

Device Modeling Report

COMPONENTS: THYRISTOR
PART NUMBER: 2N6399
MANUFACTURER: ON SEMICONDUCTOR



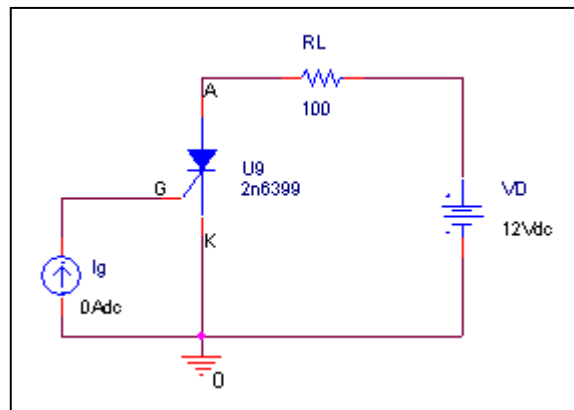
Bee Technologies Inc.

DIODE MODEL

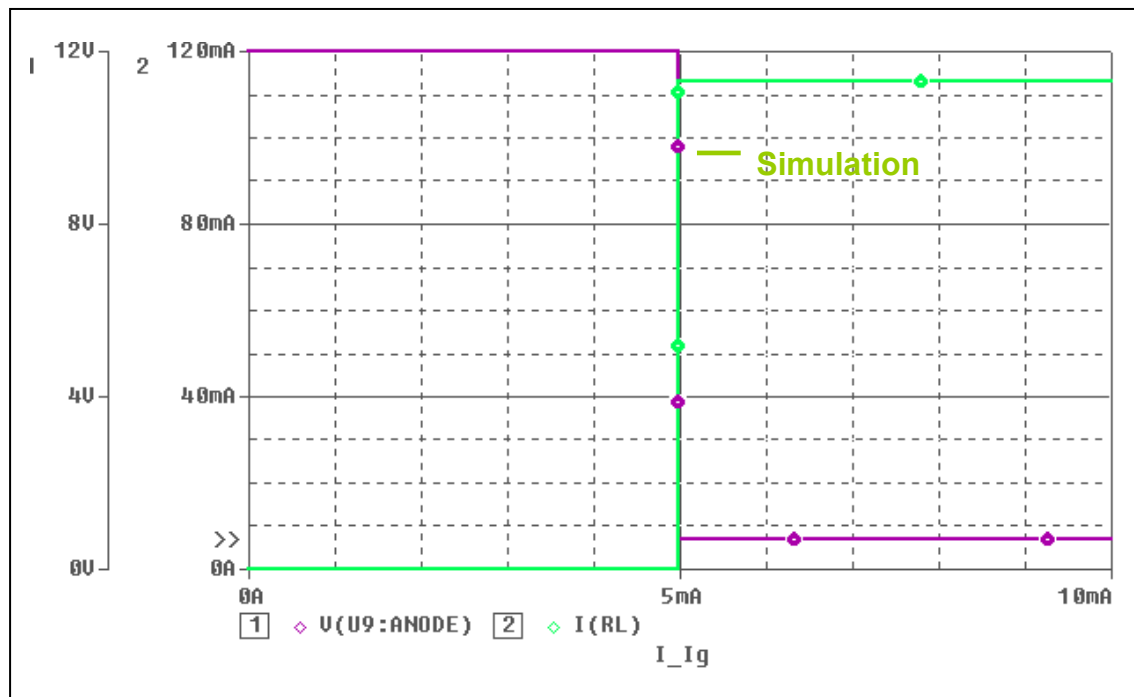
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a positive value)
IBV	Reverse Breakdown Current(a positive value)
TT	Transit Time

