Device Modeling Report

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MANUFACTURER: ON SEMICONDUCTOR

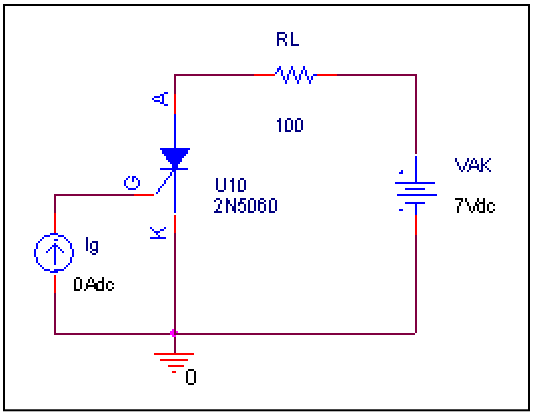
Bee Technologies Inc.

DIODE MODEL

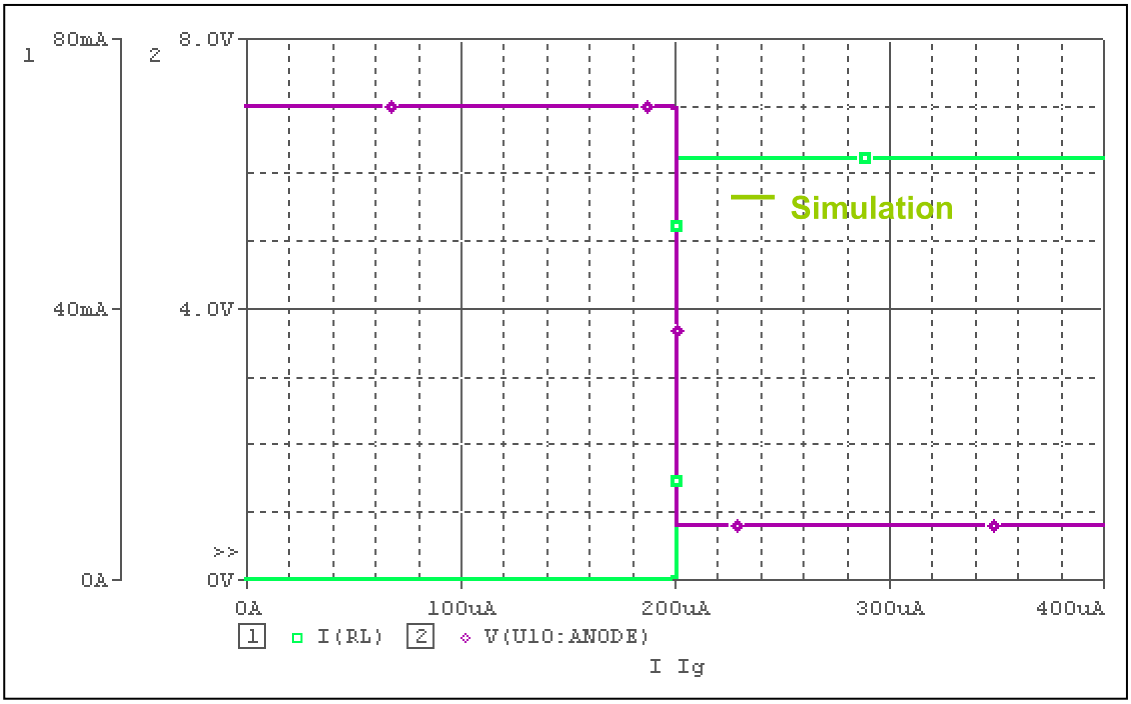
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

