Device Modeling Report

COMPONENTS:THYRISTOR
PART NUMBER:C106D
MANUFACTURER: PHILIPS SEMICONDUCTOR

Bee Technologies Inc.

All Rights Reserved Copyright (c) Bee Technologies Inc. 2004

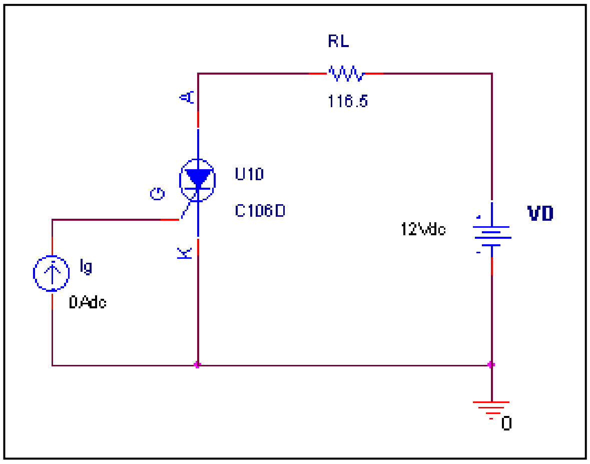
DIODE MODEL

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

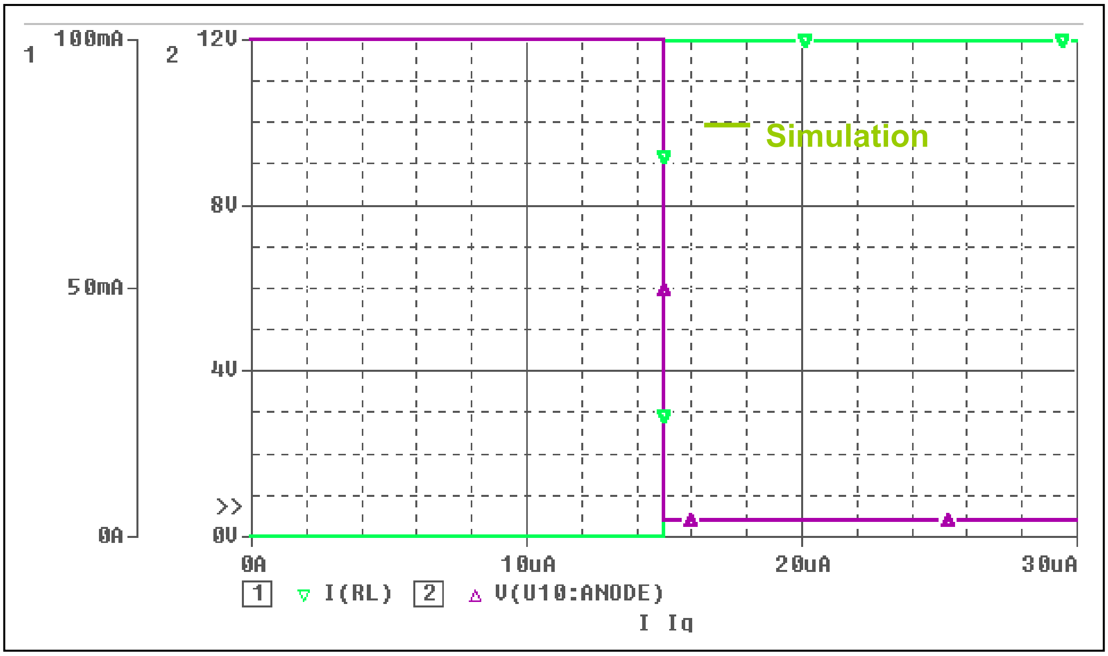
All Rights Reserved Copyright (c) Bee Technologies Inc. 2004

