Device Modeling Report

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MANUFACTURER: NEC CORPORATION

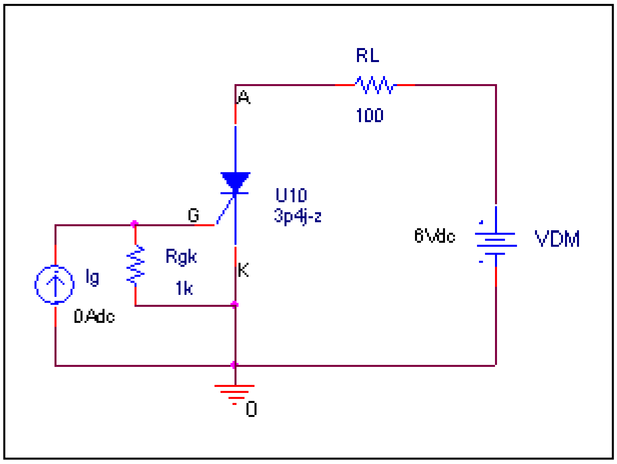
Bee Technologies Inc.

DIODE MODEL

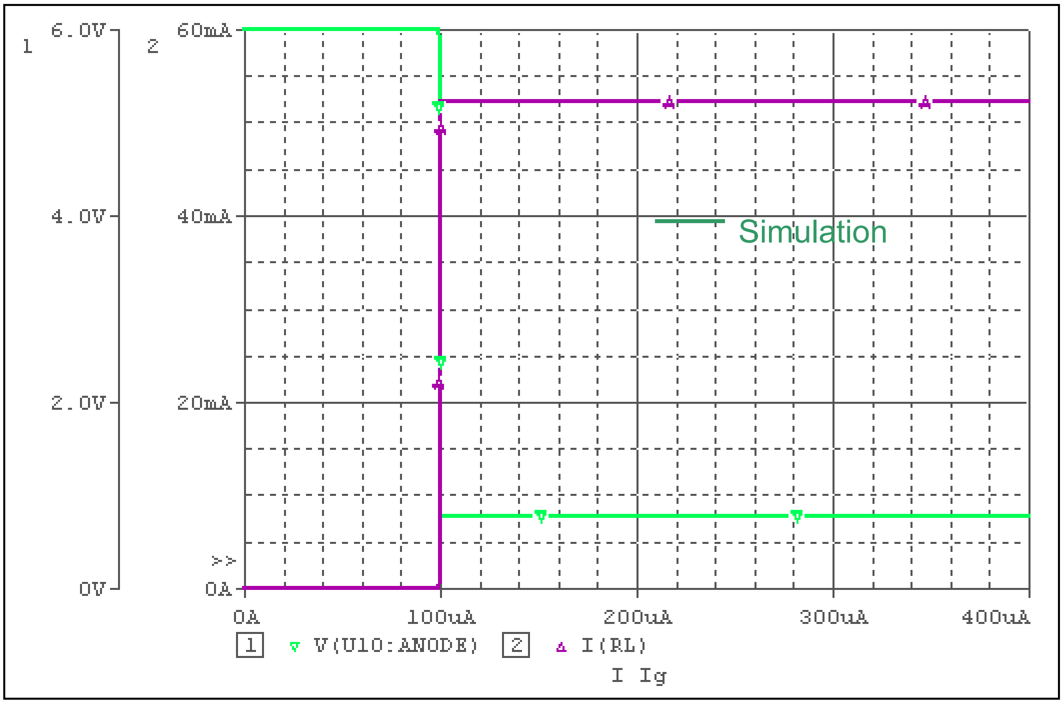
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

