

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTTKY RECTIFIER / STANDARD
PART NUMBER: 1SS372
MANUFACTURER: TOSHIBA

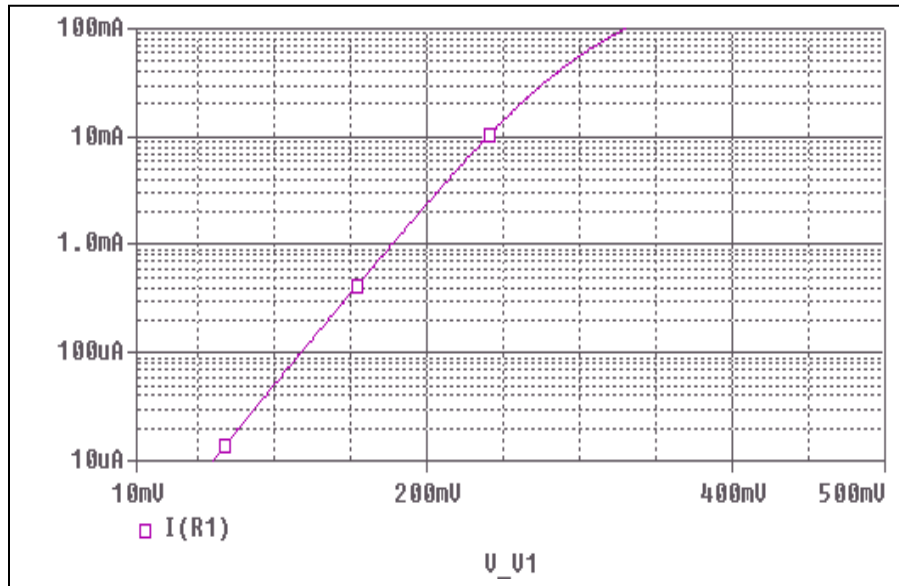


Bee Technologies Inc.

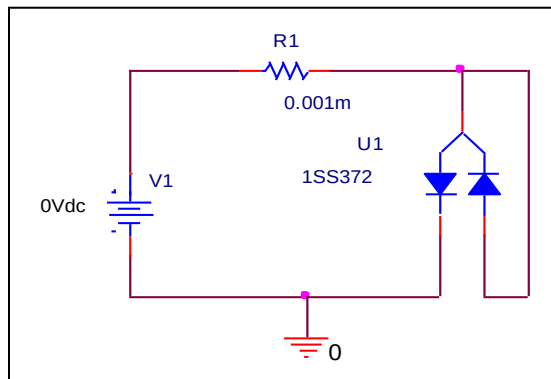
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Forward Current Characteristic

