

Device Modeling Report

COMPONENTS:
DIODE/ SCHOTTKY RECTIFIER / STANDARD
PART NUMBER: XBS206S17R
MANUFACTURER: TOREX SEMICONDUCTOR

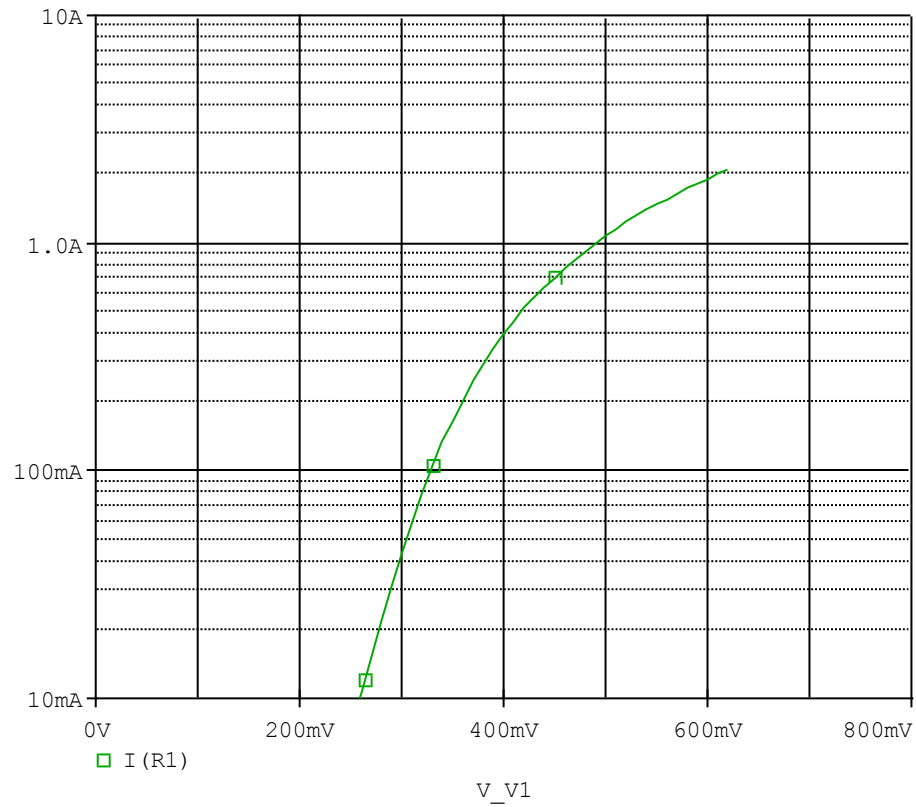


Bee Technologies Inc.

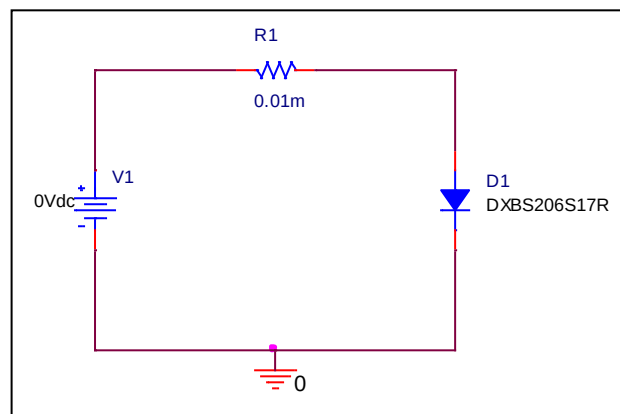
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