IG-VT Characteristic

Evaluation Circuit



Simulation result

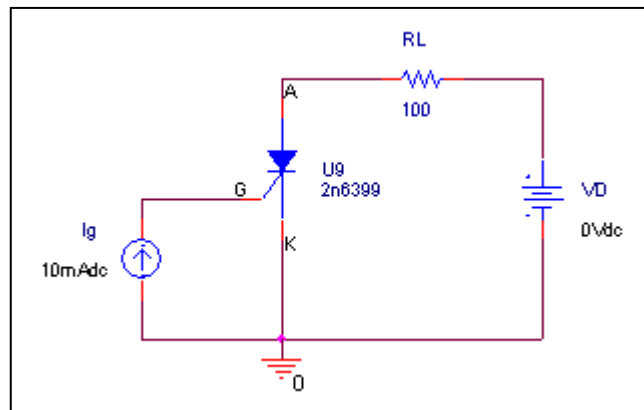


Comparison Table

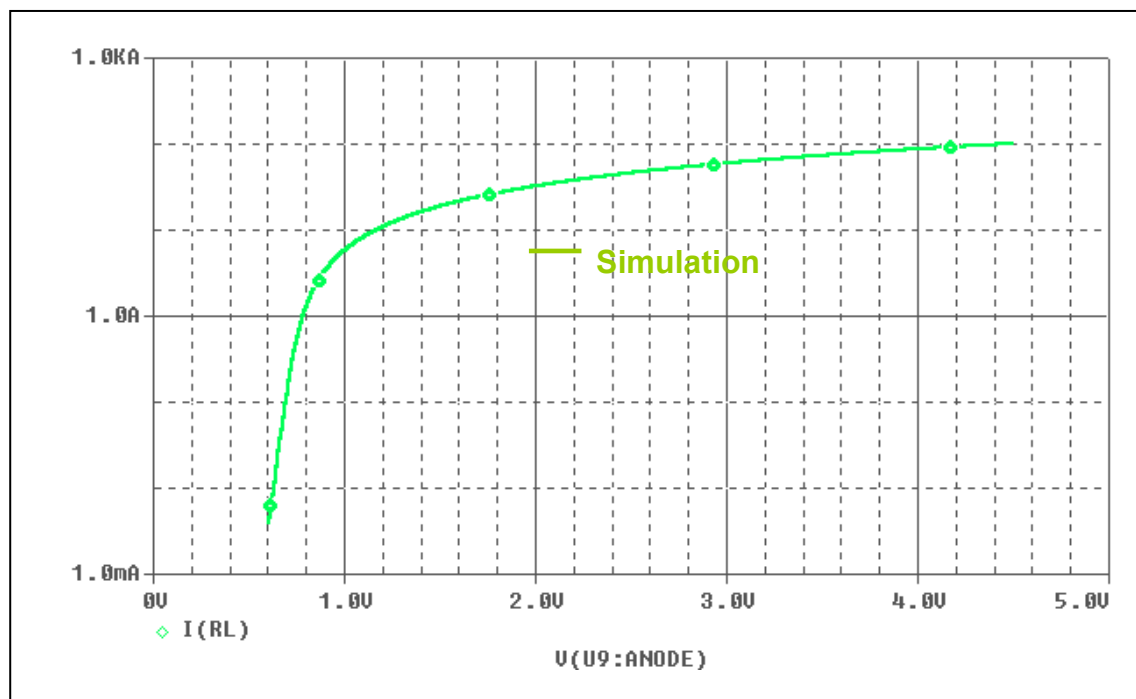
	Measurement	Simulation	% Error
I_{GT} (mA)	5	4.9745	-0.51000
V_{GT} (V)	0.7	0.696955	-0.43500

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

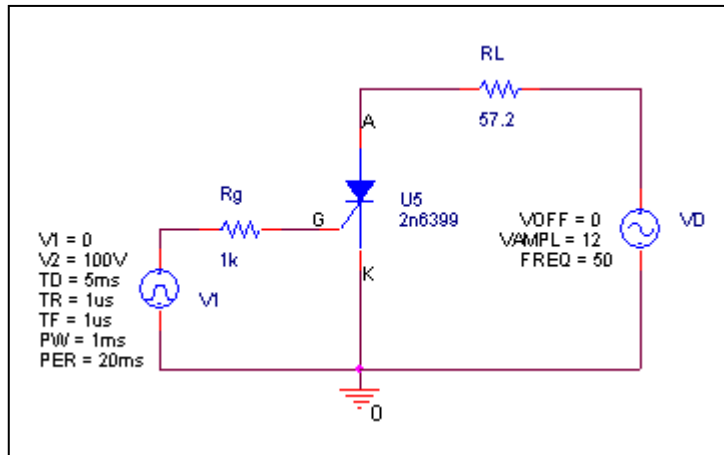


Comparison Table

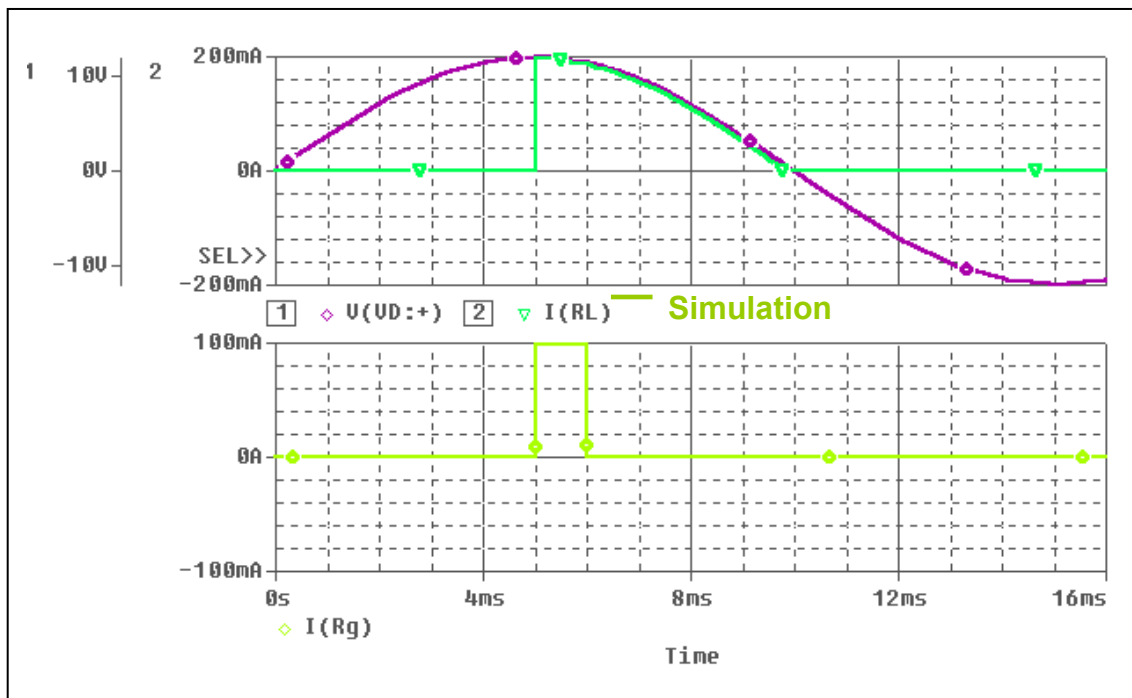
At ITM=24	Measurement	Simulation	% Error
VTM(V)	1.7	1.7098	0.57647