IG-VT Characteristic

Evaluation Circuit



Simulation result

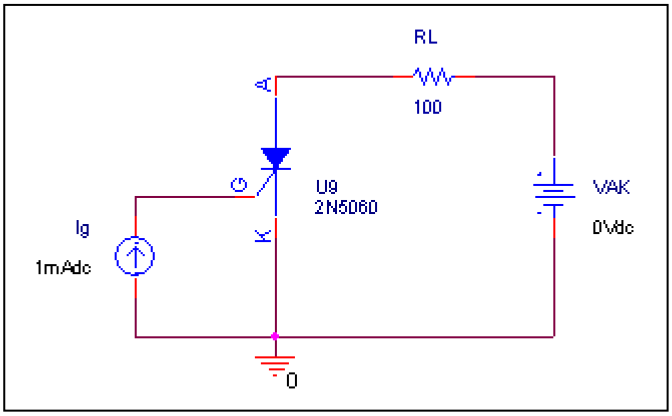


Comparison Table

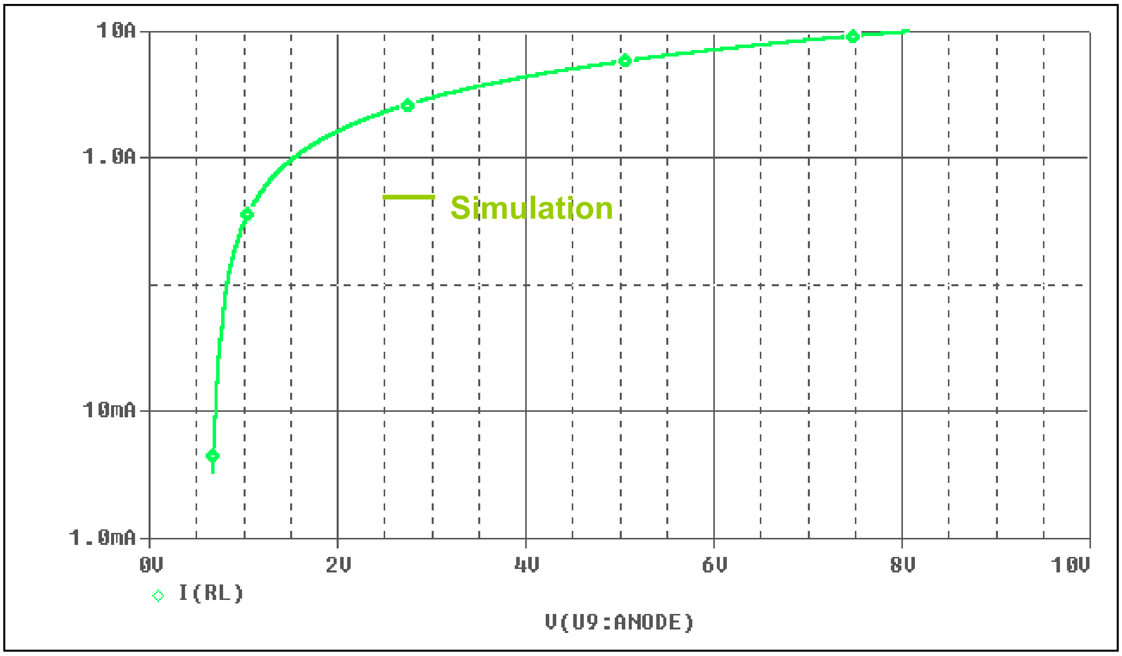
	Measurement	Simulation	% Error
IG_T (uA)	200(max)	199.524	-0.23800
V_{GT} (V)	0.8(max)	0.792363	-0.95463

