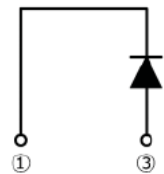


LTspice Model

Fast Recovery Diode

KYOCERA

FSF10A20



Model Information

TO-220 Full-Mold 2pin

Model	A macro model based on general SPICE diode model		
Call Name	MDC_FSF10A20_LT		
Pin Assign	1:C 3:A		
File List	Model Library	MDC_FSF10A20_LT01.lib	
	Model Report	MDC_FSF10A20_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	August 2016 v01.1		
●Product name	FSF10A20		
●Company name	KYOCERA Corporation		
●Characteristics	IfVf[Temp],IrVr[Temp],TrrIfIr,SurgeWaveform		

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	0	to	200	V
Temperature	-40	to	150	deg C

Diode

○ : Implemented
× : Not Implemented
— : Not applicable

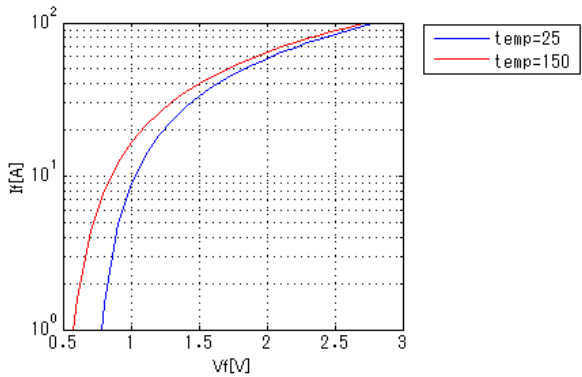
Model Functions Table

RANK=1

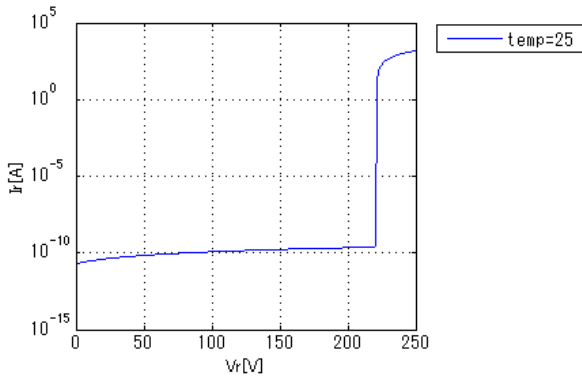
Functions	RANK	Implemented
IF-VF(Temp)	1	○
IR-VR(Temp)	1	○
Capacitance	1	—
Reverse recovery characteristics	1	○
Rectification characteristics(Bridge)	1	—
Surge voltage-Transient	2	—

Simulation results are following.
Explanatory notes — : simulated

IfVf[Temp]

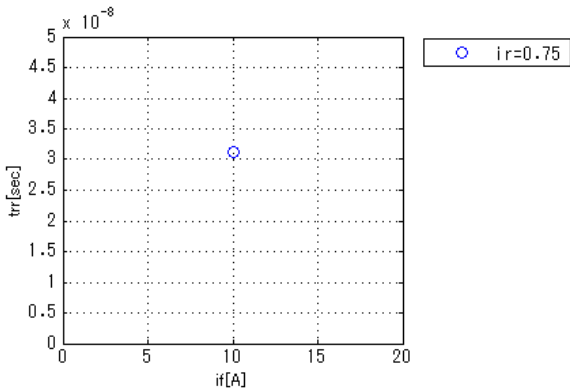


IrVr[Temp]



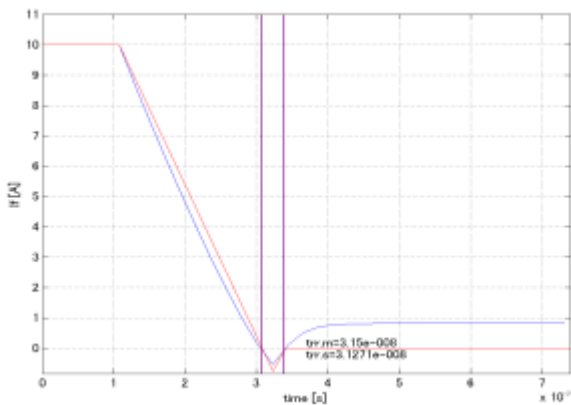
TrrIfIr

Irr = 0.075A, didt = 50A/us



Trr Waveform (Red : Datasheet Blue : Simulation)

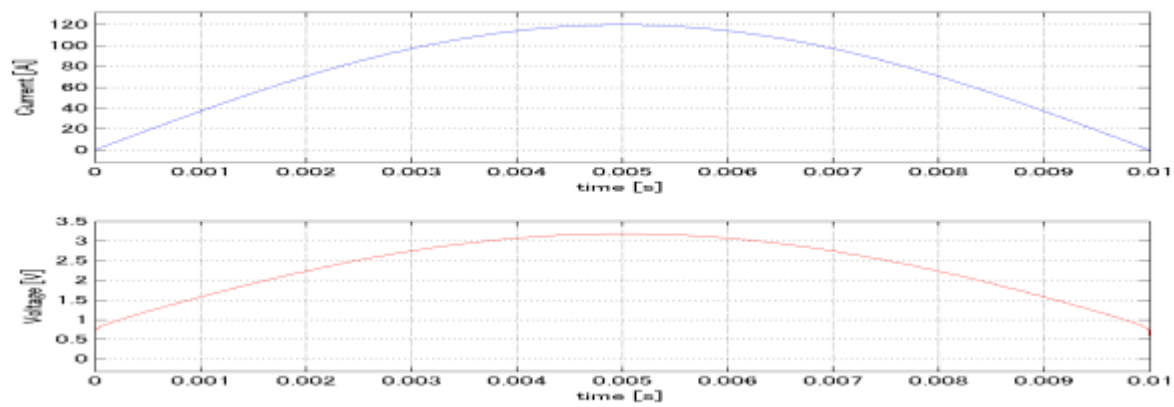
If = 10A, Ir = 0.75A, Irr = 0.075A, didt = 50A/us



Simulation results are following.
Explanatory notes — : simulated

Surge Forward Waveform

Sine Half 50Hz



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