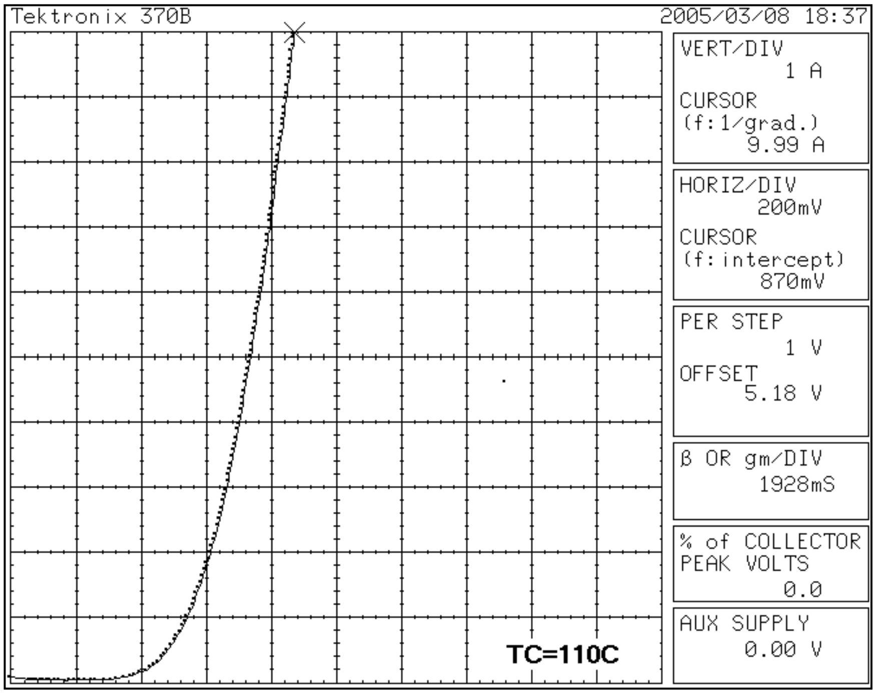
Device Modeling Report

COMPONENTS:
DIODE/ GENERAL PURPOSE RECTIFIER / STANDARD
PART NUMBER: RHRG7560
MANUFACTURER: INTERSIL
REMARK: TC=110C

Bee Technologies Inc.

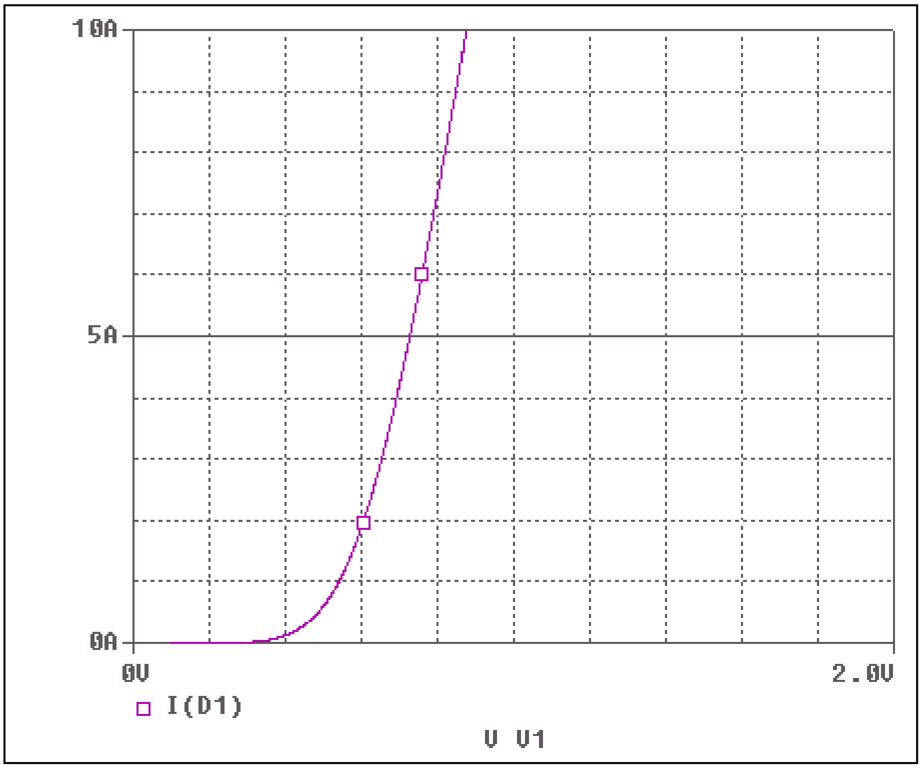
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic Reference

