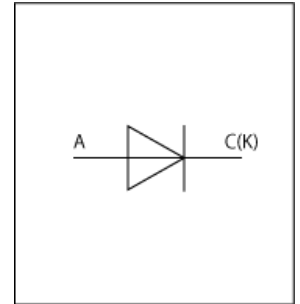


# LTspice Model

## Fast Recovery Diode

### NXP

### BYC15X-600P



#### Model Information

**Model** A macro model based on general SPICE diode model  
**Call Name** MDC\_BYC15X-600P\_LT  
**Pin Assign** 1:C 2:A  
**File List** Model Library MDC\_BYC15X-600P\_LT01.lib  
 Model Report MDC\_BYC15X-600P\_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 Rev.01 - 3 September 2018
- Product name BYC15X-600P
- Company name NXP Semiconductors N.V.
- Characteristics  $I_f[V(Temp)], I_r[V_r(Temp)], T_{rr}[I_r], T_{rr}[I_r]_2, T_{rr}[I_r]_3, T_{rr}[I_r]_4, Q_{rr}[I_r], Q_{rr}[I_r]_2$

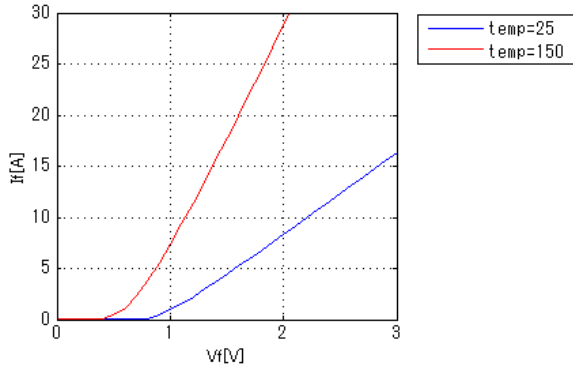
#### Simulation Range

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

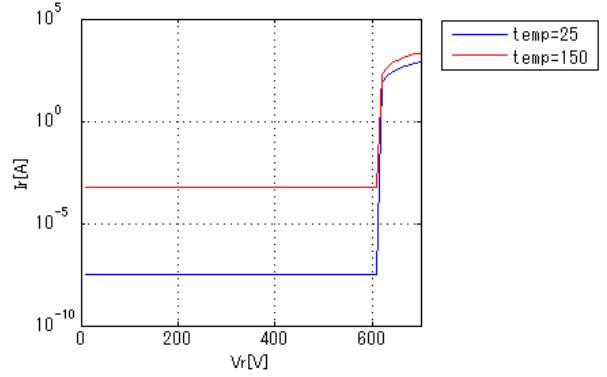
Item	Range			Unit
	Min.		Max.	
Forward Voltage	0	to	600	V
Temperature	-65	to	175	deg C