IG-VT Characteristic

Evaluation Circuit



Simulation result



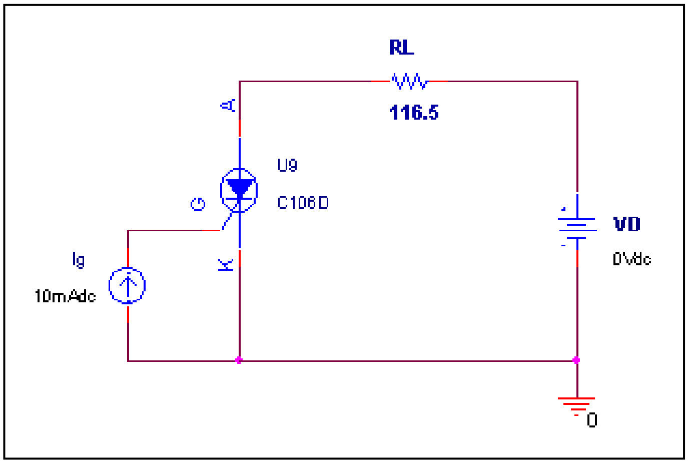
Comparison Table

	Measurement	Simulation	% Error
IG_T (uA)	15	14.940	-0.40000
V_{GT} (V)	0.4	0.3956	-1.10000

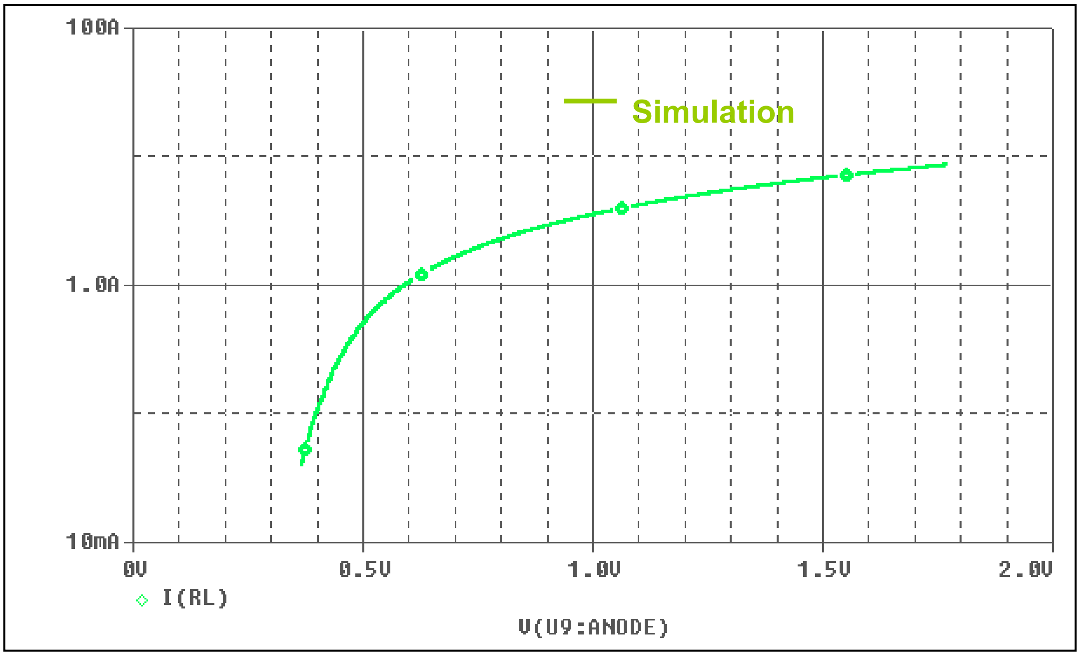
All Rights Reserved Copyright (c) Bee Technologies Inc. 2004