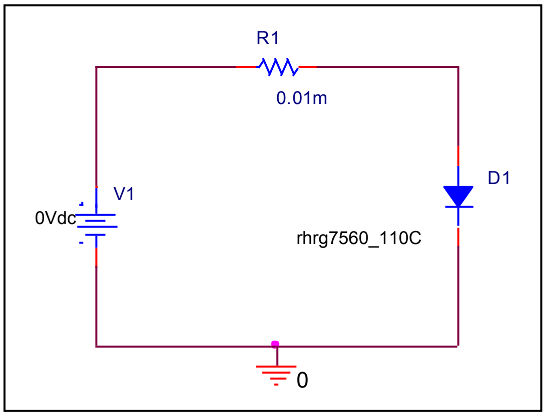


Forward Current Characteristic

Circuit Simulation Result

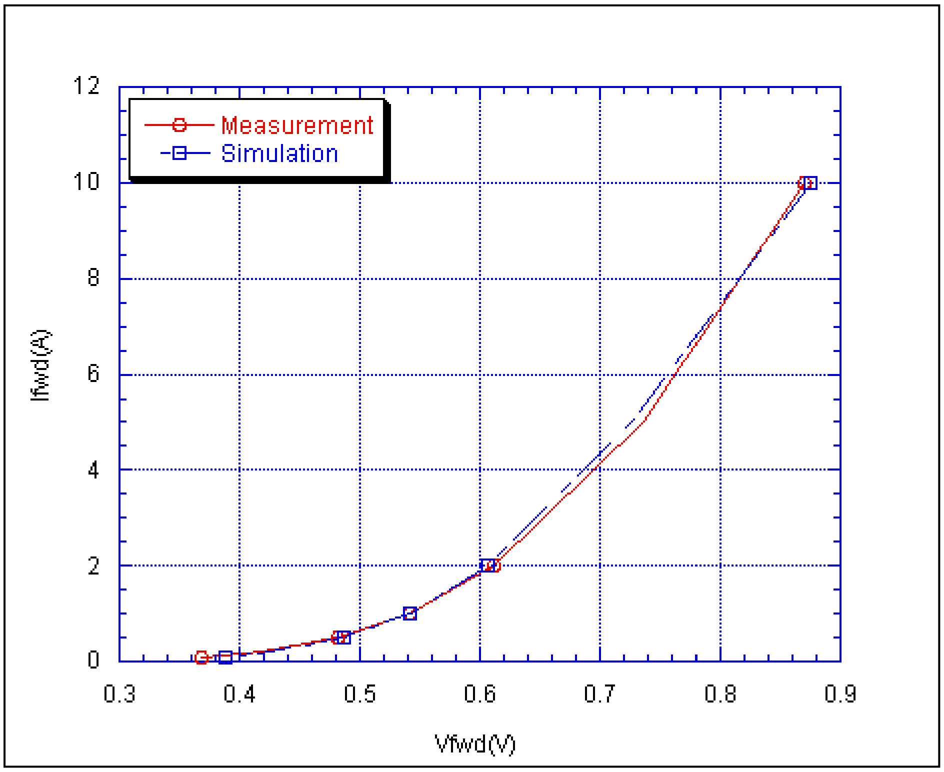


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

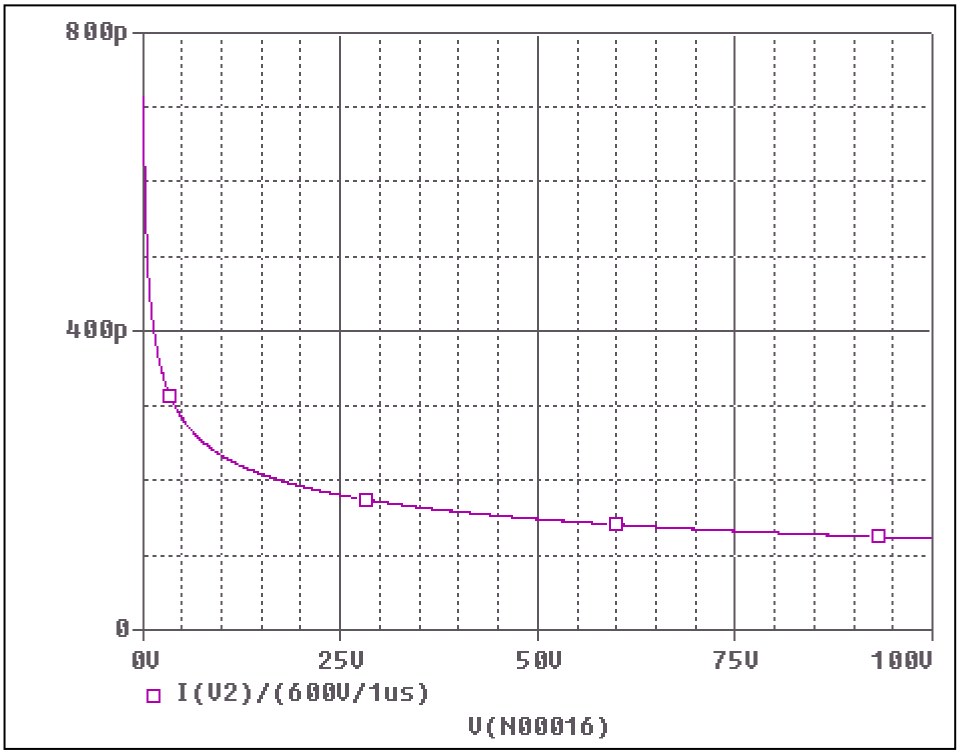


Simulation Result

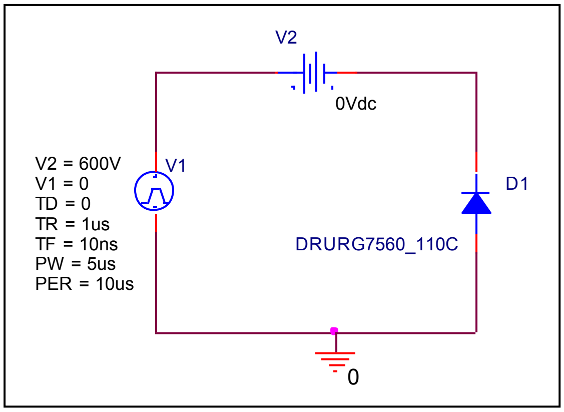
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.368	0.388	5.4347
0.2	0.418	0.4258	1.8660
0.5	0.482	0.4867	0.9751
1	0.542	0.5412	-0.1476
2	0.612	0.6063	-0.9313
5	0.736	0.7266	-1.2771
10	0.87	0.8754	0.6206

