LTspice Model
Triac
RENESAS
BCR30AM-12LB
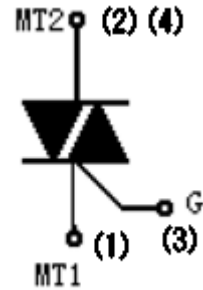
Model Information

Model	A macro model	
Call Name	MDC_BCR30AM-12LB_LT	
Pin Assign	1:T1 2:T2 3:G 4:T2(tab)	
File List	Model Library	MDC_BCR30AM-12LB_LT01.lib
	Model Report	MDC_BCR30AM-12LB_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.3.00 Nov 30, 2007
- ●Product name   BCR30AM-12LB
- ●Company name   Renesas Electronics Corporation
- ●Characteristics   ItmVtm[Temp],NormIgtTemp[Pname],NormIdrmTemp,Norm BvTemp,NormIdrmTemp,NormHoldTemp,SineWaveform,Switching Tgt

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	600	V
Temperature	-40	to	150	deg C

Thyristor or Triac
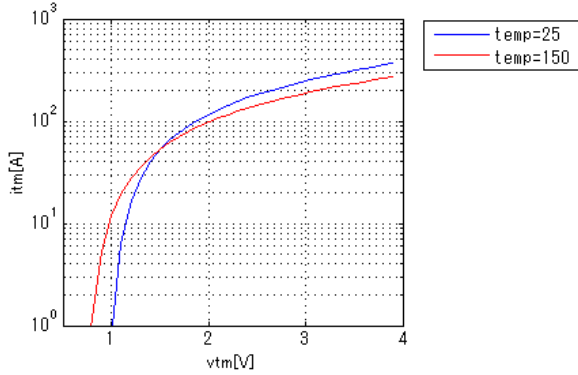
○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

Functions	RANK=1	
	RANK	Implemented
Itm-Vtm(Temp)	1	○
Igt-Temp	1	○
Vgt-Temp	1	○
Bvover-Temp	1	○
Idrm-Temp	1	○
Latch Hold	1	○
Tgt	1	—

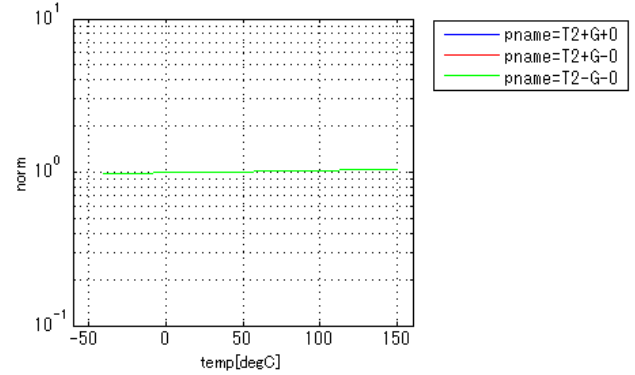Simulation results are following.
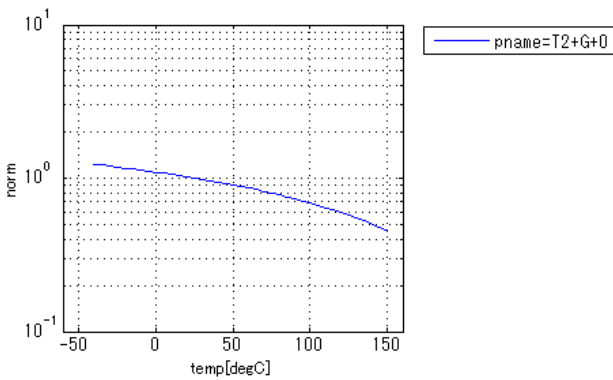Explanatory notes ─ : simulated

