

Device Modeling Report

COMPONENTS: THYRISTOR
PART NUMBER: 8P4J
MANUFACTURER: NEC CORPORATION



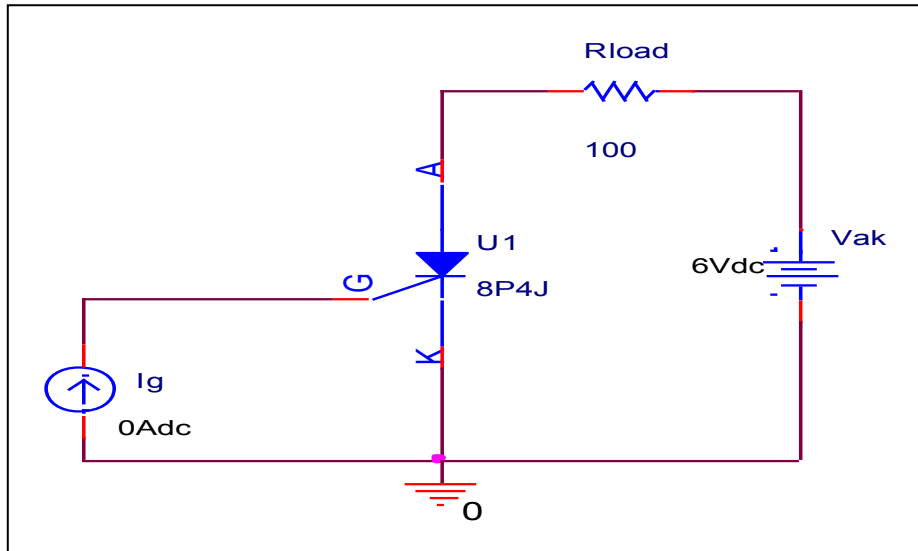
Bee Technologies Inc.

DIODE MODEL

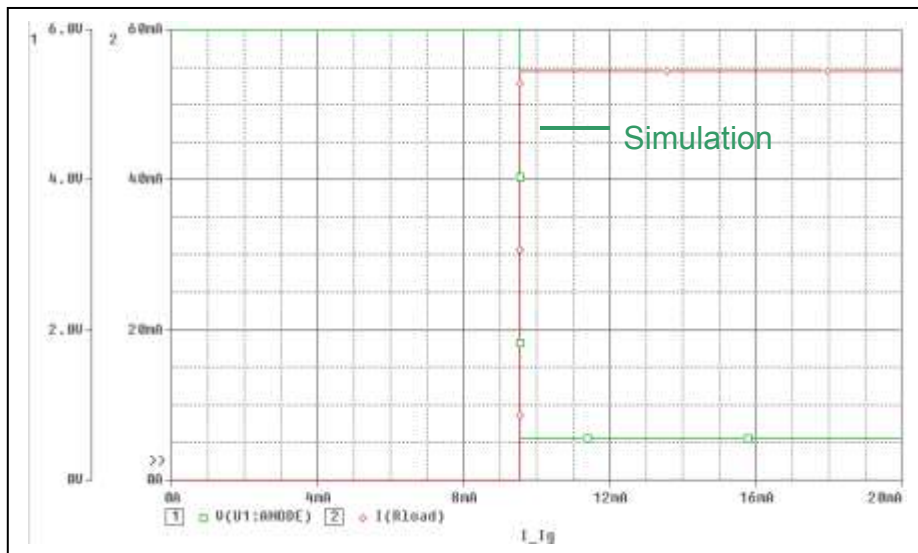
Pspice model Parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