Capacitance Characteristic

Circuit Simulation Result

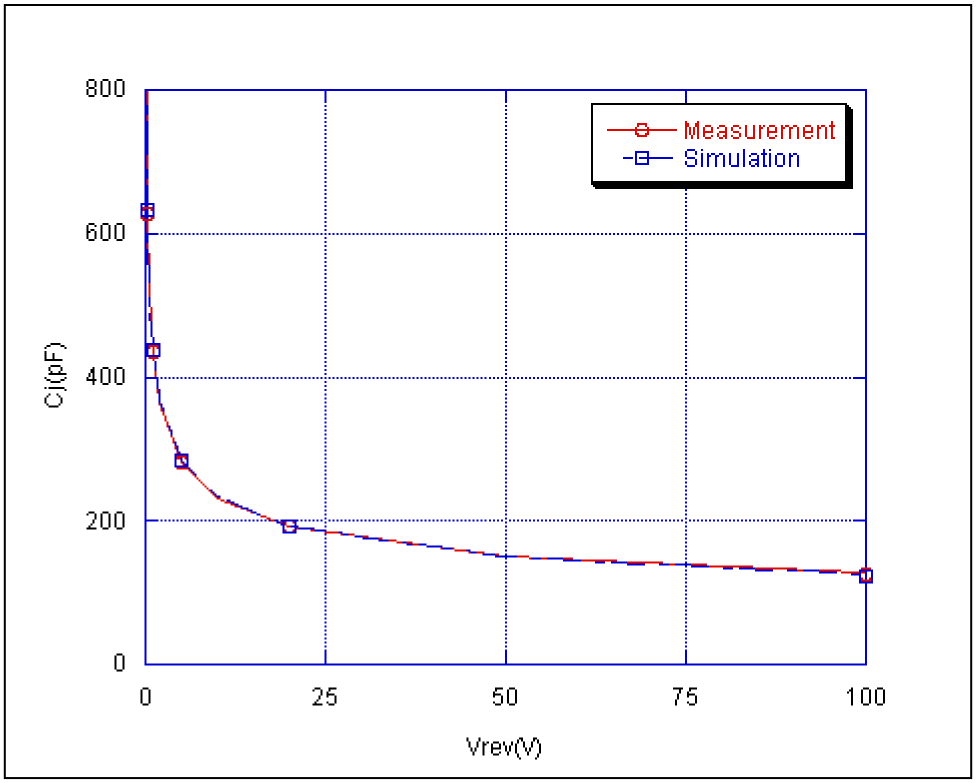


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

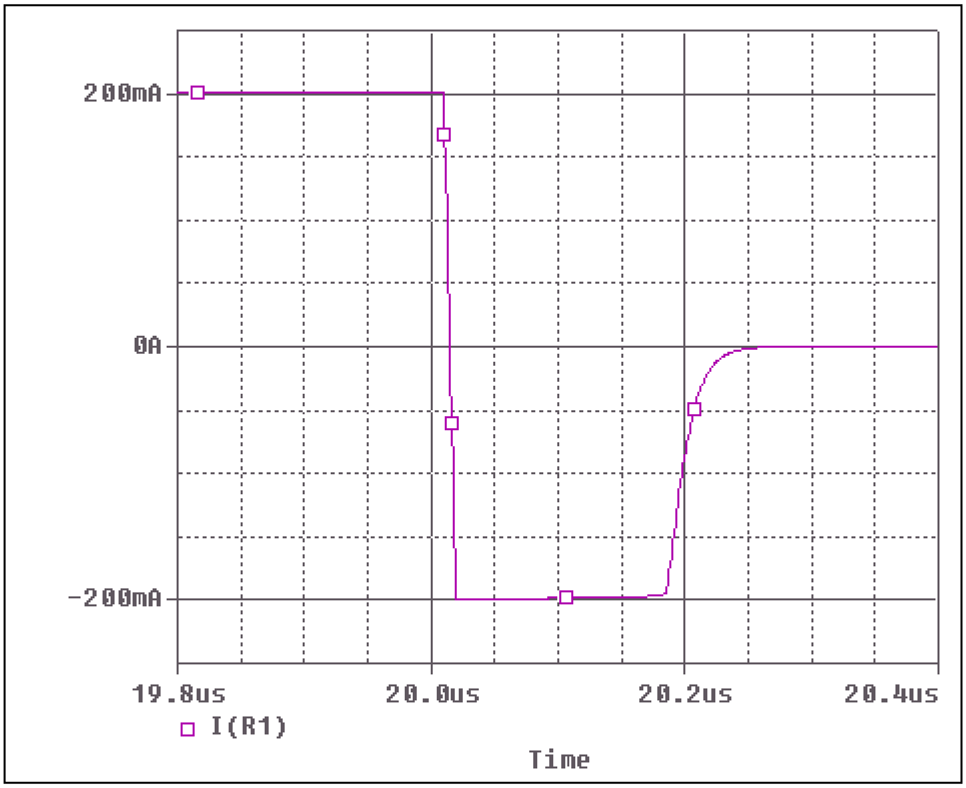


Simulation Result

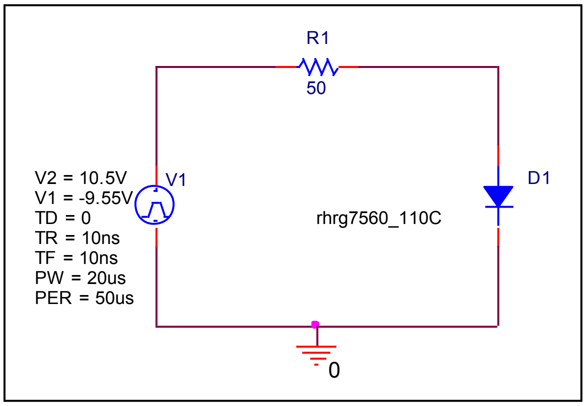
Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0	827.110	827.110	0.00
0.2	627.100	633.835	-1.07
0.5	517.330	519.817	-0.48
1	435.220	438.373	-0.72
2	364.100	364.814	-0.20
5	281.200	284.275	-1.09
10	232.302	234.130	-0.79