Circuit Simulation Result

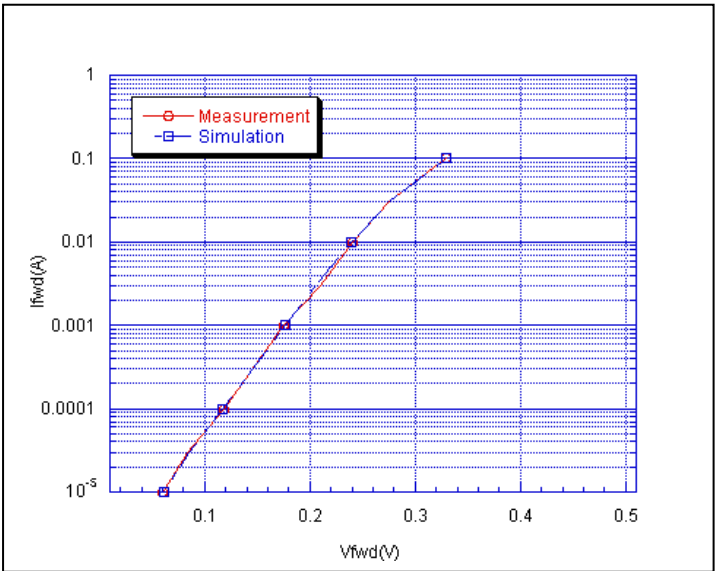


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

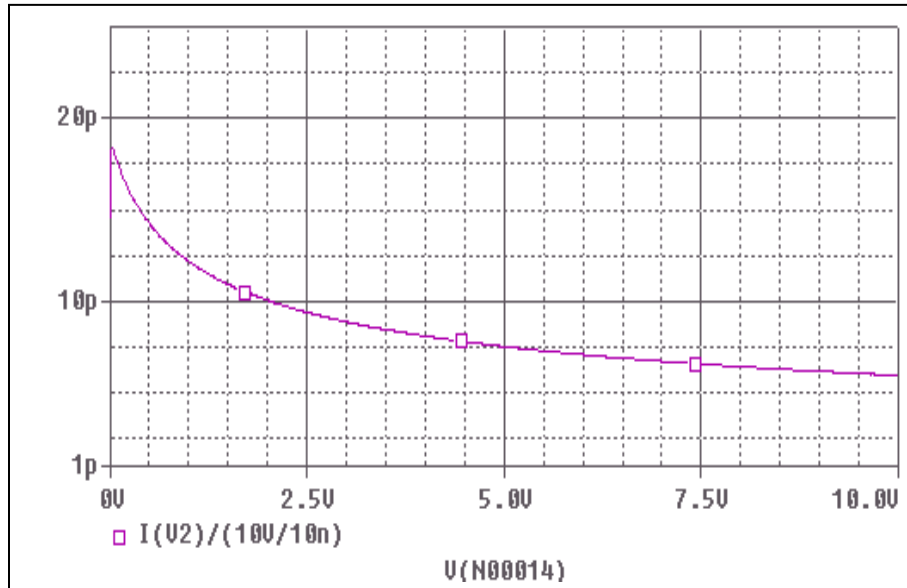


Simulation Result

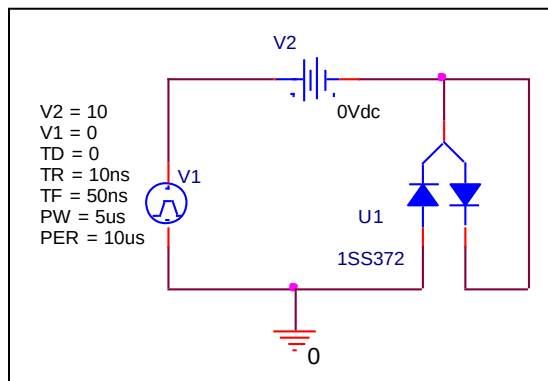
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
1.00E-05	0.060	0.061	1.67
3.00E-05	0.083	0.085	2.05
0.0001	0.119	0.117	-1.68
0.001	0.175	0.177	1.26
0.003	0.210	0.206	-1.90
0.01	0.240	0.240	-0.17
0.03	0.275	0.275	-0.04
0.1	0.330	0.330	0.03

Junction Capacitance Characteristic

Circuit Simulation Result

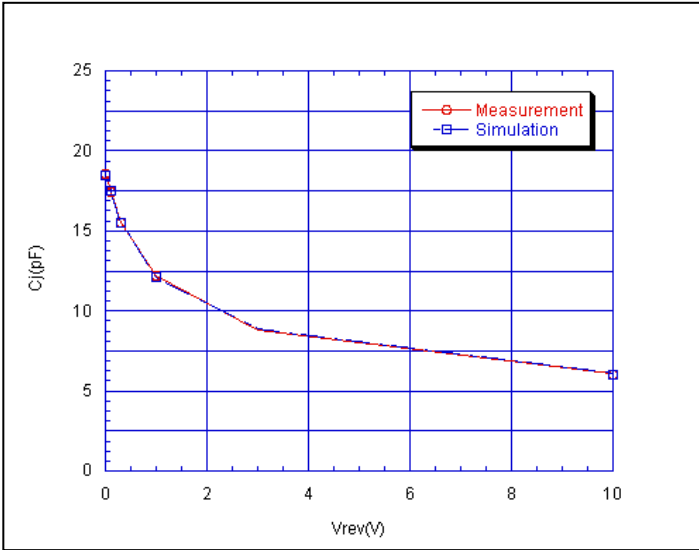


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
0.01	18.600	18.500	-0.54
0.03	18.300	18.400	0.55
0.1	17.400	17.500	0.57
0.3	15.500	15.500	0.00
1	12.200	12.100	-0.82
3	8.800	8.870	0.80
10	6.000	5.974	-0.43