
**File List** Model Library MDC\_KV1400\_PS01.lib  
 Model Report MDC\_KV1400\_PS.pdf (this file)

**Verified Simulator Version** PSpice version 17.2  
**Note**

### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version January 2000
- Product name KV1400
- Company name TOKO, INC.
- Characteristics CjVr,IrVr[Temp],QfactorVr[Freq],ESRFreq[Vr],NormCjVr[Temp],DiffCjVr[Freq]

### 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.	
Reverse Voltage (DC)	0	to	18	V
Temperature	-55	to	150	deg C

## Variable Capacitor

○ : Implemented  
× : Not Implemented  
— : Not applicable

Model Functions Table

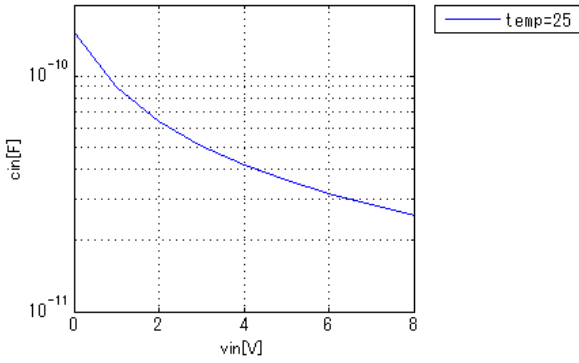
RANK=1

Functions	RANK	Implemented
IF-VF(Temp)	1	—
IR-VR(Temp)	1	○
Capacitanc-VR	1	○
Qfactor-Frequency	1-	○
ESR-Frequency	1	○
Capacitance-Temp	1	○

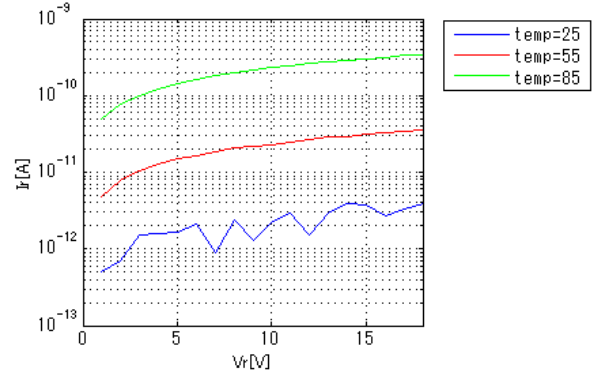
Simulation results are following.  
 Explanatory notes — : simulated

**CjVr**

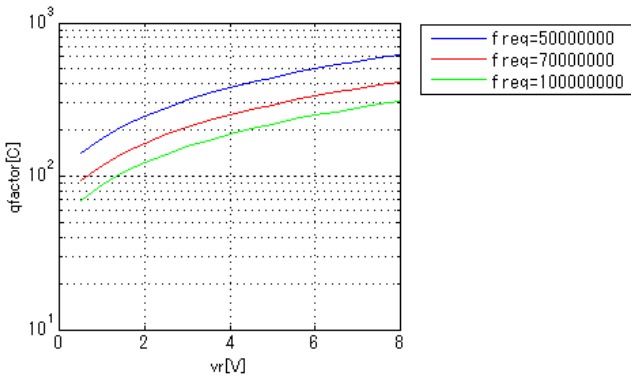
Freq = 1000000Hz



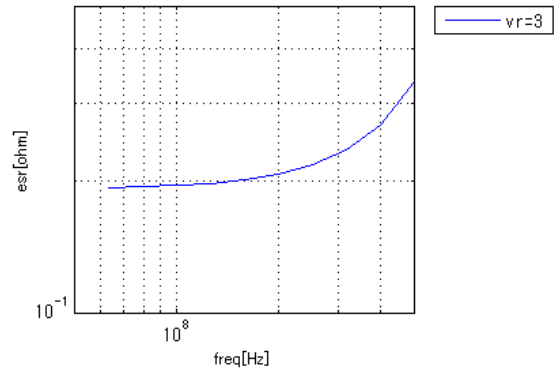
**IrVr[Temp]**



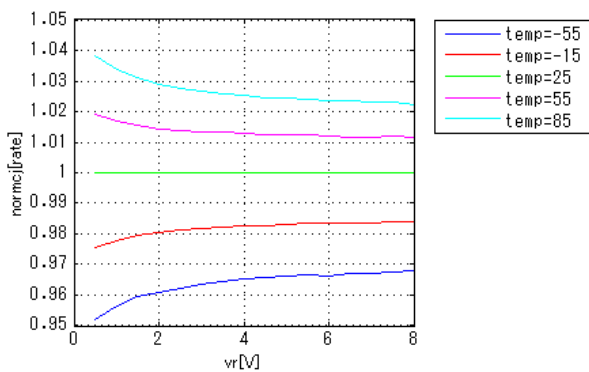
**QfactorVr[Freq]**



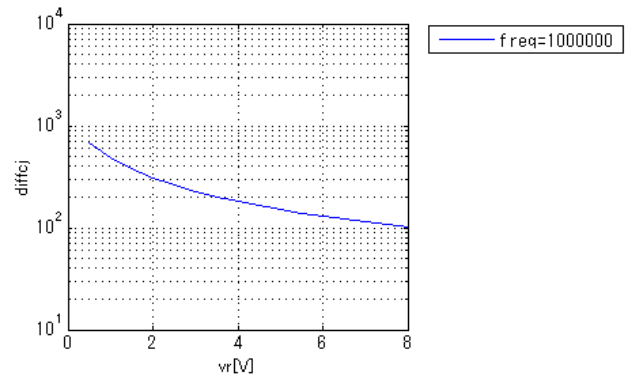
**ESRFreq[Vr]**



**NormCjVr[Temp]**



**DiffCjVr[Freq]**



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