Device Modeling Report

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PART NUMBER:8P2M
MANUFACTURER: NEC

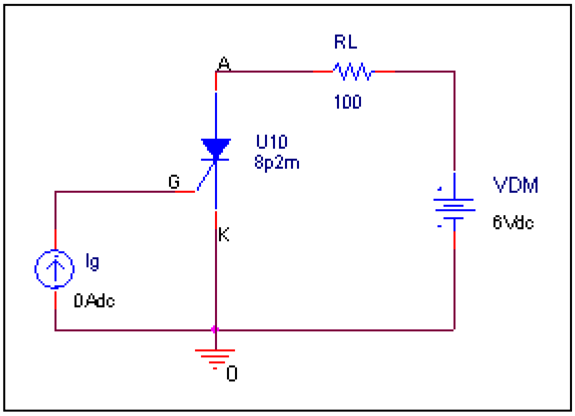
Bee Technologies Inc.

DIODE MODEL

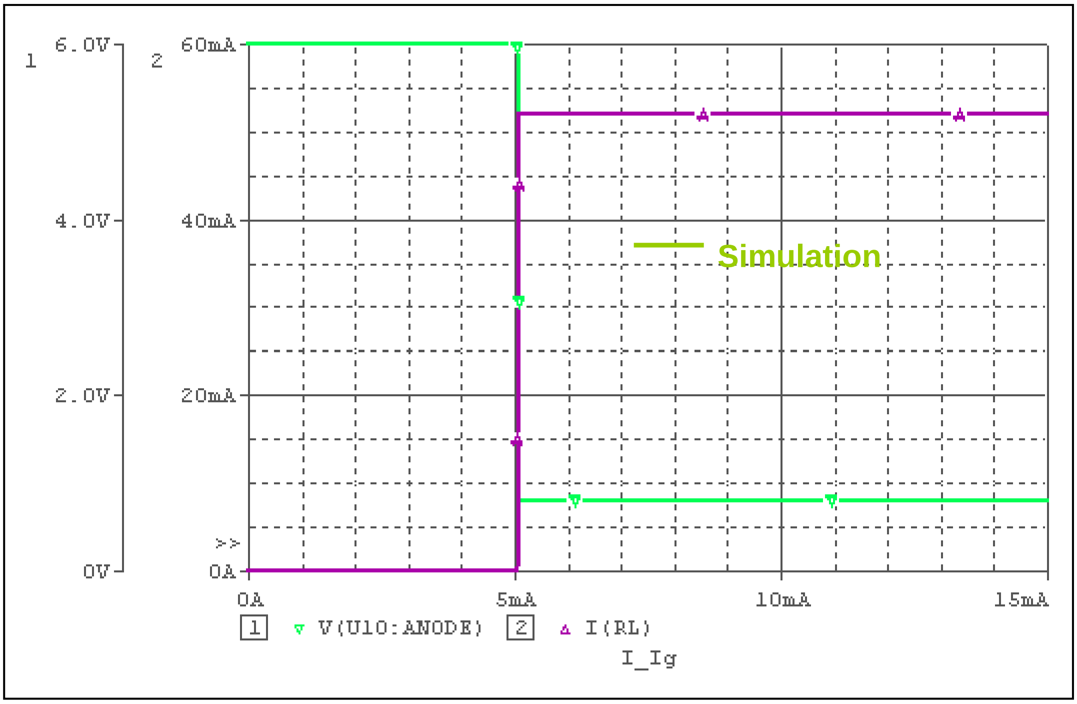
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

