

Device Modeling Report

COMPONENTS: THYRISTOR
PART NUMBER: 2N5062
MANUFACTURER: ON SEMICONDUCTOR



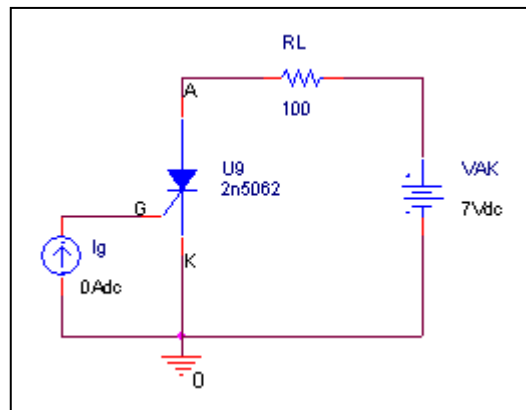
Bee Technologies Inc.

DIODE MODEL

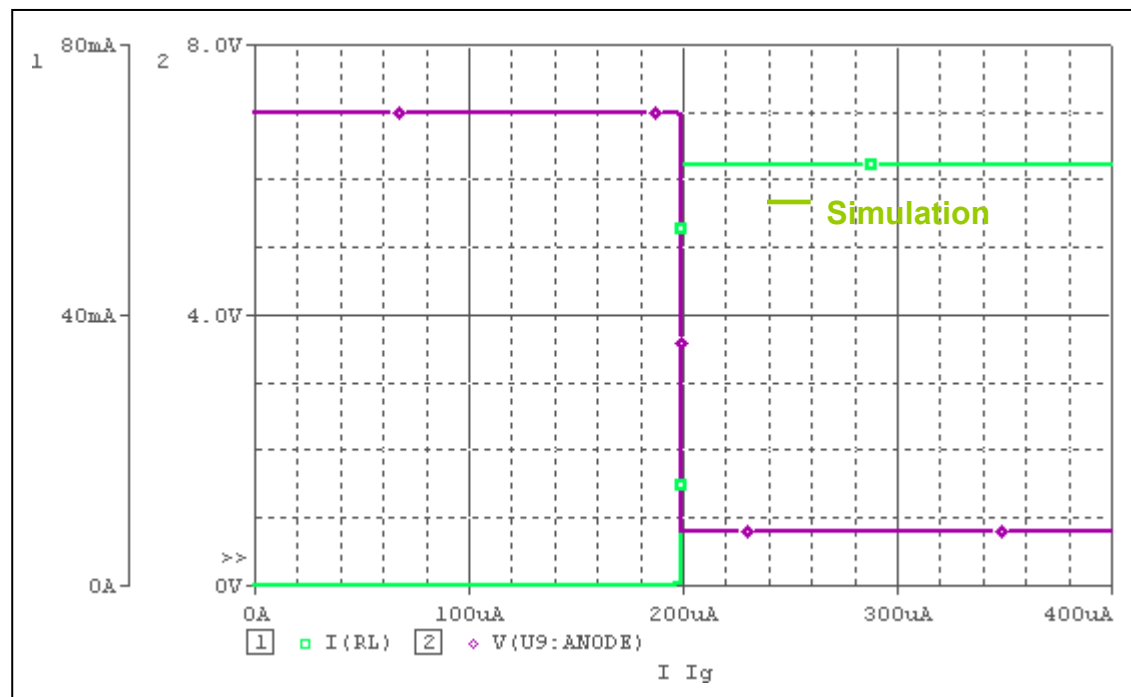
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

