

# Device Modeling Report

COMPONENTS:  
DIODE/ SCHOOTKY RECTIFIER / STANDARD  
PART NUMBER: 1SS388  
MANUFACTURER: TOSHIBA

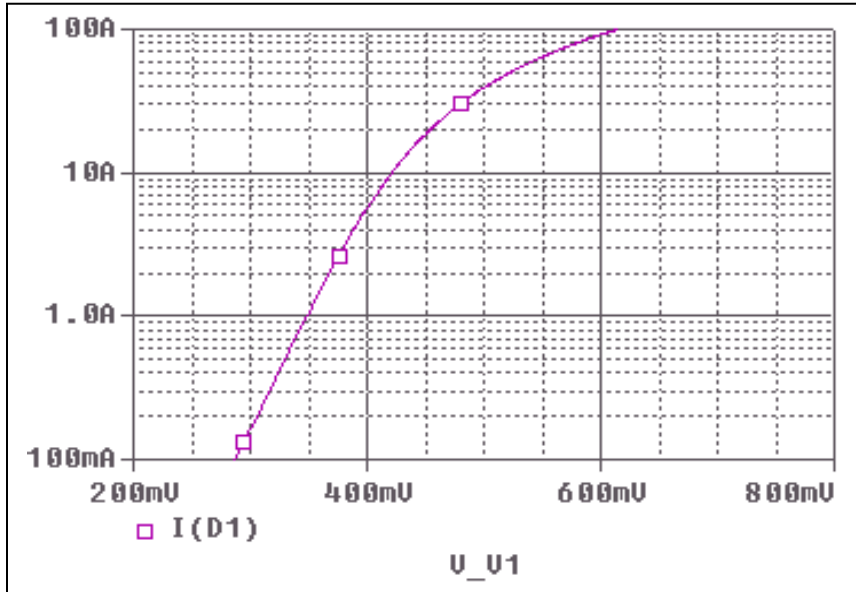


**Bee Technologies Inc.**

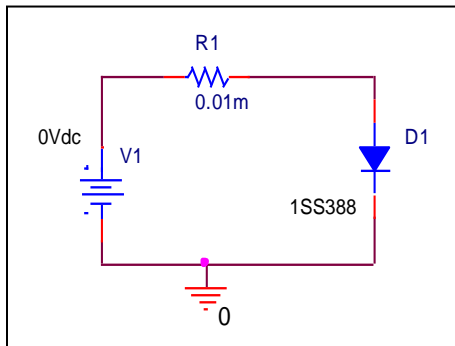
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