IG-VT Characteristic

Evaluation Circuit



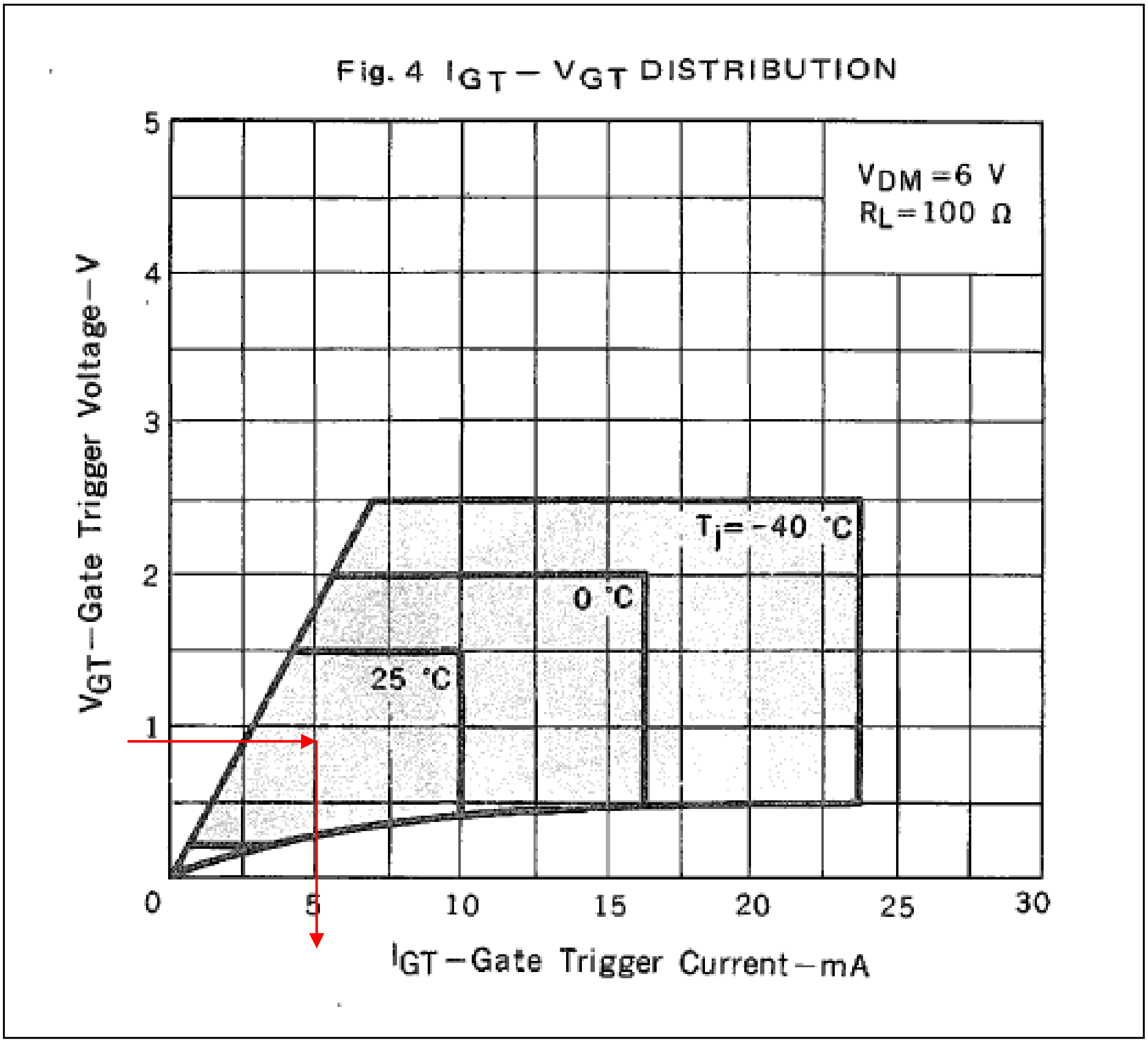
Simulation result



Comparison Table (** See Reference)

	Measurement	Simulation	% Error
IG_T (mA)	**5**	**5.0398**	**-0.7960**
V_{GT} (V)	**0.8**	**0.793682**	**0.7898**