IG-VT Characteristic

Evaluation Circuit



Simulation result

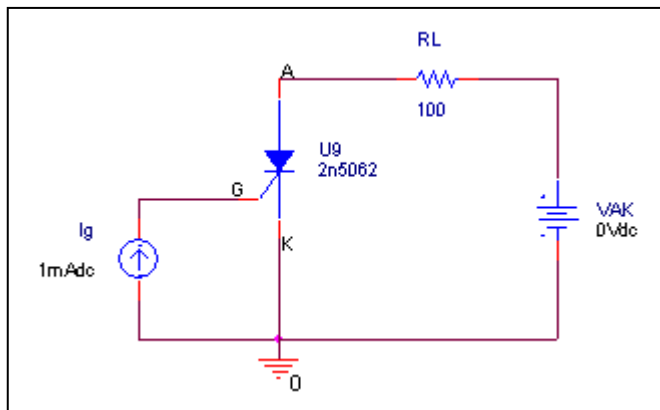


Comparison Table

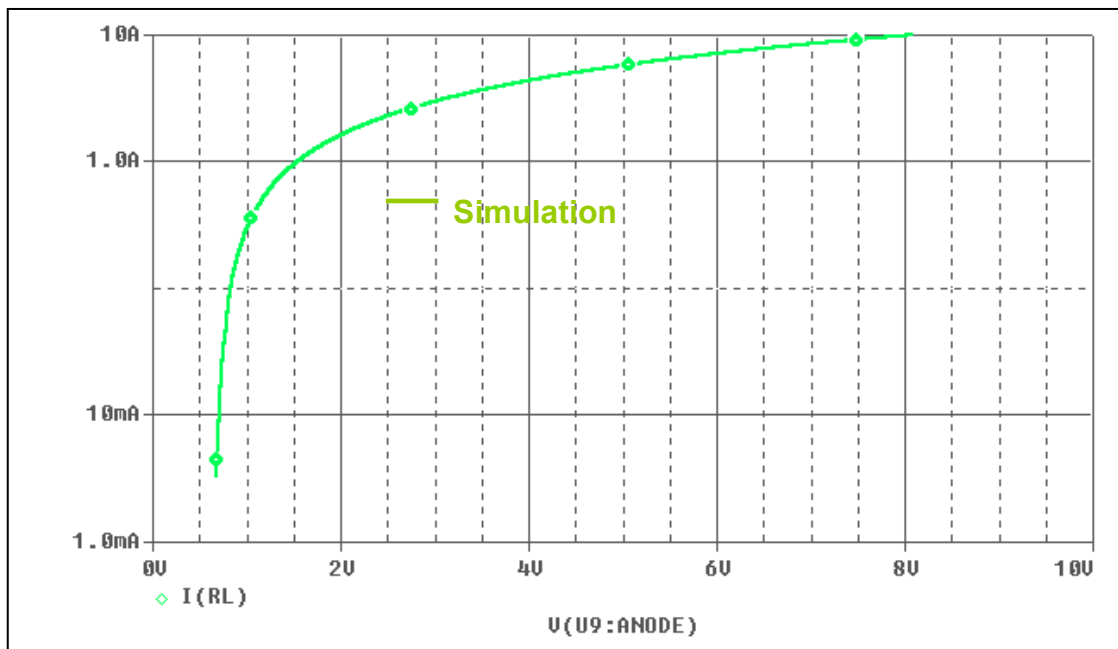
	Measurement	Simulation	% Error
I_{GT} (μA)	200(max)	198.685	-0.65750
V_{GT} (V)	0.8(max)	0.792363	-0.95463

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

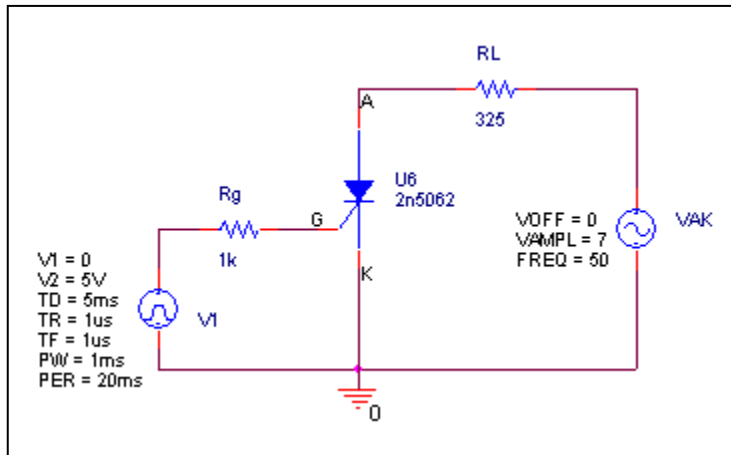


Comparison Table

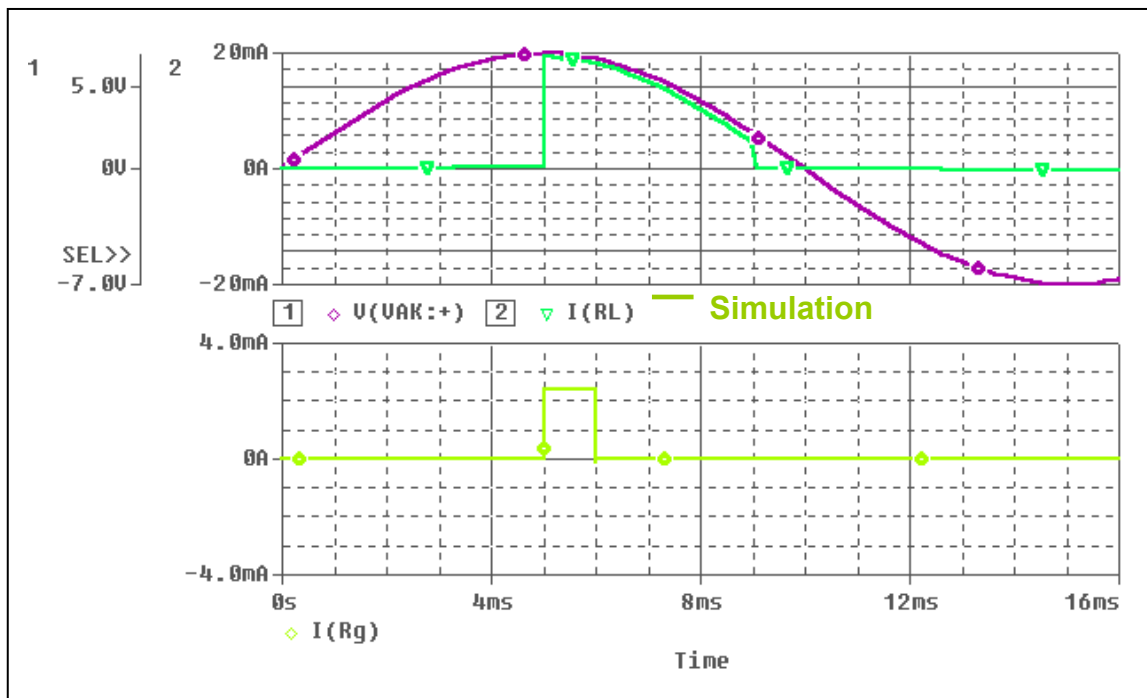
At ITM=1.2	Measurement	Simulation	% Error
VTM(V)	1.7(max)	1.6970	-0.17647