Holding Characteristic (IH)

Evaluation Circuit



Simulation result

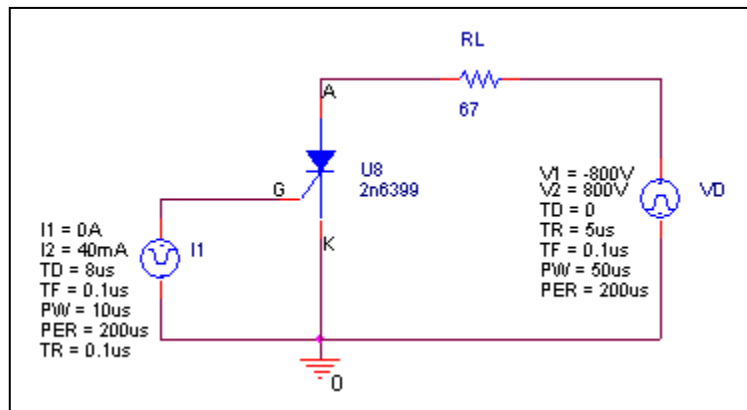


Comparison Table

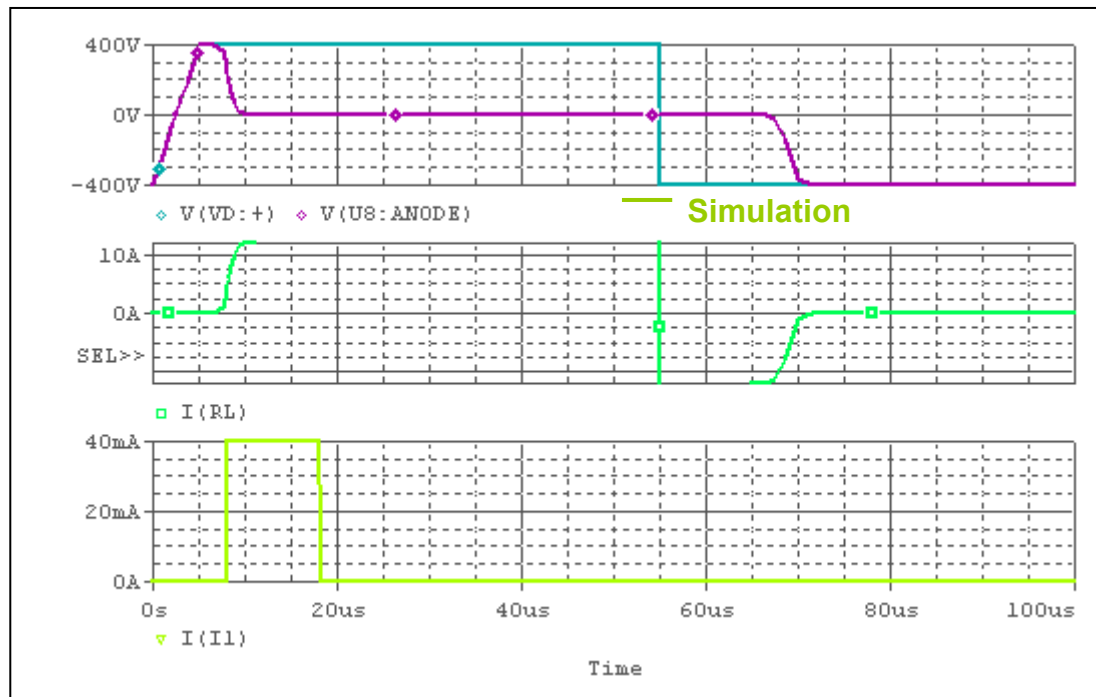
VD=12V	Measurement	Simulation	% Error
IH(mA)	6	6.2282	3.80333

Switching Time Characteristic

Evaluation Circuit



Simulation result



Comparison Table

	Measurement	Simulation	%Error
Ton(us)	1	0.987329	-1.26710
Toff(us)	15	14.955	-0.30000