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

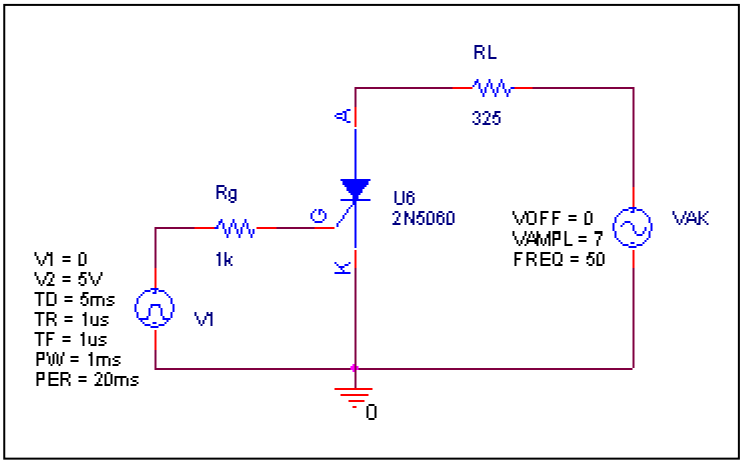


Comparison Table

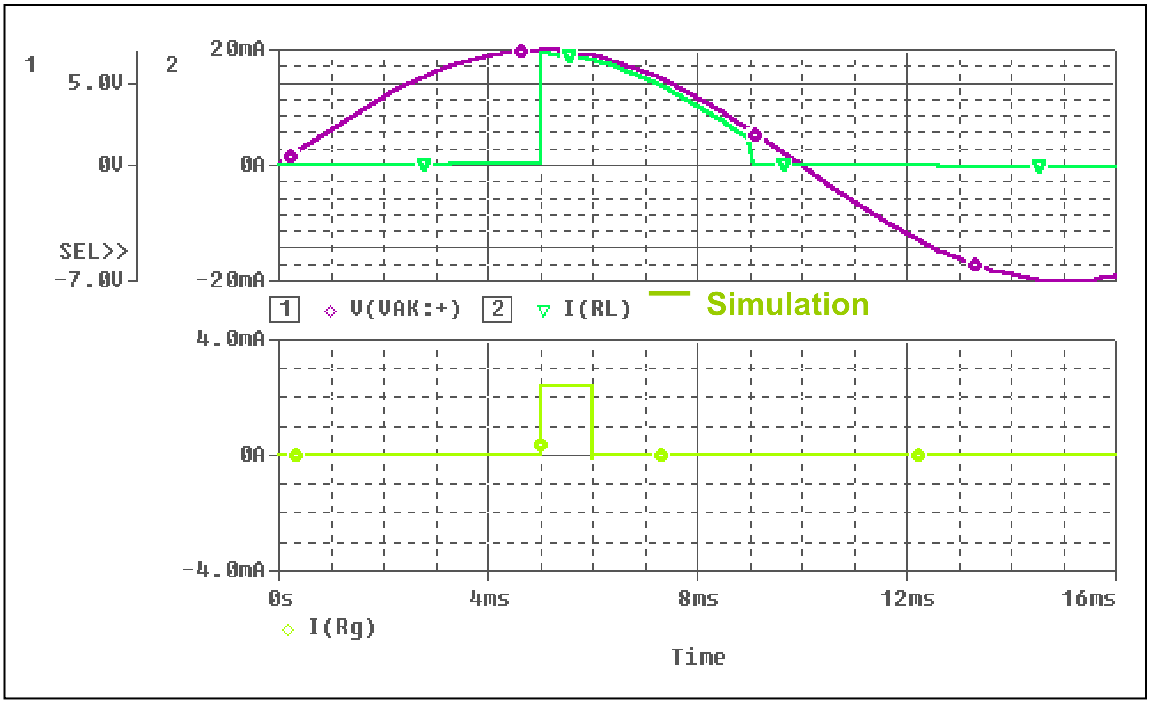
At ITM=1.2	Measurement	Simulation	% Error
VTM(V)	1.7(max)	1.6970	-0.17647

Holding Characteristic (IH)