ITM-VTM Characteristic

Evaluation Circuit



Simulation result



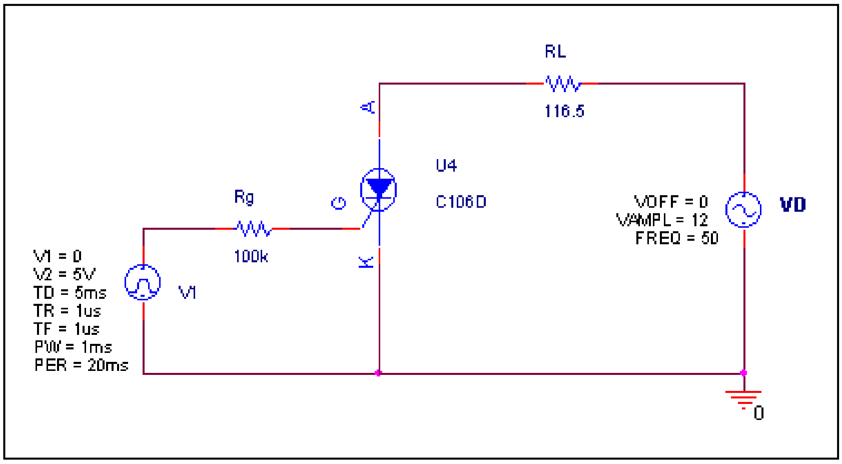
Comparison Table

At ITM=5A	Measurement	Simulation	% Error
VTM(V)	1.23	1.2273	-0.21951

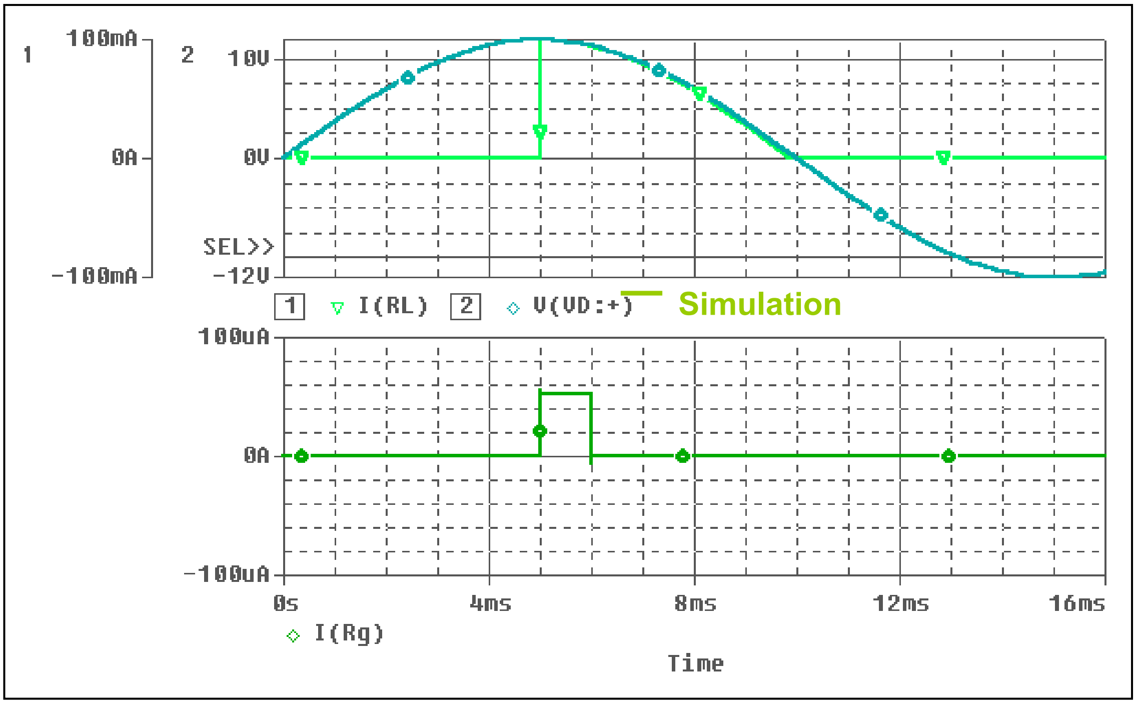
All Rights Reserved Copyright (c) Bee Technologies Inc. 2004

Holding Characteristic (IH)