# Forward Current Characteristic

## Circuit Simulation Result

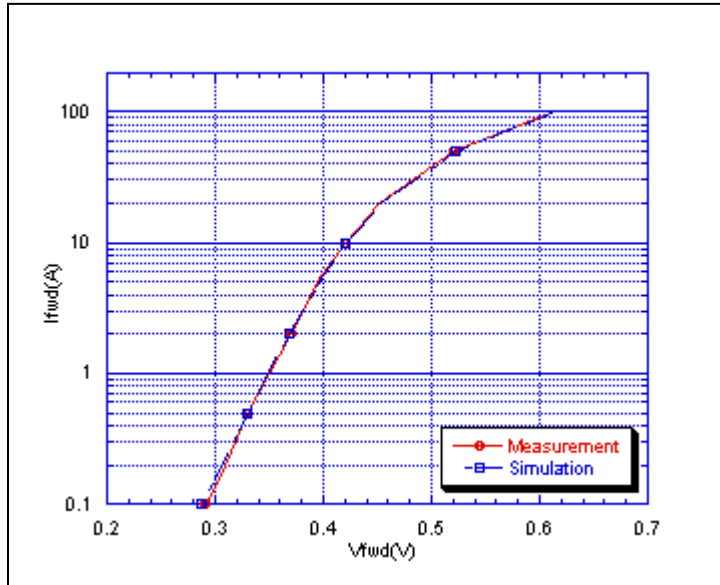


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result

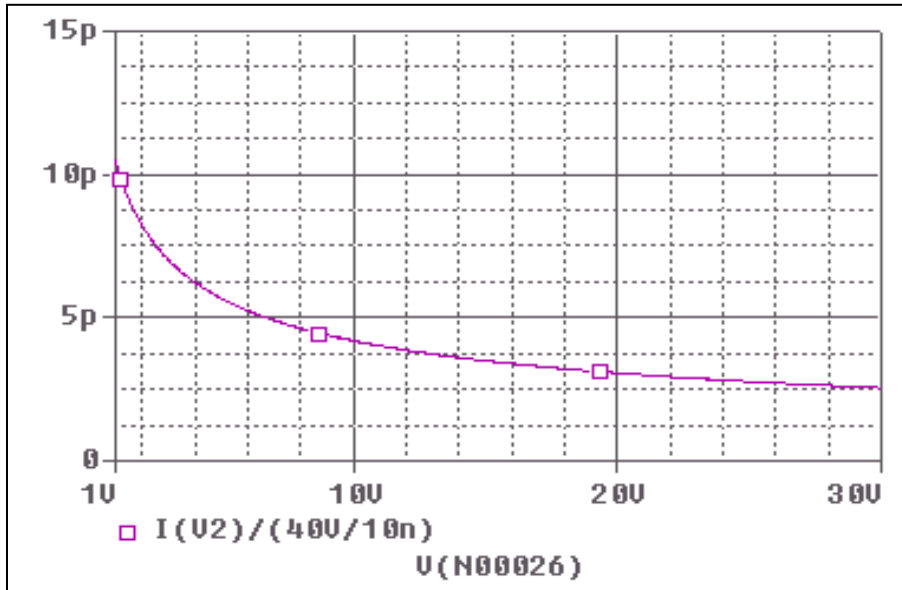


## Simulation Result

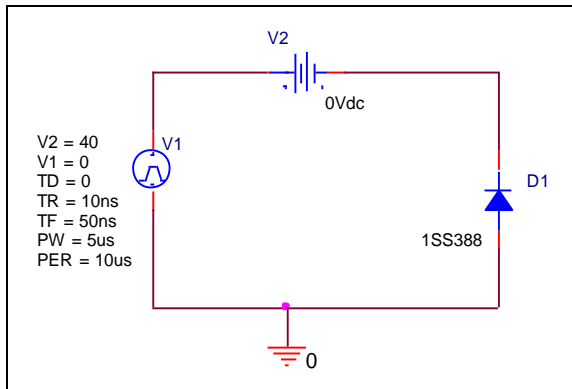
Ifwd(A)	Vfwd(V) Measurement	Vfwd(V) Simulation	%Error
0.1	0.290	0.287	-0.90
0.2	0.310	0.305	-1.48
0.5	0.330	0.330	-0.12
1	0.350	0.348	-0.49
2	0.370	0.368	-0.62
5	0.395	0.396	0.23
10	0.420	0.421	0.31
20	0.452	0.454	0.44
50	0.520	0.522	0.42
100	0.615	0.615	0.03

# Junction Capacitance Characteristic

## Circuit Simulation Result

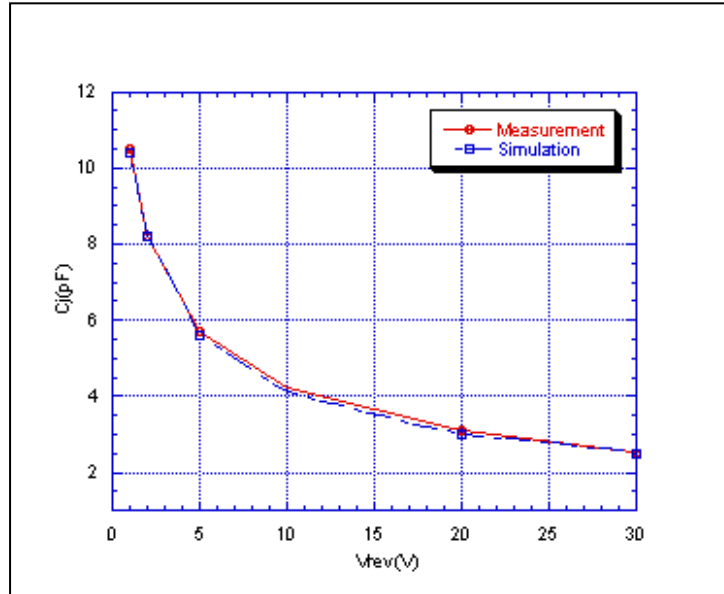


## Evaluation Circuit



# Comparison Graph

## Circuit Simulation Result



## Simulation Result

Vrev(V)	Cj(pF) Measurement	Cj(pF) Simulation	%Error
1	10.500	10.400	-0.95
2	8.220	8.200	-0.24
5	5.700	5.600	-1.75
10	4.200	4.100	-2.38
20	3.100	3.000	-3.23
30	2.520	2.500	-0.79