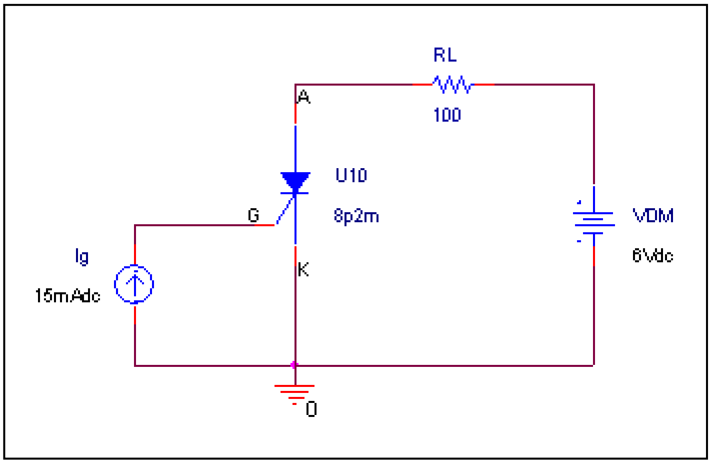
Reference



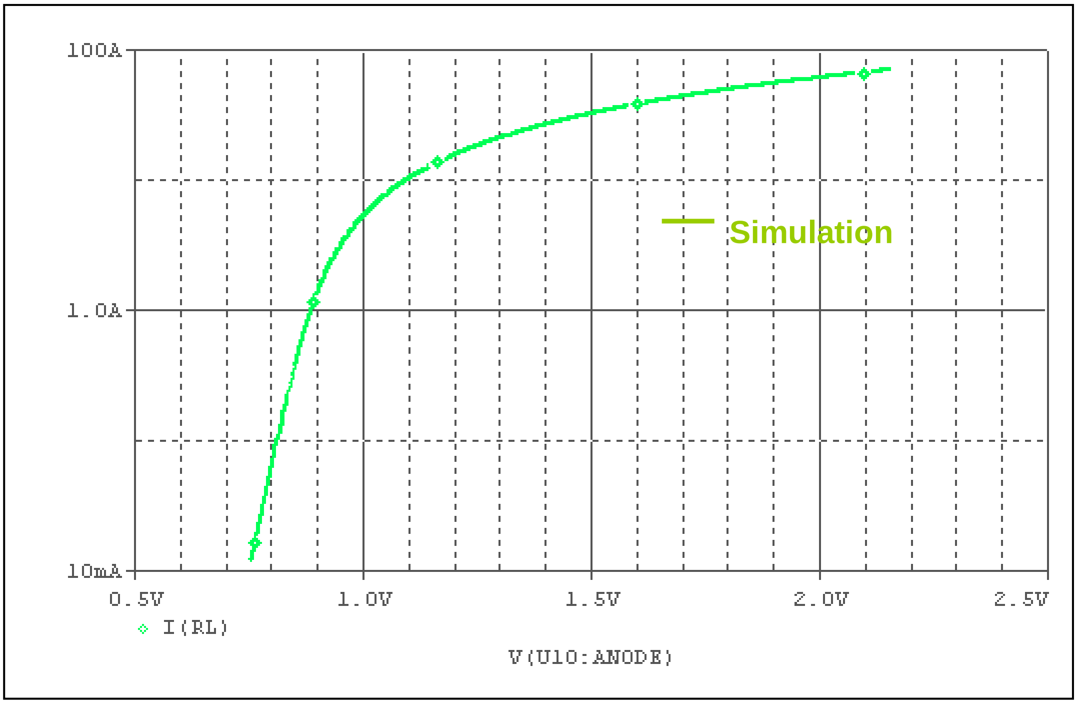
I_{GT} = 5 mA , V_{GT} = 0.8 V

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

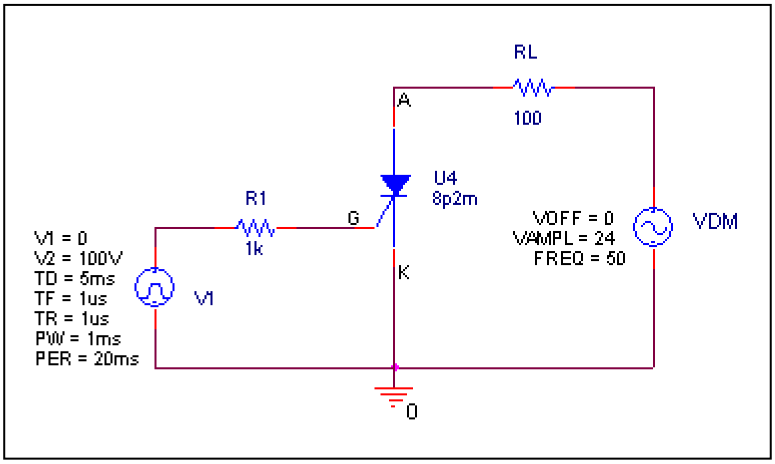


Comparison Table

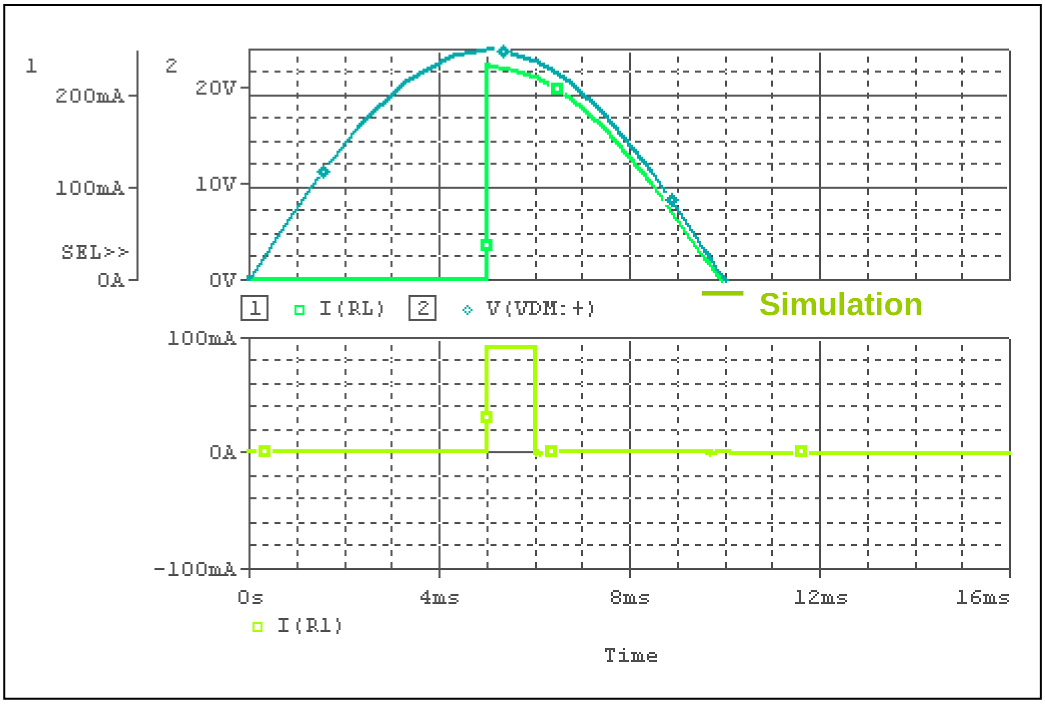
At ITM=25A	Measurement	Simulation	% Error
VTM(V)	1.4(max)	1.3732	1.9143