ItmVtm[Temp]

vgt. = 1V

NormIgtTemp[Pname]
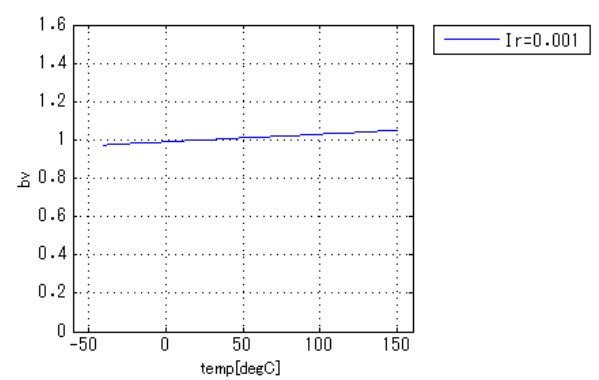
vgt. = 2.5V, vdm. = 6V, rl. = 6ohm, rg. = 330ohm

NormIgtTemp[Pname]
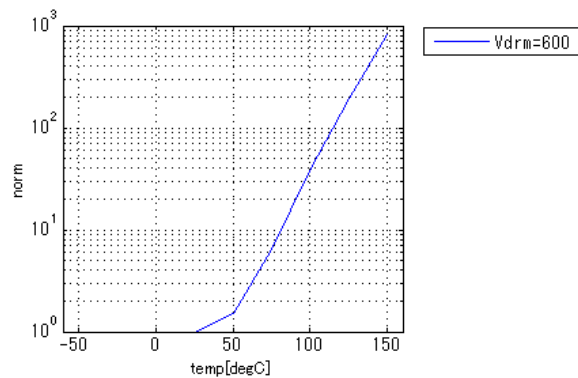
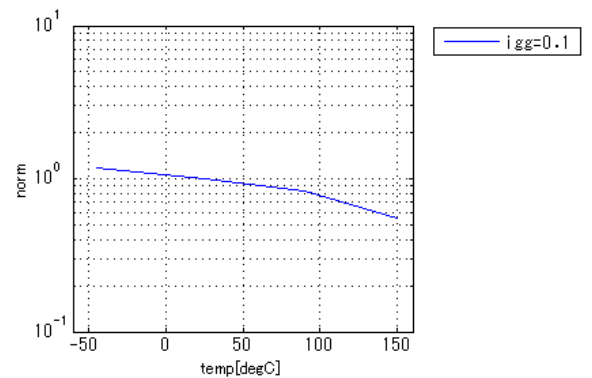igt. = 0.05V, vdm. = 6V, rl. = 6ohm, rg. = 330ohm