IG-VT Characteristic

Evaluation Circuit



Simulation result

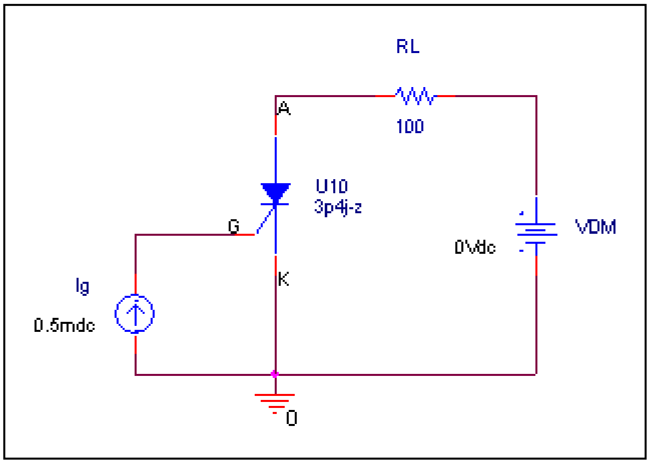


Comparison Table

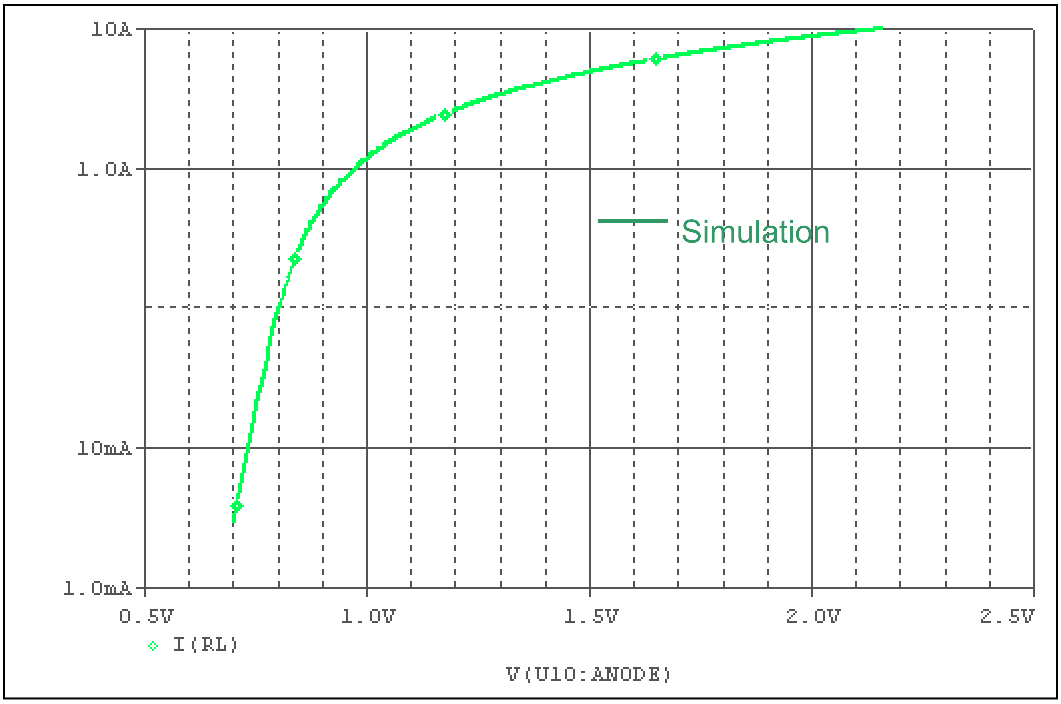
	Measurement	Simulation	% Error
IG (uA)	100(max)	99.048	0.9520
VT (V)	0.8(max)	0.779404	2.5745

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

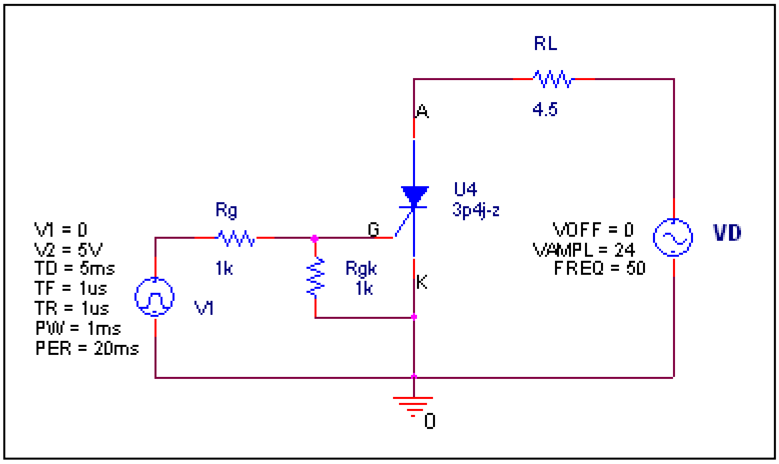


Comparison Table

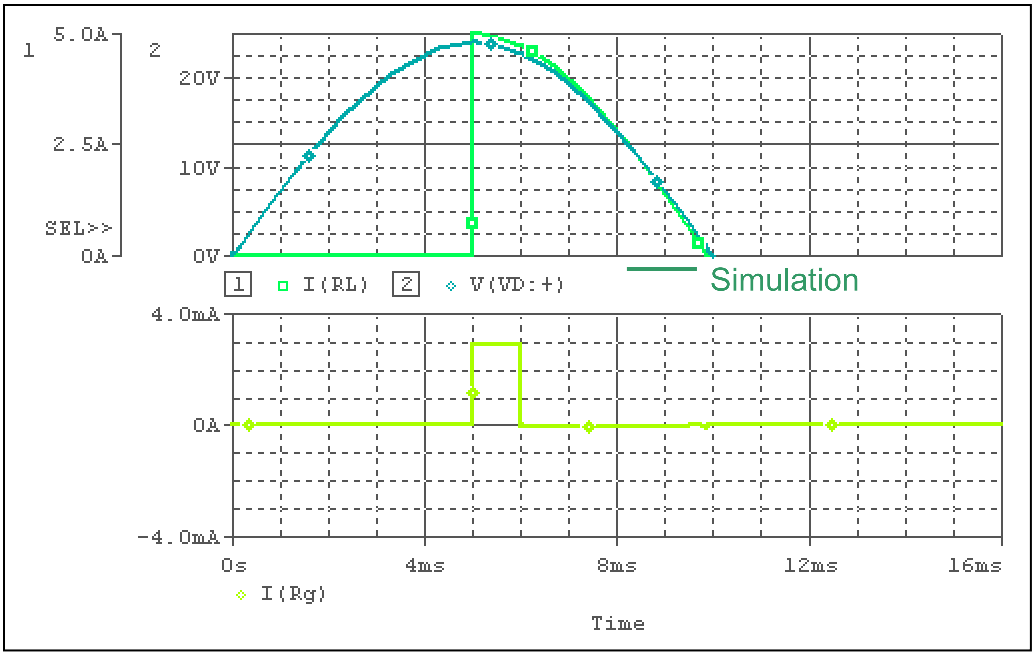
At ITM=4A	Measurement	Simulation	% Error
VTM(V)	**1.4**	**1.3875**	**0.8929**

Holding Characteristic (IH)

Evaluation Circuit



Simulation result



Comparison Table

V_{DM}=24V,ITM=5A	Measurement	Simulation	% Error
IH(mA)	5(max)	4.8479	3.0420