20	193.311	193.000	0.16
50	151.302	150.000	0.86
100	126.350	122.350	3.17

Reverse Recovery Characteristic

Circuit Simulation Result



Evaluation Circuit

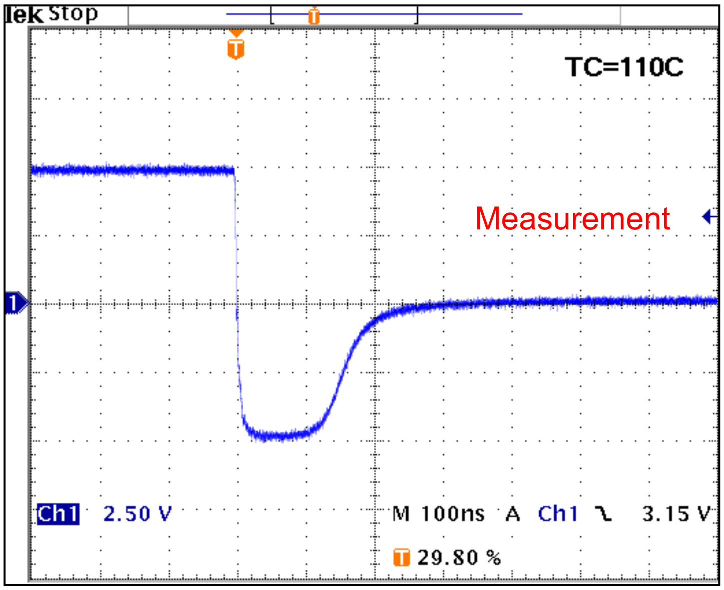


Compare Measurement vs. Simulation

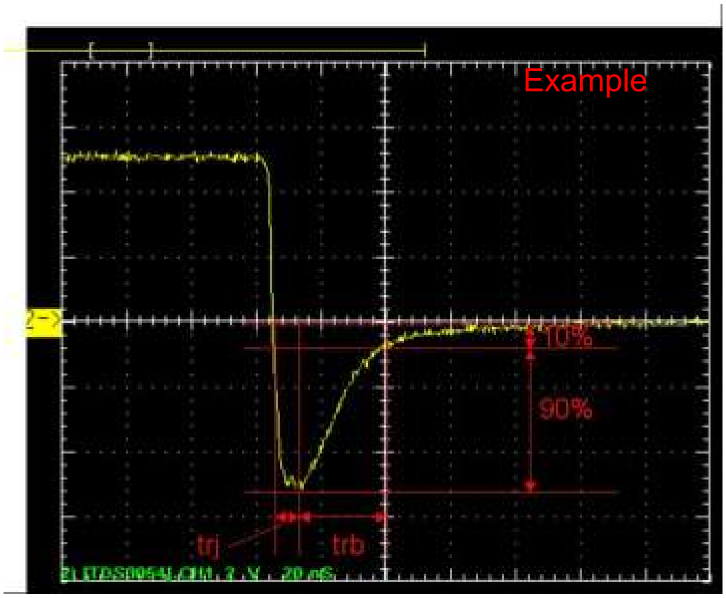
trr	Measurement		Simulation		%Error
	202	ns	203	ns	0.495

Reverse Recovery Characteristic

Reference



Trj =74 (ns)
Trb=128 (ns)
Conditions: Ifwd=Irev=0.2(A), Rl=50



Relation between trj and trb