Device Modeling Report

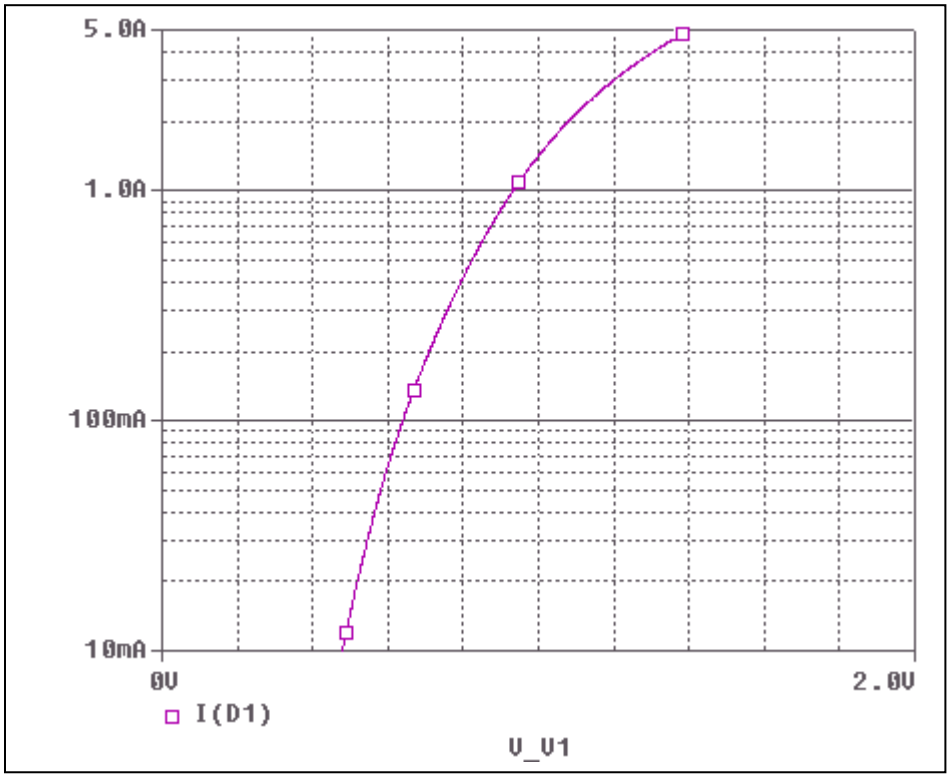
COMPONENTS:
DIODE/ GENERAL PURPOSE RECTIFIER / STANDARD
PART NUMBER: HFA08TB60
MANUFACTURER: INTERNATIONAL RECTIFIER
REMARK: TC=80C

Bee Technologies Inc.

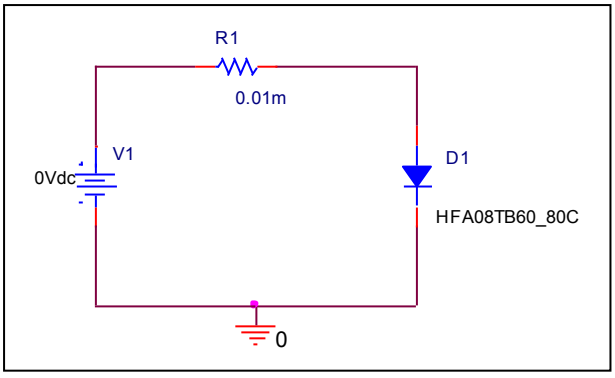
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