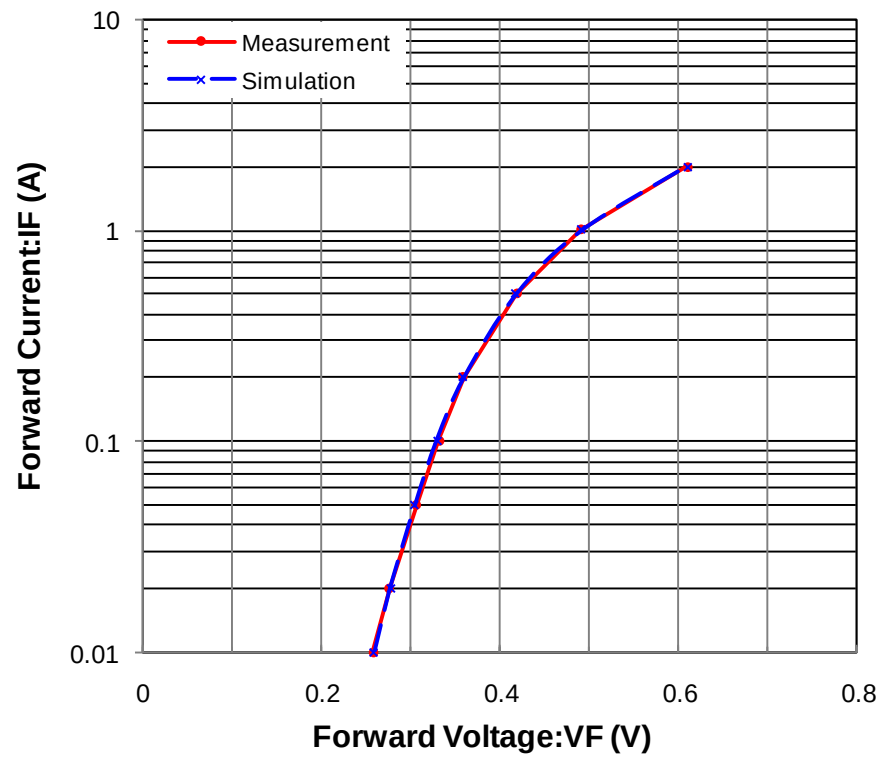


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

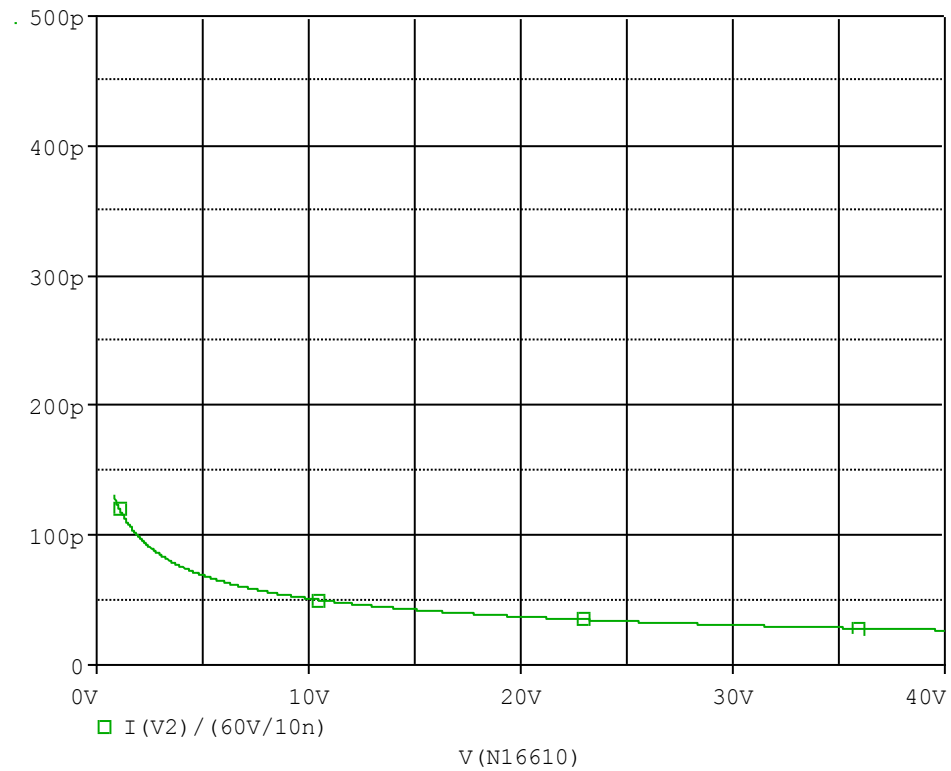


Simulation Result

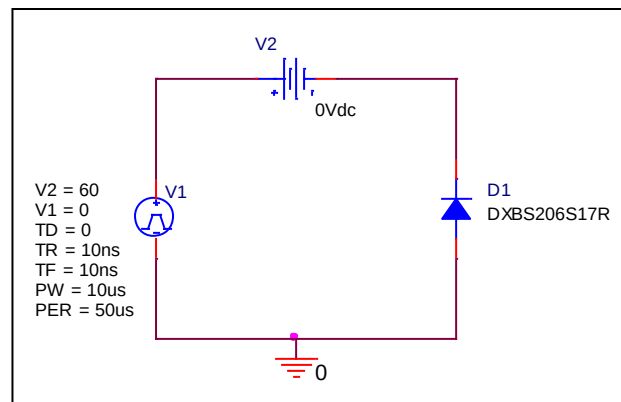
I_F (A)	V_F (V)		%Error
	Measurement	Simulation	
0.01	0.257	0.258	0.40
0.02	0.276	0.277	0.40
0.05	0.306	0.304	-0.51
0.1	0.331	0.329	-0.72
0.2	0.358	0.359	0.17
0.5	0.418	0.418	-0.10
1	0.490	0.491	0.14
2	0.610	0.610	-0.03