Holding Characteristic (IH)

Evaluation Circuit



Simulation result

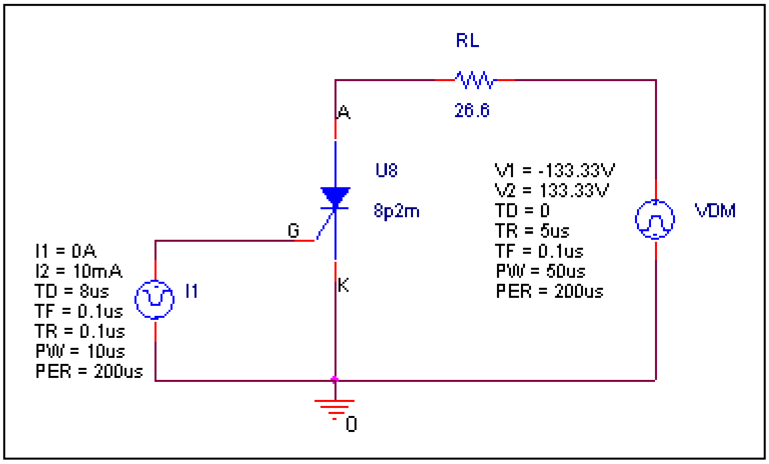


Comparison Table

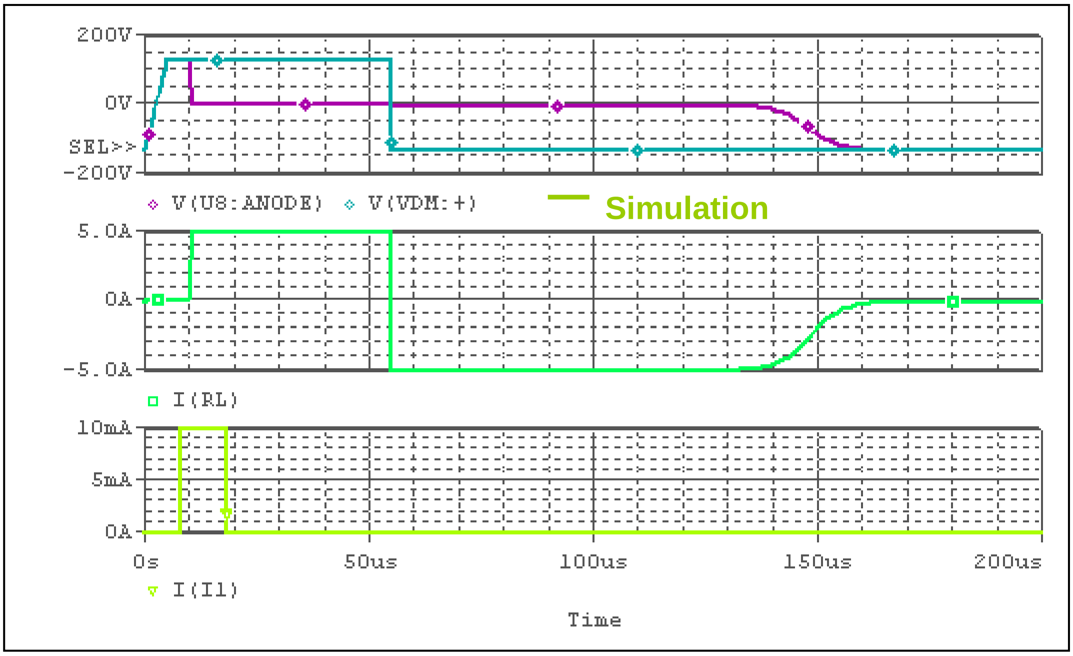
V_D=24V	Measurement	Simulation	% Error
IH(mA)	6	5.9778	0.3700

Switching Time Characteristic

Evaluation Circuit



Simulation result



Comparison Table

	Measurement	Simulation	%Error
Toff(us)	**100**	**101.080**	**-1.0800**