

Device Modeling Report

COMPONENTS:

DIODE/ SCHOTTKY RECTIFIER / STANDARD

PART NUMBER: 1SS367

MANUFACTURER: TOSHIBA

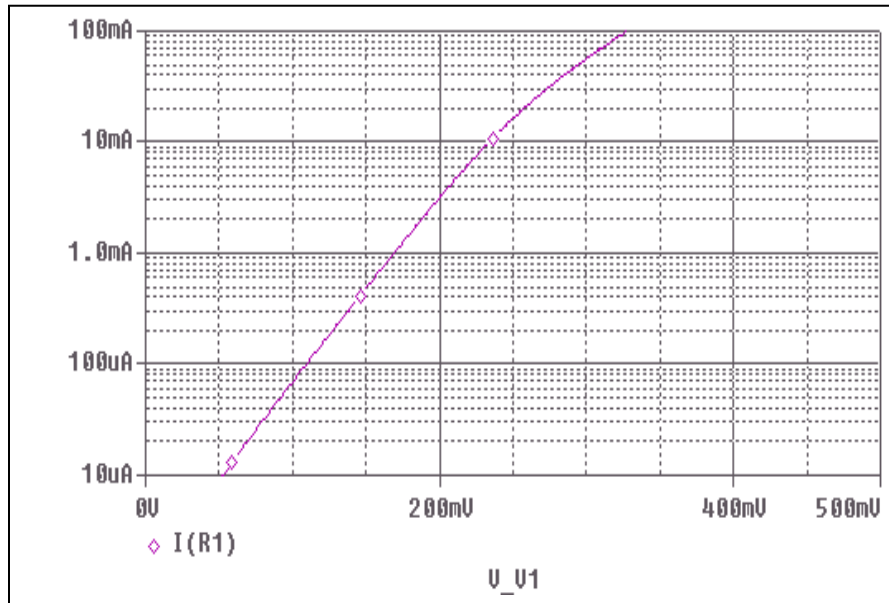


Bee Technologies Inc.

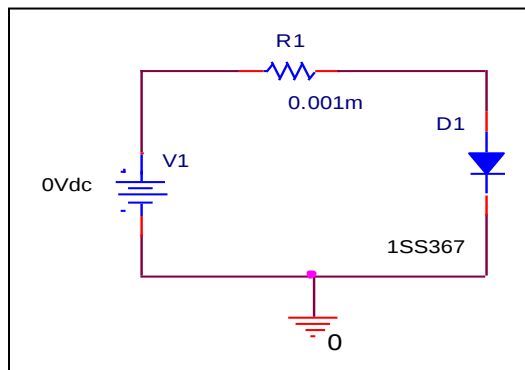
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