Simulation results are following.  
 Explanatory notes — : simulated

**IfVf[Temp]**

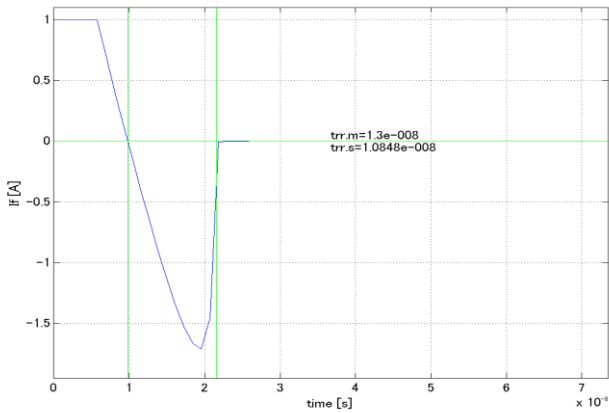


**IrVr[Temp]**



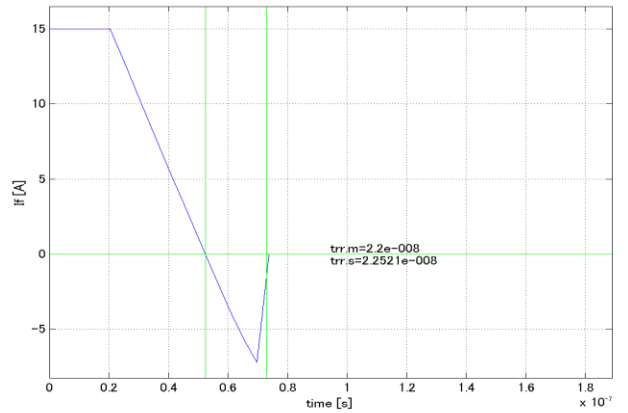
**Trrlf[Ir]**

didt = 200A/us, vr = 30V, temp = 25degC



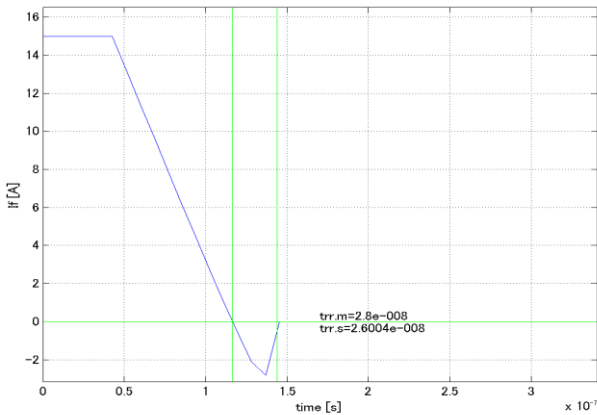
**Trrlf[Ir]2**

didt = 500A/us, vr = 400V, temp = 25degC



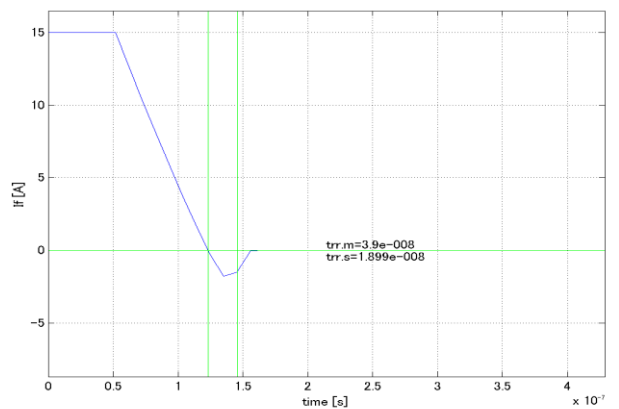
**Trrlf[Ir]3**

didt = 200A/us, vr = 200V, temp = 25degC



**Trrlf[Ir]4**

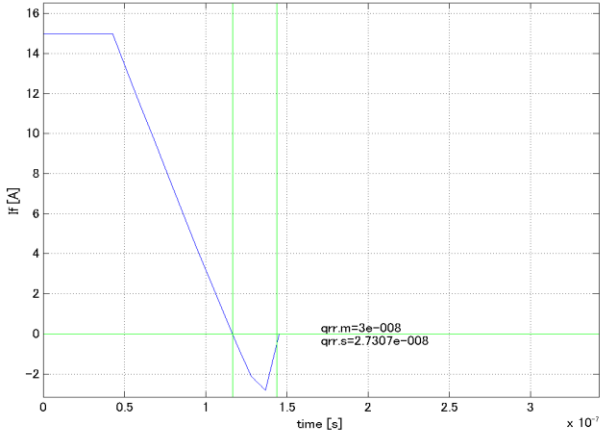
didt = 200A/us, vr = 200V, temp = 125degC



Simulation results are following.  
 Explanatory notes — : simulated

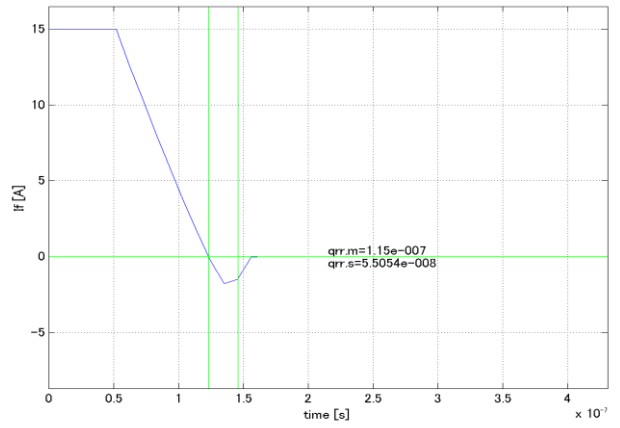
**Qrrlf[1r]**

didt = 200A/us, vr = 200V, temp = 25degC



**Qrrlf[1r]2**

didt = 200A/us, vr = 200V, temp = 125degC



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