Capacitance Characteristic

Circuit Simulation Result

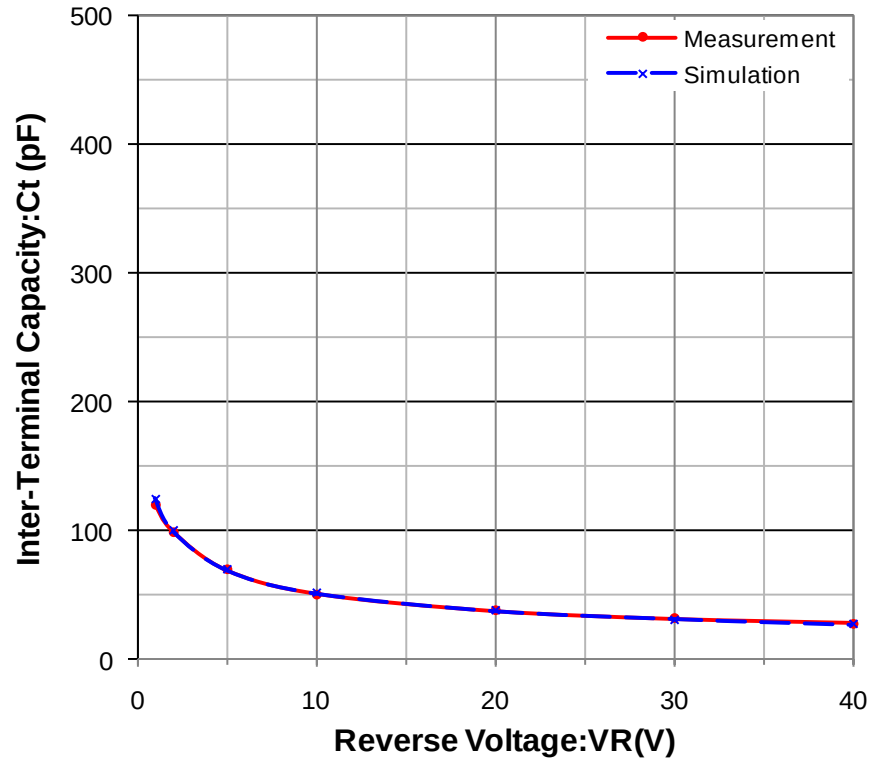


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

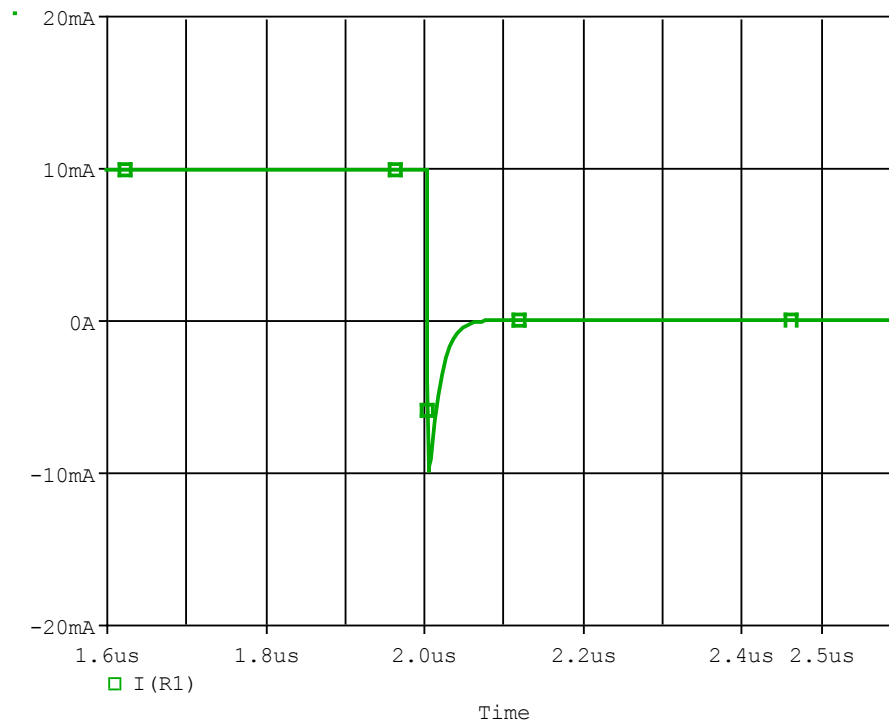


Simulation Result

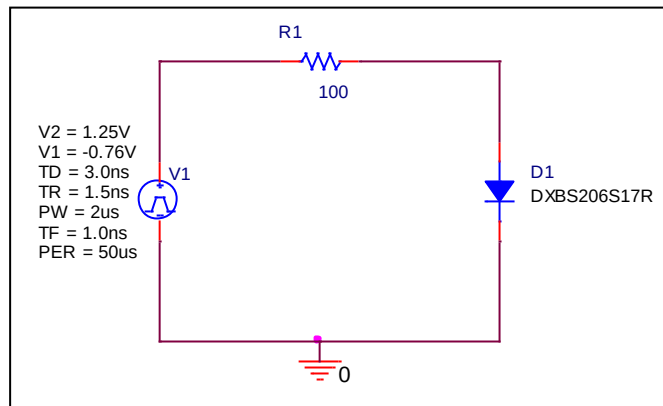
V _R (V)	C _t (pF)		%Error
	Measurement	Simulation	
1	120.000	124.599	3.83
2	98.400	99.378	0.99
5	69.000	69.368	0.53
10	50.000	51.257	2.51
20	37.200	37.286	0.23
30	31.000	30.806	-0.63
40	27.500	26.857	-2.34

Reverse Recovery Characteristic

Circuit Simulation Result



Evaluation Circuit



Compare Measurement vs. Simulation

Parameter	Unit	Measurement	Simulation	%Error
trr	ns	35.000	35.625	1.79