NormBvTemp

NormIdrmTemp

vdrm. = 600V

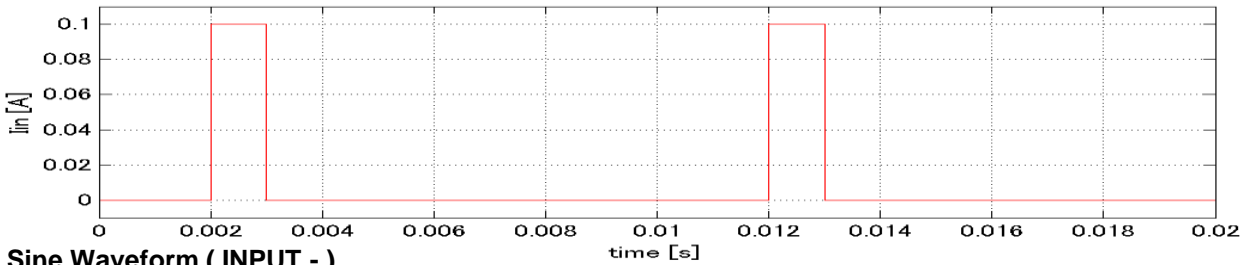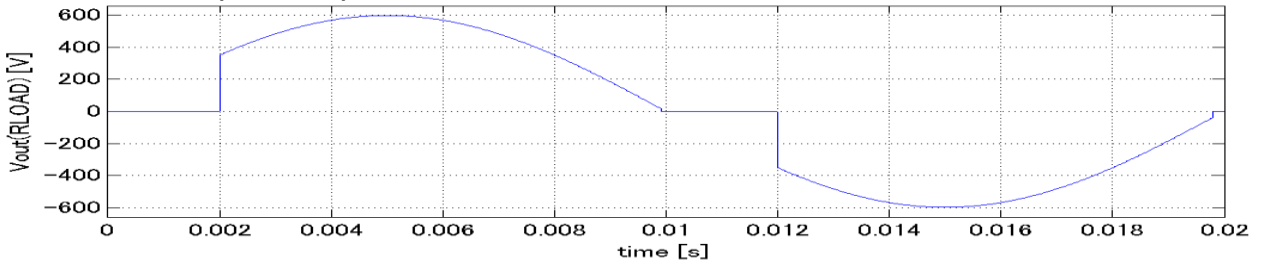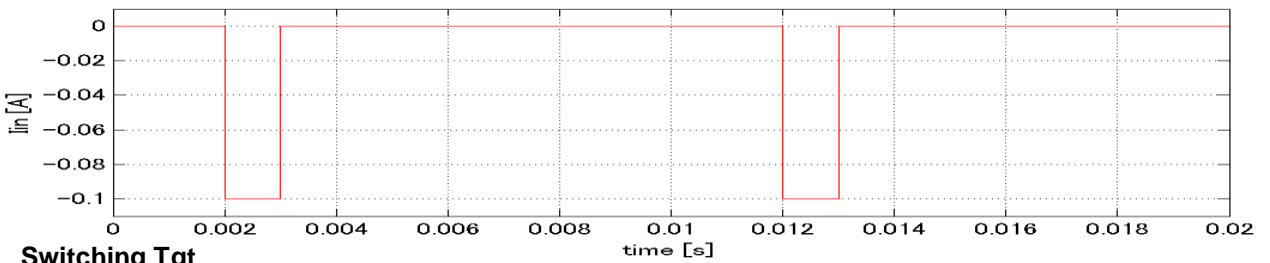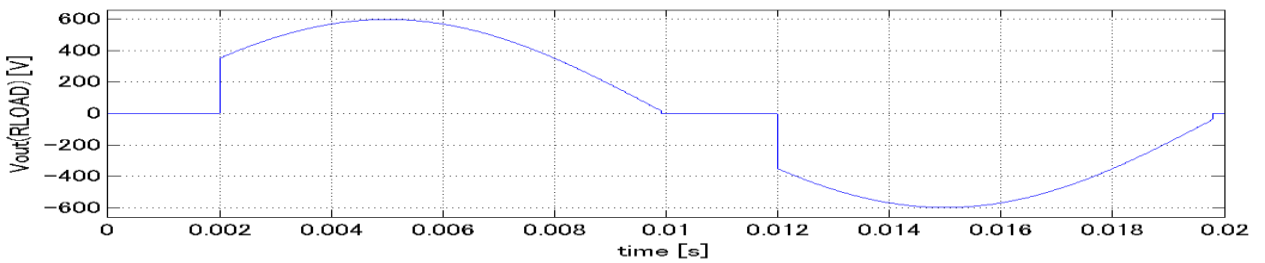## NormHoldTemp

igg. = 0.1A, vdd. = 6V

Simulation results are following.
Explanatory notes 　— : simulated

Sine Waveform (INPUT +)

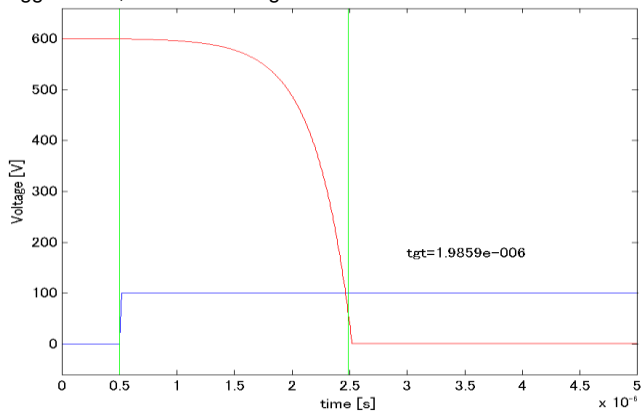## Sine Waveform (INPUT -)

Switching Tgt

igg. = 0.1A, vdd. = 600V digdt = 5A/us

tgt=1.9859e-006

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