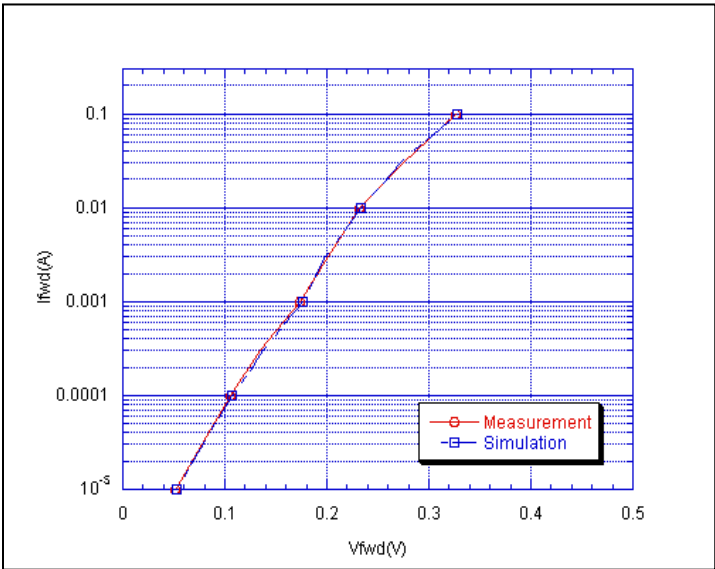


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

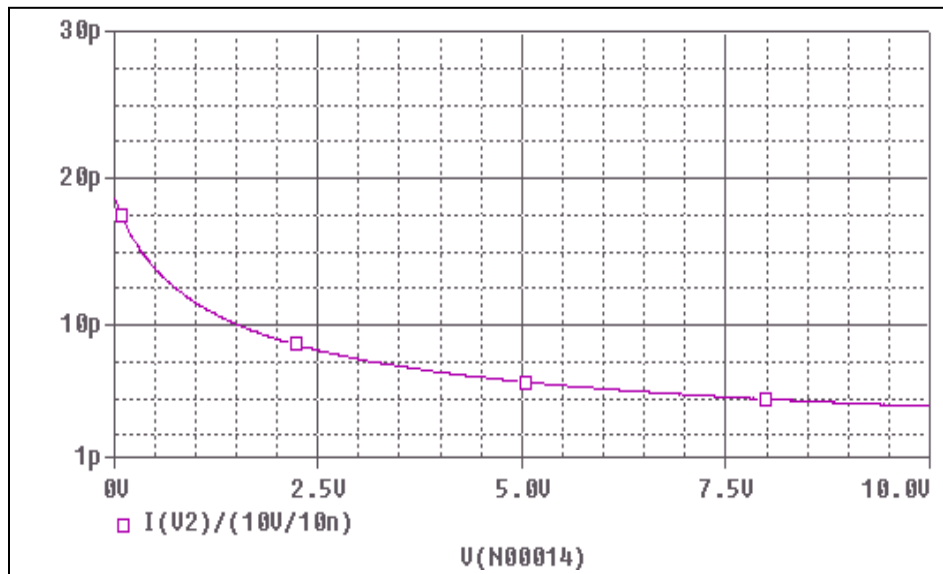


Simulation Result

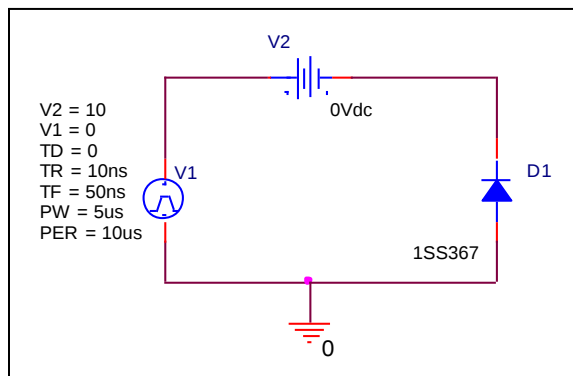
$I_{fwd}(A)$	$V_{fwd}(V)$ Measurement	$V_{fwd}(V)$ Simulation	%Error
1.00E-05	0.052	0.053	1.54
3.00E-05	0.078	0.079	1.15
0.0001	0.106	0.107	1.13
0.0003	0.135	0.138	2.23
0.001	0.174	0.177	1.67
0.003	0.202	0.198	-1.78
0.01	0.232	0.234	0.69
0.03	0.275	0.273	-0.91
0.1	0.326	0.327	0.43

Junction Capacitance Characteristic

Circuit Simulation Result

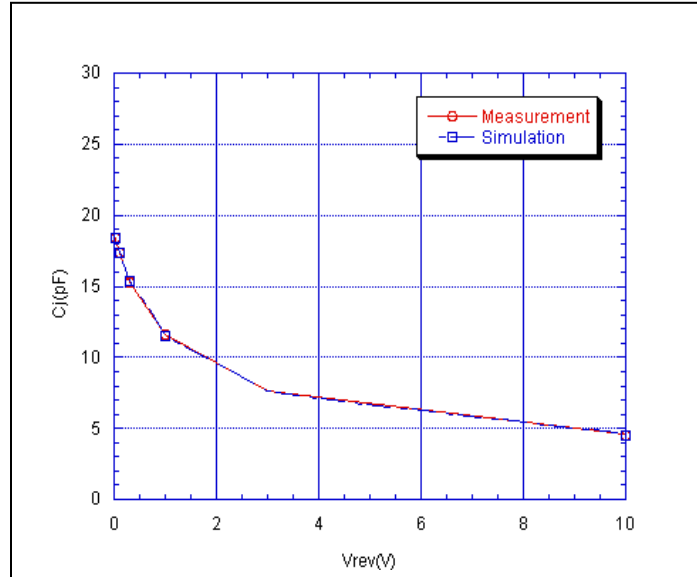


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.02	18.400	18.441	0.22
0.03	18.300	18.303	0.02
0.1	17.400	17.372	-0.16
0.3	15.300	15.351	0.33
1	11.600	11.517	-0.72
3	7.600	7.671	0.93
10	4.500	4.472	-0.62