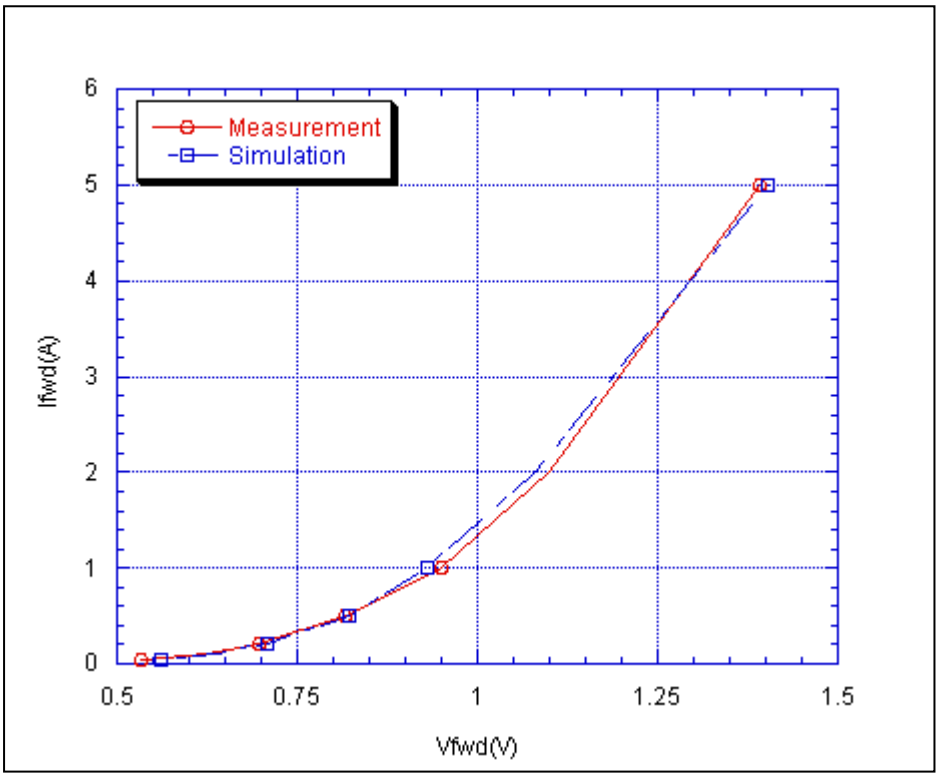


Evaluation Circuit



Comparison Graph

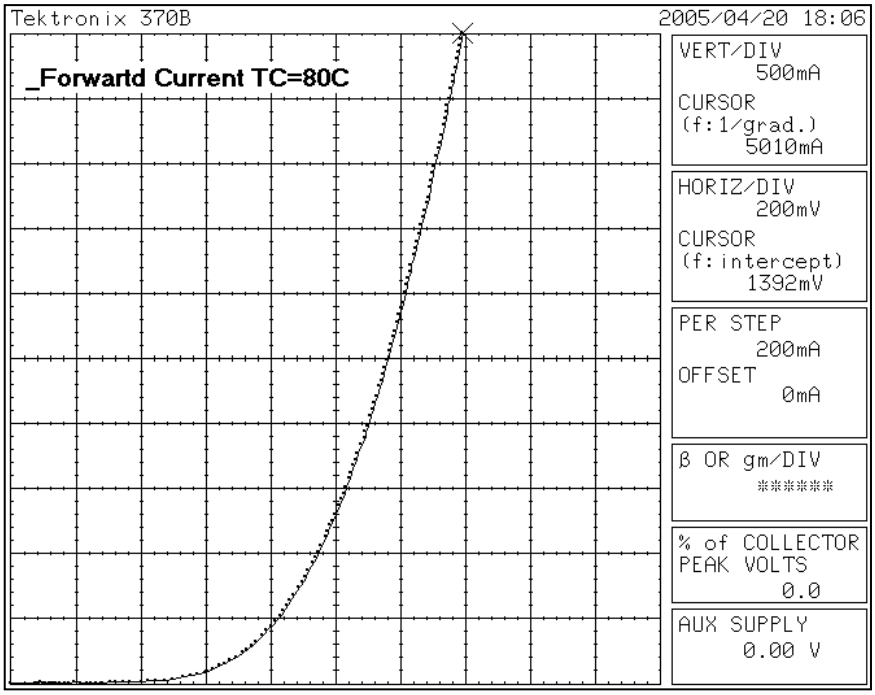
Circuit Simulation Result



Simulation Result

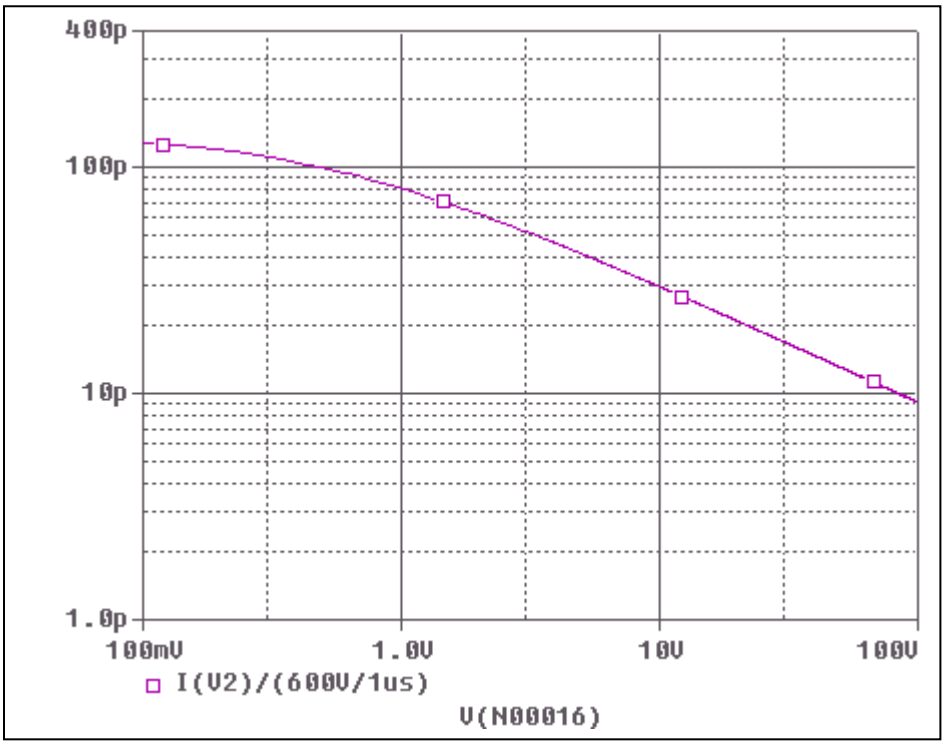
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.626	0.638	-1.917
0.2	0.696	0.709	-1.868
0.5	0.816	0.823	-0.858
1	0.950	0.932	1.895
2	1.100	1.080	1.818
5	1.392	1.402	-0.718