IG-VT Characteristic

Evaluation Circuit



Simulation result

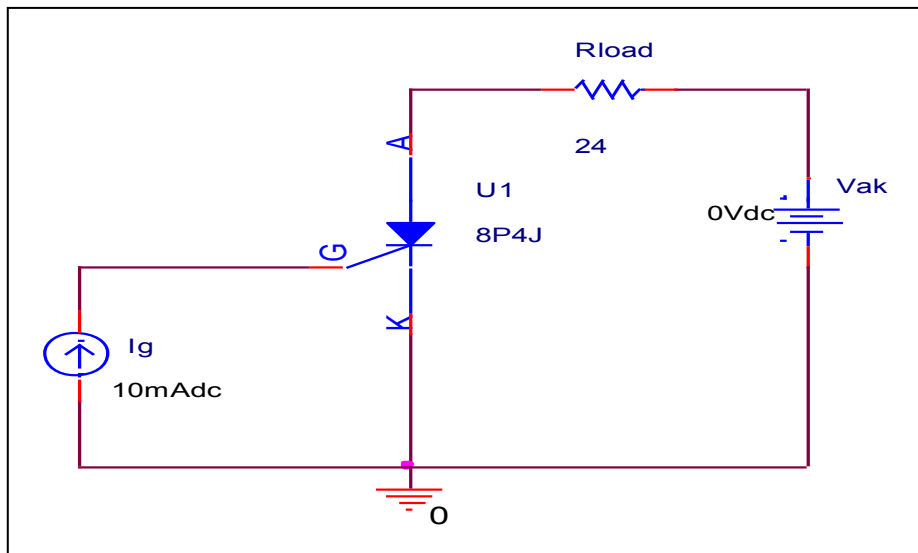


Comparison Table

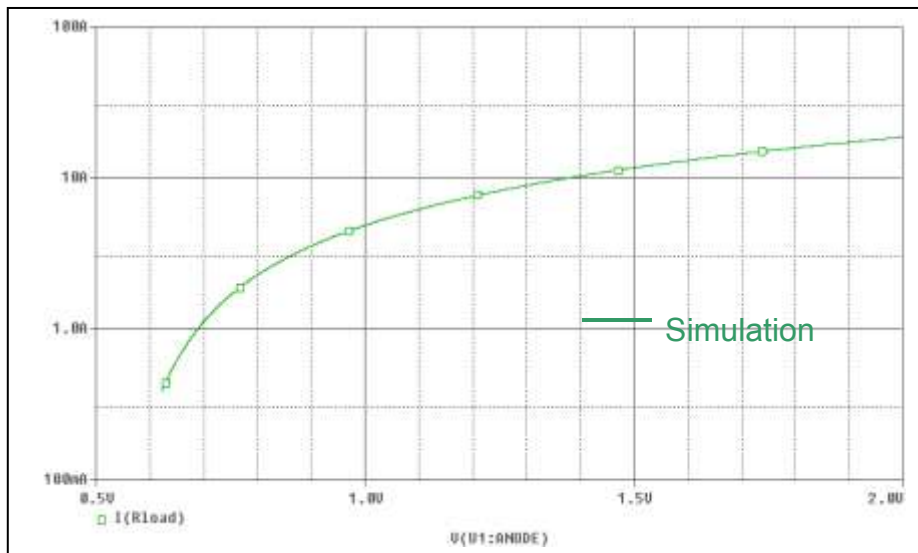
	Measurement	Simulation	% Error
IG (Max 10) (mA)	9.5	9.540	-0.421
VT (Max 1.5)(V)	0.55	0.547	0.545

ITM-VTM Characteristic

Evaluation Circuit



Simulation result

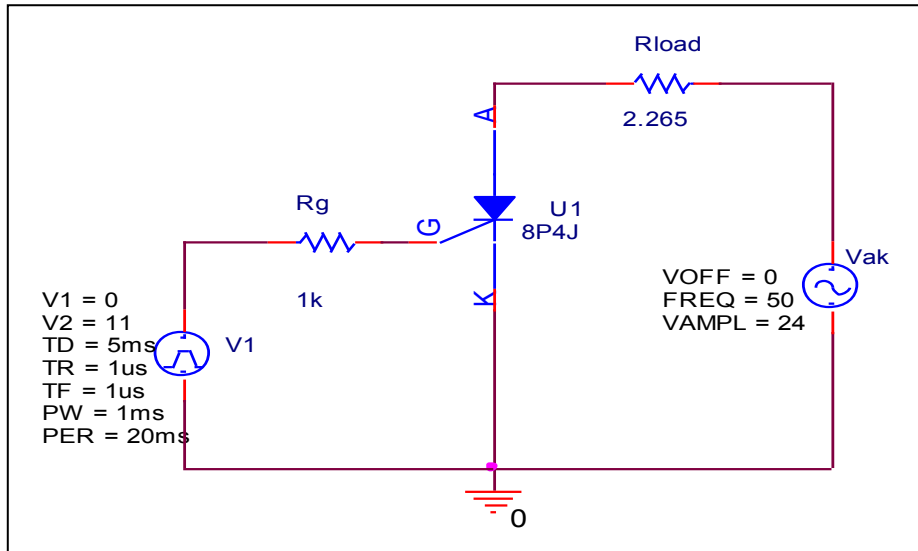


Comparison Table

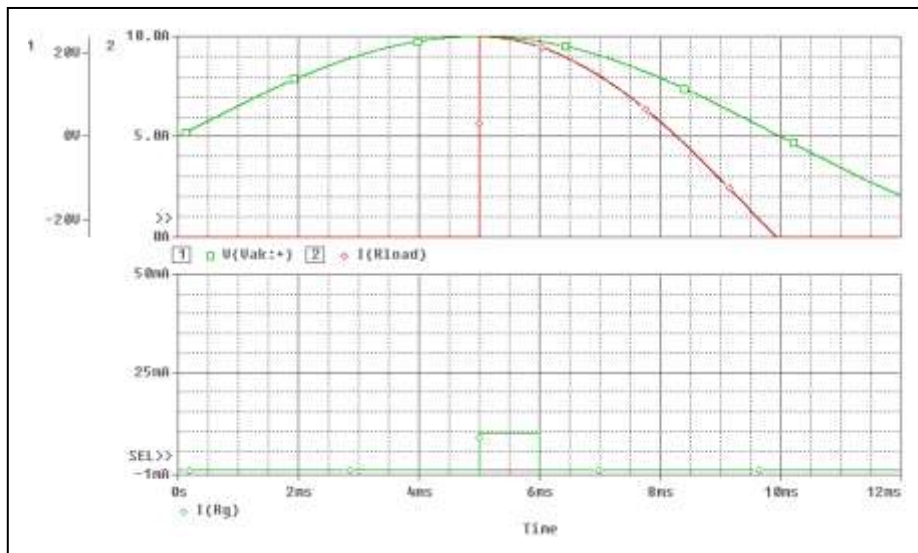
At ITM=10A	Measurement	Simulation	% Error
VTM(V)	1.4	1.3787	1.521

Holding Characteristic (IH)

Evaluation Circuit



Simulation result



Comparison Table

VAK=24V,ITM=10A	Measurement	Simulation	% Error
IH(mA)	6	6.1259	-2.098