Evaluation Circuit



Simulation result



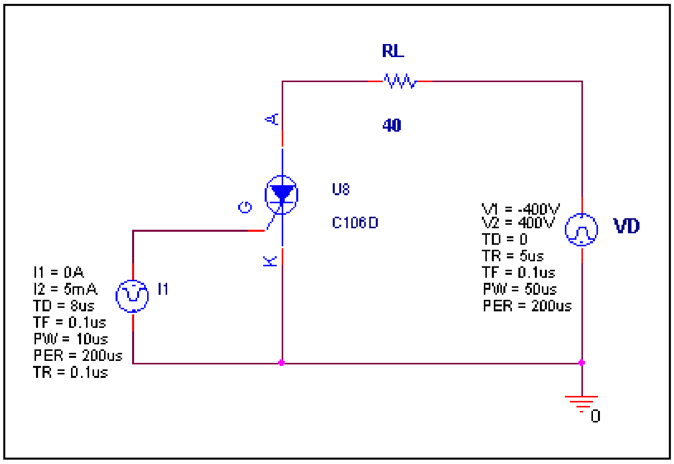
Comparison Table

VD=12V	Measurement	Simulation	% Error
IH(mA)	6(max)	5.9424	-0.96000

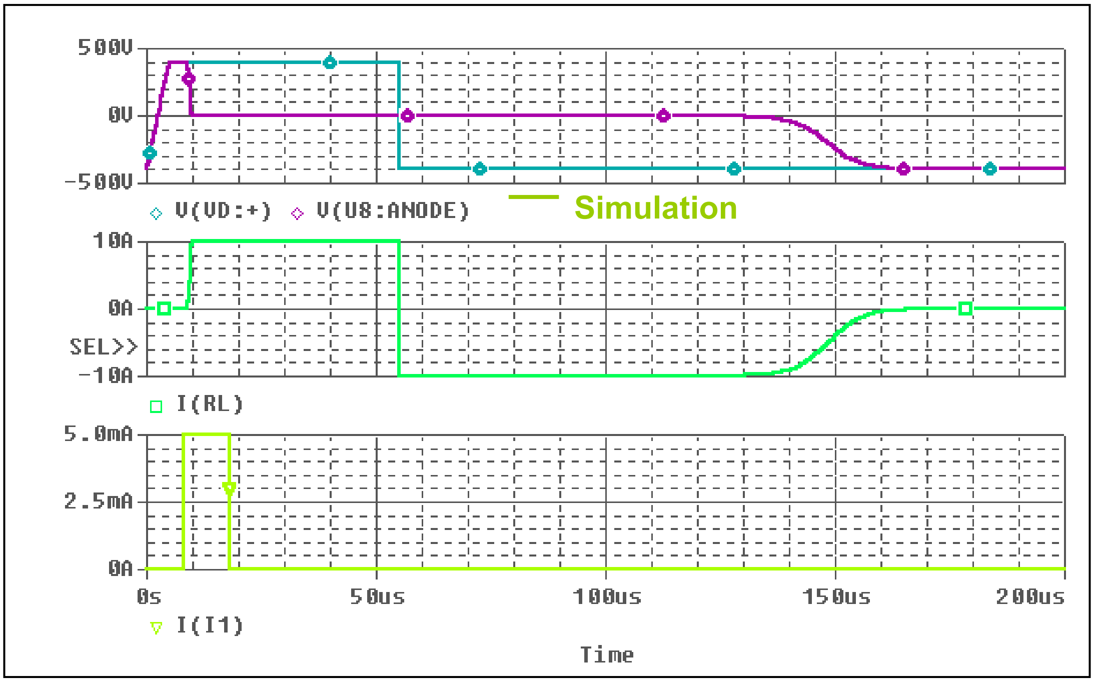
All Rights Reserved Copyright (c) Bee Technologies Inc. 2004

Switching Time Characteristic

Evaluation Circuit



Simulation result



Comparison Table

	Measurement	Simulation	%Error
Ton(us)	2	2.0140	0.70000
Toff(us)	100	101.837	1.83700

All Rights Reserved Copyright (c) Bee Technologies Inc. 2004