Forward Current Characteristic Reference

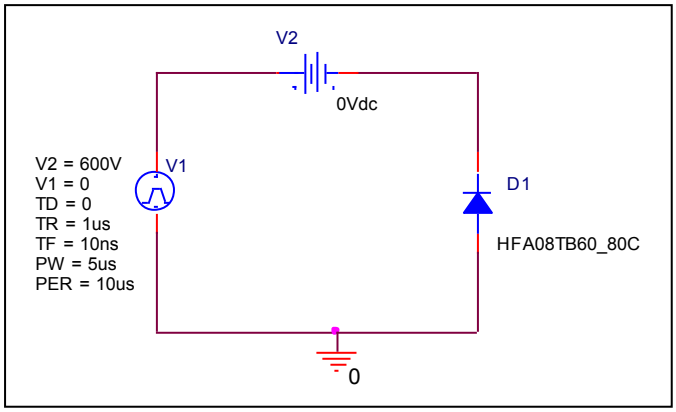


Capacitance Characteristic

Circuit Simulation Result

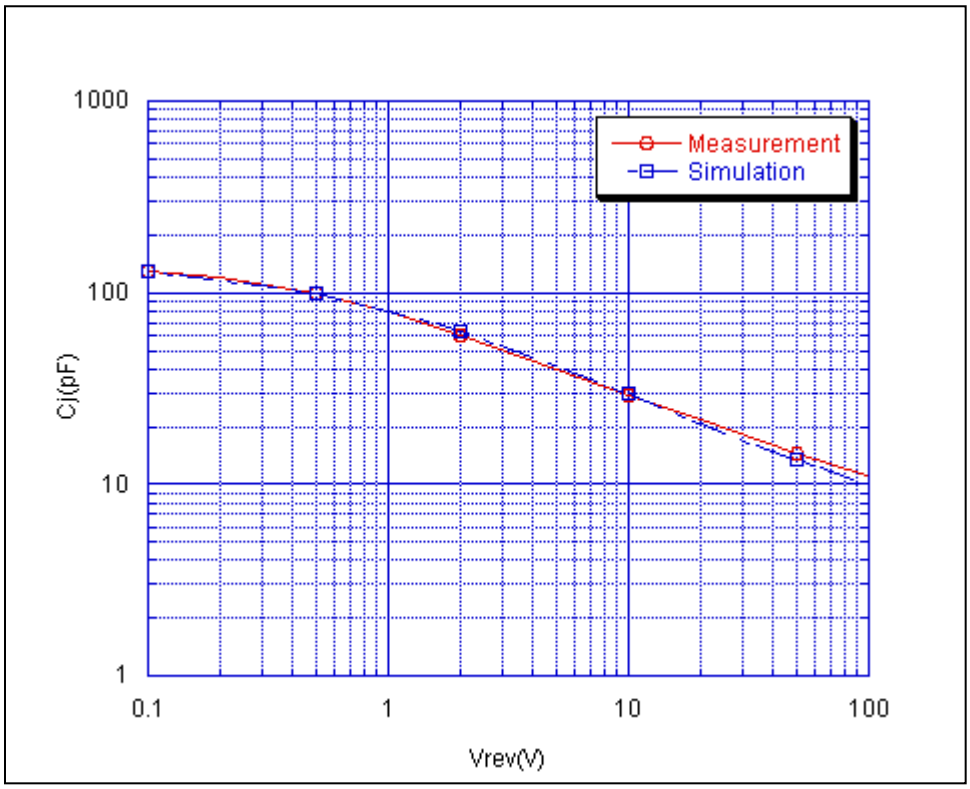


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

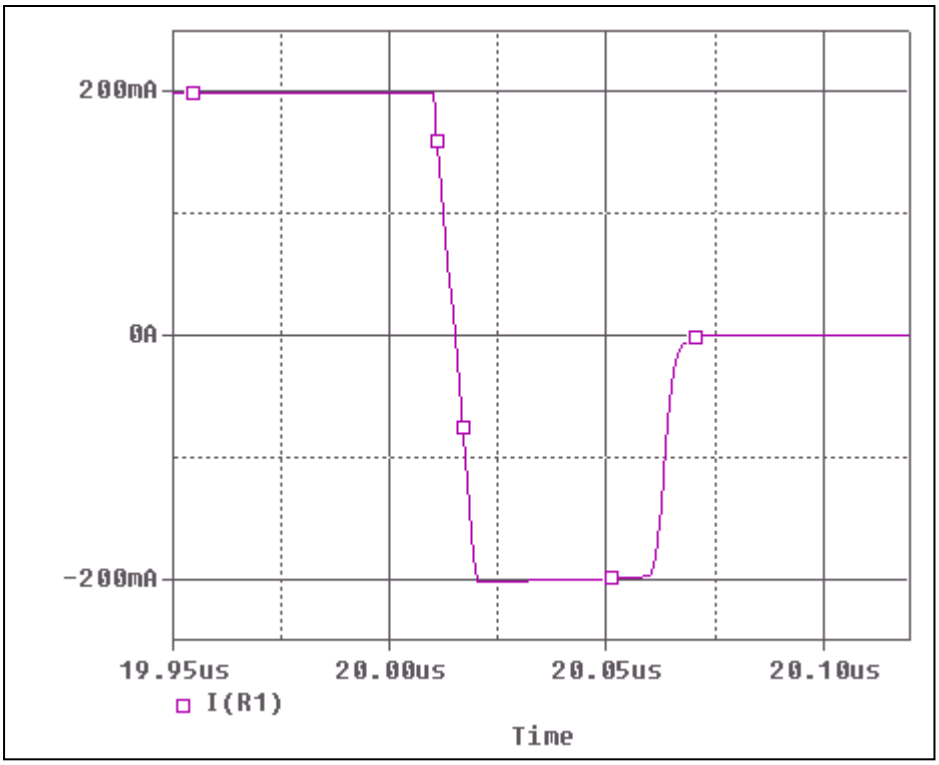


Simulation Result

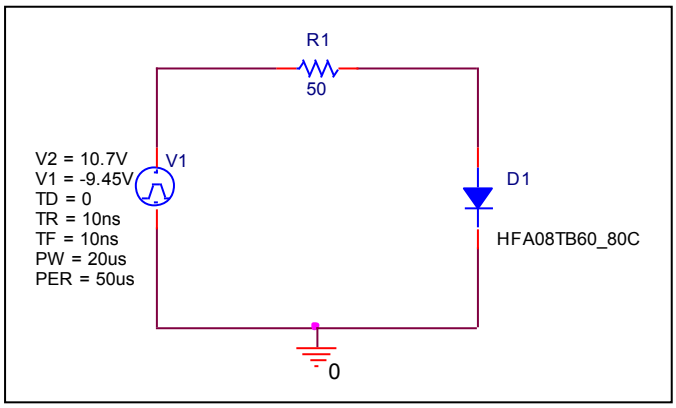
Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	136.370	136.367	0.002
0.1	129.500	128.578	0.712
0.2	119.570	118.903	0.558
0.5	100.200	99.190	1.008
1	79.435	80.817	-1.740