Evaluation Circuit



Simulation result

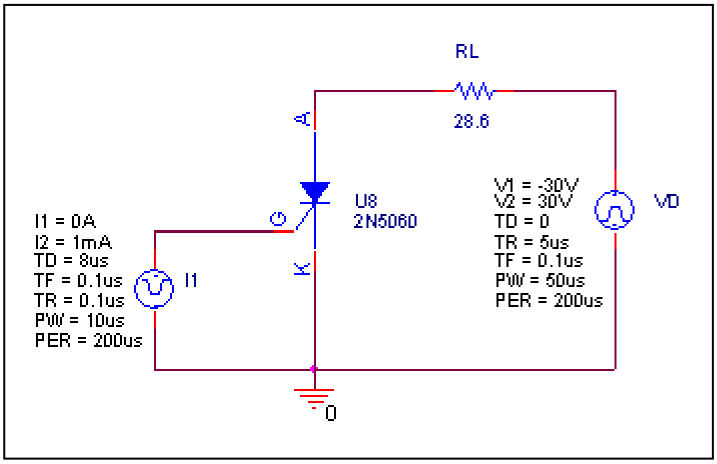


Comparison Table

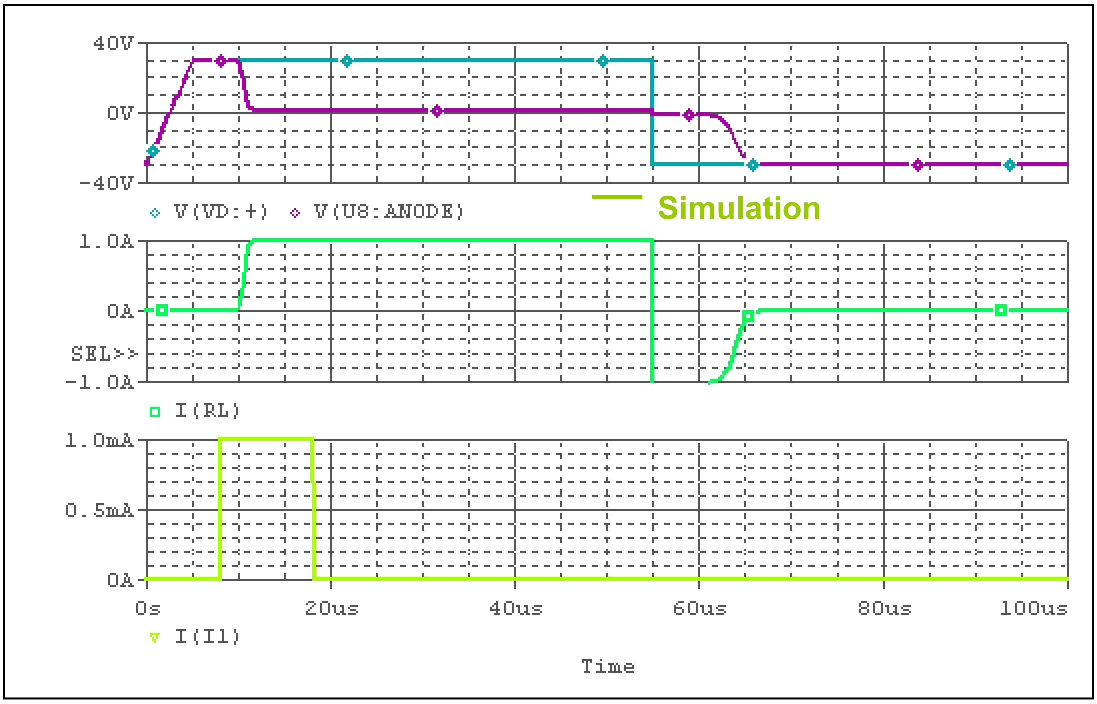
VD=7V	Measurement	Simulation	% Error
IH(mA)	5(max)	4.7599	-4.80200

Switching Time Characteristic

Evaluation Circuit



Simulation result



Comparison Table

	Measurement	Simulation	%Error
Ton(us)	3	3.0140	0.46667
Toff(us)	10	10.073	0.73000