Holding Characteristic (IH)

Evaluation Circuit



Simulation result

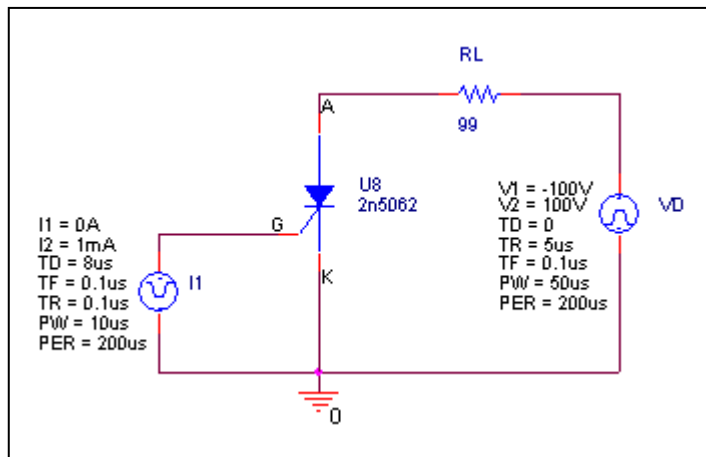


Comparison Table

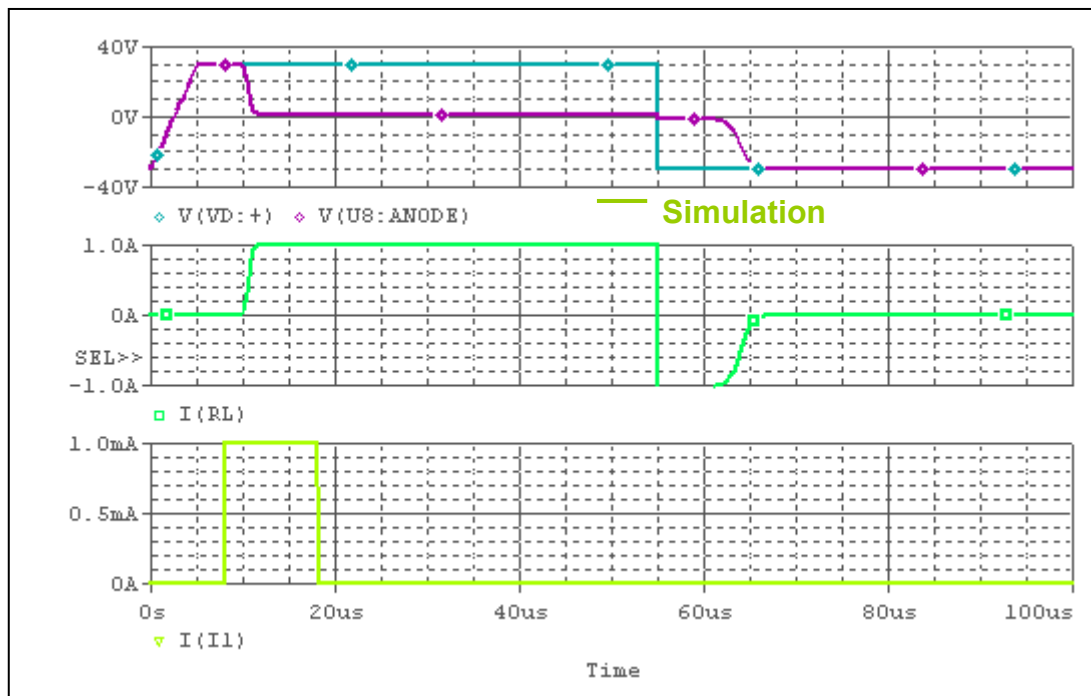
VD=7V	Measurement	Simulation	% Error
IH(mA)	5(max)	4.7956	-4.08800

Switching Time Characteristic

Evaluation Circuit



Simulation result



Comparison Table

	Measurement	Simulation	%Error
Ton(us)	3	3.0112	0.37333
Toff(us)	30	30.518	1.72667