2	60.197	62.594	-3.982
5	39.998	41.338	-3.350
10	29.366	29.735	-1.257
20	21.687	20.873	3.753

Reverse Recovery Characteristic

Circuit Simulation Result



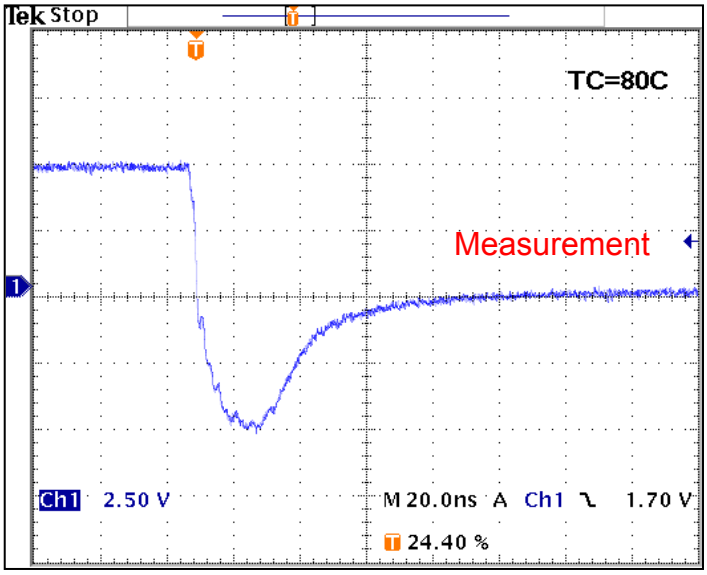
Evaluation Circuit



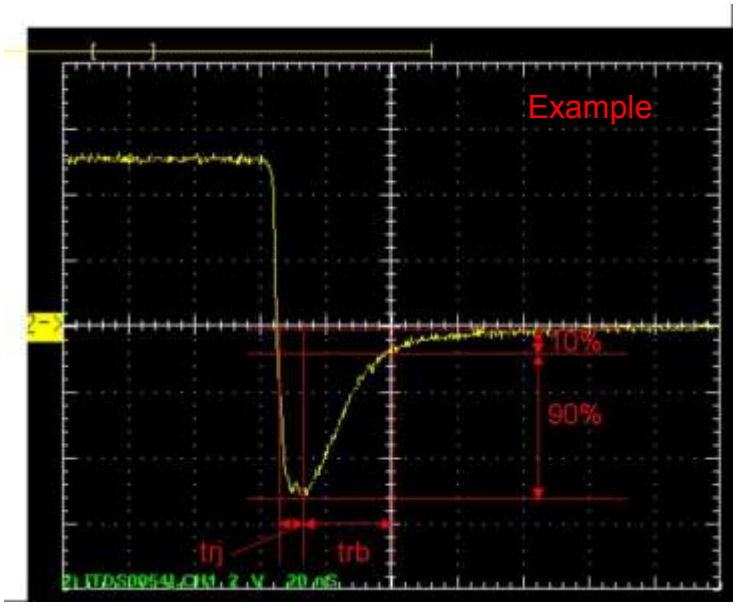
Compare Measurement vs. Simulation

trr	Measurement		Simulation		%Error
	50.40	ns	50.73	ns	0.674

Reverse Recovery Characteristic Reference



Trj = 18(ns)
Trb=32.4 (ns)
Conditions: Ifwd=Irev=0.2(A), Rl=50



Relation between trj and trb